GENERAL MOTORS LLC
Vehicle Safety and Crashworthiness

June 27, 2013

Scott Yon, Chief
Vehicle Integrity Division
Office of Defects Investigation
National Highway Traffic Safety Administration
1200 New Jersey Ave, SE, Room W48-314
Washington, DC 20590

N130146

NVS-212llh
PE13013

Dear Mr. Yon:

This letter is General Motors (GM) response to your information request (IR), dated May 17, 2013, to investigate allegations of simultaneous loss of both low beam headlights without warning while operating model year (MY) 2005-2007 Chevrolet Corvette vehicles manufactured by General Motors LLC (GM), and to request certain information.

Following a May 24, 2013, discussion with Lawrence L. Hershman of your staff, it was agreed that the subject component for this inquiry is the underhood bussed electrical center (UBEC). If GM's investigation indicates any of the other components listed in your May 17, 2013, information request may be directly related to allegations of simultaneous loss of both low beam headlights without warning while operating model year (MY) 2005-2007 Chevrolet Corvette vehicles, GM will provide the requested information regarding that component.

Your requests and our corresponding replies are as follows:

1. **State, by model and model year, the number of subject vehicles GM has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by GM, state the following:**
   a. **Vehicle identification number (VIN);**
   b. **Make;**
   c. **Model;**
   d. **Model Year;**
   e. **Subject component part numbers and design versions installed as original equipment;**
   f. **Date of manufacture;**
   g. **Date warranty coverage commenced; and**
   h. **The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease).**

Provide the table in Microsoft Access 2000, or a compatible format, entitled "PRODUCTION DATA."

General Motors is providing the number of subject vehicles produced for sale or lease in the United States by make, model and model year in Table 1 below:

Make/Model	2005 MY	2006 MY	2007 MY	TOTAL
Chevrolet Corvette	33,798	31,556	37,742	103,107

TABLE 1: SUBJECT VEHICLE PRODUCTION

The production information requested in 1a – 1h is provided on the ATT_1_GM disk; folder labeled "Q_01". Refer to the Microsoft Access file labeled: "Q_01_PRODUCTION DATA". In response to 1e the file contains the part number of the underhood fuse block (UBEC) installed as original equipment in the subject vehicles.

2. **State the number of each of the following, received by GM, or of which GM is otherwise aware, which relate to, or may relate to, the alleged defect in the subject vehicles:**
   a. **Consumer complaints, including those from fleet operators;**
   b. **Field reports, including dealer field reports;**
   c. **Reports involving a crash, injury or fatality;**
   d. **Reports involving a fire;**
   e. **Property damage claims; and**
   f. **Third-party arbitration proceedings where GM is or was a party to the arbitration; and**
   g. **Lawsuits, both pending and closed, in which GM is or was a defendant or codefendant.**

   For subparts "a" through "g" state the total number of each item (e.g., consumer complaints, field reports, etc.) separately. Multiple incidents involving the same vehicle are to be counted separately. Multiple reports of the same incident are also to be counted separately (i.e., a consumer complaint and a field report involving the same incident in which a crash occurred are to be counted as a crash report, a field report and a consumer complaint).

   In addition, for items "c" through "g" provide a summary description of the alleged problem and causal and contributing factors and GM's assessment of the problem, with a summary of the significant underlying facts and evidence. For items "f" and "g" identify the parties to the action, as well as the caption,

court, docket number, and date on which the complaint or other document initiating the action was filed.

Table 2-1 summarizes records that may be related to allegations of simultaneous loss of both low beam headlights without warning while operating the subject vehicles. GM has organized the records by the GM file number within each attachment. Refer to access database "Q_03_REQUEST NUMBER TWO DATA" included on the ATT_1_GM disk.

		SUBCATEGORIES				
TYPE OF REPORT	GM REPORTS	CORRESPONDING TO NHTSA REPORTS	NUMBER WITH PROPERTY DAMAGE	NUMBER WITH CRASH	Fire	NUMBER WITH INJURIES/ FATALITIES*
Owner Reports	17	5	0	0	0	0/0
Field Reports	31	0	0	0	0	0/0
Not-In-Suit Claims	0	0	0	0	0	0/0
Subrogation Claims	0	0	0	0	0	0/0
Third Party Arbitration Proceedings	0	0	0	0	0	0/0
Product Liability Lawsuits	0	0	0	0	0	0/0
Total Reports (Including Duplicates)	48	5	0	0	0	0/0
Total Vehicles with Reports (Unique VIN)	48	5	0	0	0	0/0

TABLE 2-1 SUBJECT VEHICLE REPORTS THAT MAY BE RELATED TO THE ALLEGED DEFECT

The sources of the requested information and the last date the searches were conducted are tabulated in Table 2-2 below.

SOURCE SYSTEM	LAST DATE GATHERED
Customer Assistance Center	05/28/2013
Technical Assistance Center	05/28/2013
Field Information Network Database (FIND)	06/06/2013
Field Product Report Database (FPRD)	06/06/2013
Company Vehicle Evaluation Program (CVEP)	06/03/2013
Captured Test Fleet (CTF)	06/03/2013
Early Quality Feedback (EQF)	06/03/2013
Legal/Employee Self Insured Services (ESIS)/Product Liability Claims/Lawsuits	06/04/2013

TABLE 2-2: DATA SOURCES

3. Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 2, state the following information:

a. **GM's file number or other identifier used;**
b. **The category of the item, as identified in Request No. 2 (i.e., consumer complaint, field report, etc.);**
c. **Vehicle owner or fleet name (and fleet contact person), address, and telephone number;**
d. **Vehicle's VIN;**
e. **Vehicle's make, model and model year;**
f. **Vehicle's mileage at time of incident;**
g. **Incident date;**
h. **Report or claim date;**
i. **Whether the loss of lighting occurred while the vehicle was in motion;**
j. **Whether a crash is alleged;**
k. **Whether a fire is alleged;**
l. **Whether property damage is alleged;**
m. **Number of alleged injuries, if any; and**
n. **Number of alleged fatalities, if any.**

Provide this information in Microsoft Access 2000, or a compatible format, entitled "REQUEST NUMBER TWO DATA."

The requested information is provided on the ATT_1_GM disk; folder labeled "Q_03". Refer to "Q_03_REQUEST_NUMBER_TWO_DATA".

4. **Produce copies of all documents related to each item within the scope of Request No. 2. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method GM used for organizing the documents.**

Copies of the records summarized in Table 2-1 are embedded in the file provided in ATT_1_GM disk; folder labeled "Q_03". Refer to the Microsoft Access file labeled "Q_03_REQUEST_NUMBER_TWO_DATA". GM has organized the records by the GM file number within each attachment.

5. **State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by GM to date that relate to, or may relate to, the alleged defect in the subject vehicles: warranty claims; extended warranty claims; claims for good will services that were provided; field, zone, or similar adjustments and reimbursements; and warranty claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign.**

Separately, for each such claim, state the following information:

a. GM's claim number;
b. Vehicle owner or fleet name (and fleet contact person) and telephone number;
c. VIN;
d. Repair date;
e. Vehicle mileage at time of repair;
f. Repairing dealer's or facility's name, telephone number, city and state or ZIP code;
g. Labor operation number;
h. Problem code;
i. Replacement part number(s) and description(s);
j. Concern stated by customer; and
k. Comment, if any, by dealer/technician relating to claim and/or repair.

Provide this information in Microsoft Access 2000, or a compatible format, entitled "WARRANTY DATA."

Table 5-1 summarizes the GM Global Analysis and Reporting Tool (GART – regular warranty), the Motors Insurance Corporation (MIC – service contract claims) and the Universal Warranty Corporation (UWC – service contract claims) databases claims of UBEC replacement that also include an indication of simultaneous loss of both low beam headlights in the subject vehicles. GM has organized the records by the GM file number within each attachment. Refer to access database "Q_05_Warranty_Data" included on the ATT_1_GM disk.

There are additional warranty claim records included in the access database "Q_05_Warranty_Data" on the ATT_1_GM disk that are not included in Table 5-1. These additional claim records include replacement of the subject component, but do not include enough information to determine if they are related to loss of both low beam headlights.

Make/Model	Model Year	Number of Claims			
		Regular	MIC	UWC	TOTAL
Chevrolet Corvette	2005	21	9	4	34
	2006	15	23	0	38
	2007	21	14	1	36
TOTAL		57	46	5	108

TABLE 5-1: REGULAR WARRANTY CLAIMS, MIC EXTENDED SERVICE CONTRACT CLAIMS, AND UWC EXTENDED SERVICE CONTRACT CLAIMS

The sources of the requested information and the last date the searches were conducted are tabulated in Table 5-2 below.

SOURCE SYSTEM	LAST DATE GATHERED
GART - Regular Warranty	05/28/2013
Motors Insurance Corporation (MIC) - Service Contract Claims	05/28/2013
Universal Warranty Corporation (UWC) - Service Contract Claims	05/28/2013

TABLE 5-2: DATA SOURCES

For this response, GM searched GART – regular warranty claims, MIC – extended service contract claims and UWC – service contract claims databases to collect the warranty and service contract claims data.

GM's warranty database does not contain the vehicle owner's name or telephone number. Some of the replacement part numbers; part descriptions and customer concern code descriptions are not included in the GM warranty database. In response to requests 5j and 5k, GM is providing all available verbatim text. The verbatim texts are optional fields in the GM warranty system for the dealer to enter any additional comments that may be applicable to the warranty claim. The verbatim text fields are not required to be completed for every warranty claim.

The warranty data provided has limited analytical value in analyzing the field performance of a motor vehicle component. The warranty records do not contain sufficient information to establish the condition of the part at the time of the warranty correction; and service personnel may not consistently use the appropriate labor and trouble codes. Warranty numbers represent claims by our dealers for reimbursement for parts and labor costs incurred in performing warranty service for our customers.

A summary of the GM warranty and goodwill claims, MIC/UWC service contract claims and MIC goodwill claims for the subject vehicles, including the information requested in 5(a-k), is provided on the Att_1_GM disk in the folder labeled "Q_05"; refer to the Microsoft Access file labeled, "Q_05_WARRANTY DATA".

6. **Describe in detail the search criteria used by GM to identify the claims identified in response to Request No. 5, including the labor operations, problem codes, part numbers and any other pertinent parameters used. Provide a list of all labor operations, labor operation descriptions, problem codes, and problem code descriptions applicable to the alleged defect in the subject vehicles. State, by make and model year, the terms of the new vehicle warranty coverage offered by GM on the subject vehicles (i.e., the number of months and mileage for which coverage is provided and the vehicle systems**

that are covered). Describe any extended warranty coverage option(s) that GM offered for the subject vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.

The GM GART - regular warranty claims and MIC - extended service contract claims databases were searched using the labor code N1730 - Engine Wiring Harness Junction Block Replacement (UBEC). UWC - extended service contract claims database does not use labor codes or trouble codes.

GM included claims using labor code N1730 with trouble/problem cause codes and customer complaint codes or a verbatim that may be related to simultaneous loss of both low beam headlights. If a verbatim indicated that the issue was unrelated to simultaneous loss of both low beam headlights the record was not included.

The subject vehicles are covered by a bumper-to-bumper new vehicle limited warranty for three years or 36,000 miles, whichever occurs first. Many different extended warranty options are available through GM dealerships. They are offered at different prices and for varying lengths of time, based on customer's preference, up to 7 years from the date of purchase or up to a total of 100,000 vehicle miles.

The number of extended service contracts on the subject vehicles that have been sold by MIC and UWC of May 28, 2013, regardless of status (in-force, expired or cancelled) is contained in Table 6-1.

MAKE/MODEL	MODEL YEAR	MIC	UWC
Chevrolet Corvette	2005	9,628	595
	2006	9,958	556
	2007	11,204	505
	TOTAL	30,790	1,656

TABLE 6-1: SUBJECT VEHICLES: MIC AND UWC EXTENDED SERVICE CONTRACTS SOLD (REGARDLESS OF STATUS: IN-FORCE, EXPIRED OR CANCELLED)

7. **Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that GM has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities. This includes, but is not limited to, bulletins, advisories, informational documents, training documents, or other documents or communications, with the exception of standard shop manuals. Also include the latest draft copy of any communication that GM is planning to issue within the next 120 days.**

Prior to this investigation, GM had not issued any Technical Service Bulletins (TSB),

advisories, informational documents or other documents that may relate to, the subject condition in the subject vehicles, to dealers, regional or zone offices, field offices, fleet purchasers or other entities. The warranty rate is extremely low. GM had no indication of the need for any bulletins or advisories regarding the alleged condition.

After receiving PE13-013, GM issued a communication to Chevrolet Dealers on May 21, 2013, in an effort to obtain any UBECs replaced on a subject vehicle due to a customer complaint of intermittent or inoperable low beam headlamps. A copy of the dealer communication is provided on the ATT_1_GM_disk; folder labeled "Q_07.

GM is not planning to issue within the next 120 days any service, warranty or other technical documents or communications to its dealers, regional or zone offices, regarding the subject condition in the subject vehicles.

This information was provided by GM Customer Care and Aftersales on June 3, 2013.

8. **Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may relate to, the alleged defect in the subject vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, GM. For each such action, provide the following information:**
   a. **Action title or identifier;**
   b. **The actual or planned start date;**
   c. **The actual or expected end date;**
   d. **Brief summary of the subject and objective of the action;**
   e. **Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and**
   f. **A brief summary of the findings and/or conclusions resulting from the action.**

   For each action identified, provide copies of all documents related to the action, regardless of whether the documents are in interim, draft, or final form. Organize the documents chronologically by action.

   The information listed in Table 8 below is a summary of actions that have been conducted, are being conducted, are planned or are being planned by or for GM regarding the subject condition on the subject vehicles as of June 14, 2013. Documents and additional supporting information are included in the Attachments as noted in the table.

General Motors requested assistance and documents from suppliers in responding to this question and this response includes those documents and the information received from suppliers.

Action 8-A: Design Validation Specifications and Documentation for the UBEC in the subject vehicles. **Start Date:** February 2000 **End Date:** April 2004 **Engineering Group:** GM Engineering, Delphi Corporation **Attachments:** ATT_2_GM_CONF disk; folder labeled "Q_08-A" ATT_3_Delphi_CONF disk, folder labeled "Q_08-A" **Description:** Specifications and Delphi Validation Plan and Testing Reports for the UBEC in the subject vehicles. Delphi UBEC Engineering Drawings. **Summary:** The UBEC meets all specifications and validation requirements.
Action 8-B: Delphi Corporation Design Failure Mode Effects Analysis (DFMEA) and Manufacturing Process Failure Mode Effects Analysis (PFMEA) for the subject vehicle UBEC. **Start Date:** September 2000 **End Date:** April 2002 **Engineering Group:** Delphi Corporation **Attachments:** ATT_3_Delphi_CONF disk, folder labeled "Q_08-B" **Description:** Subject Vehicle/Subject Component DFMEA and PFMEA information. **Summary:** The subject vehicle UBEC meets all requirements.
Action 8-C: GM Investigation 2013 **Start Date:** May 2013 **End Date:** Continuing **Engineering Group:** GM Engineering, Delphi Corporation **Attachments:** ATT_1_GM disk; folder labeled "Q_08-C" ATT_2_GM_CONF disk; folder labeled "Q_08-C" ATT_3_Delphi_CONF disk, folder labeled "Q_08-C" **Description:** GM's investigation of the alleged defect in the subject vehicle with the assistance of Delphi Corporation. **Summary:** GM Investigation of the alleged defect in the subject vehicles, analysis of warranty data and GM reports and analysis of part returns indicates a low rate of occurrence; no trends by date of build, engine option or state in the US where vehicle was originally sold or leased. Analysis of the one returned part to date that may be related to the alleged defect is provided on the ATT_3_Delphi_CONF disk. GM's effort to obtain returned parts for analysis is continuing.

TABLE 8: ACTIONS SUMMARY

9. Describe all modifications or changes made by, or on behalf of, GM in the design, material composition, manufacture, quality control, supply, or installation of the subject component, from the start of production to date, which relate to, or may relate to, the alleged defect in the subject vehicles. For each such modification or change, provide the following information:

a. The date or approximate date on which the modification or change was incorporated into vehicle production;

b. A detailed description of the modification or change;

c. The reason(s) for the modification or change;
d. The part number(s) (service and engineering) of the original component;
e. The part number(s) (service and engineering) of the modified component;
f. Whether the original unmodified component was withdrawn from production and/or sale and if so, when;
g. When the modified component was made available as a service component; and
h. Whether the modified component can be interchanged with earlier production components.

Also, provide the above information for any modification or change that GM is aware of which may be incorporated into vehicle production within the next 120 days.

GM is providing a summary of the product engineering information requested in Q9 (a-h) on ATT_1_GM disk in the folder labeled "Q_09". Refer to the folder labeled "Q_09_Design Modifications".

The Engineering Work Orders (EWOs) related to the modifications are provided on the Att_2_GM_Conf disk in the folder labeled "Q_09".

The subject vehicles are no longer in production. Therefore there are no modifications or changes to the subject component that may be incorporated into vehicle production within the next 120 days, which relate to, or may relate to, the alleged defect in the subject vehicles.

10. State the number of each of the following that GM has sold that may be used in the subject vehicles by component name, part number (both service and engineering/ production), model and model year of the vehicle in which it is used and month/year of sale (including the cut-off date for sales, if applicable):

a. Subject component; and
b. Any kits that have been released, or developed, by GM for use in service repairs to the subject component/assembly.

For each component part number, provide the supplier's name, address, and appropriate point of contact (name, title, and telephone number). Also identify by make, model and model year, any other vehicles of which GM is aware that contain the identical component, whether installed in production or in service, and state the applicable dates of production or service usage.

A summary of the requested service part information for the subject components is

provided on the ATT_1_GM disk; folder labeled "Q_10"; refer to the Microsoft Excel file labeled "Q10 UBEC Sales PE13-013 N130146". There are no kits which have been developed or released for replacement of the UBEC.

These sales numbers represent sales to dealers in the US and Canada. This data has limited analytical value in analyzing the field performance of a motor vehicle component because the records do not contain sufficient information to establish the reason for the part sale. It is not possible from this data to determine the number of these parts that have been installed in the subject vehicles or the number remaining in dealer or replacement part supplier inventory.

This table contains service part numbers, part description, part usage information including the GM vehicles that contain the identical component, part sales figures by month and calendar year, and the supplier's name and address, contact name and phone number.

11. Furnish GM's assessment of the alleged defect in the subject vehicle, including:

a. The causal or contributory factor(s);
b. The failure mechanism(s);
c. The failure mode(s);
d. The risk to motor vehicle safety that it poses; and
e. What warnings, if any, the operator and the other persons both inside and outside the vehicle would have that the alleged defect was occurring or subject component was malfunctioning; and
f. The reports included with this inquiry.

The remainder of GM's response provides additional information that substantiates GM's conclusion that the condition is not an unreasonable risk to motor vehicle safety.

GM has investigated the alleged condition, tested and examined returned parts, and analyzed warranty and other claim data. GM finds there is no unreasonable risk to motor vehicle safety for the following reasons:

- This condition does not affect the functionality of the following lamps:
  - high beam headlamps,
  - marker lamps,
  - turn signals,
  - fog lamps.

All of the above will be available in the rare event that the low beam headlamps become intermittent or inoperable and can be used by the operator until the vehicle can be repaired.

- The rate for claims of loss of low beam headlamp function during the warranty period is extremely low (0.02 IPTV) and the cumulative rate of known claims is (1.04 IPTV) after a long exposure period (6.5 years). This rate of inoperative headlights does not present an unreasonable risk to vehicle safety.
- GM is not aware of any reports of crashes or injuries that may be related to this condition.

The system operation is described as follows. The UBEC circuit involved is the headlamp low beam relay control circuit (circuit 1970). Battery voltage is applied at all times to one side of the low beam coil. The other side of the coil, the headlamp low beam relay control circuit (circuit 1970), is switched to ground to energize the relay and apply power to the low beam headlamps. The headlamps can be energized by placing the headlamp switch in the HEAD or AUTO position, for normal operation or automatic lamp control (ALC), respectively. When the headlamp switch is placed in the HEAD position, ground is applied from the headlamp switch, through the body control module (BCM), to circuit 1970, activating the low beam headlamps. When ALC is activated the headlamps will be off during daylight conditions but will turn on when the ambient light sensor detects low outside light level. The ambient light sensor, a light sensitive transistor, varies the voltage signal to the HVAC control module. In low light conditions the HVAC control module sends a signal to the BCM via class 2 serial data commanding the BCM to apply ground to circuit 1970, activating the low beam headlamps.

The failure mechanism is a routed wire in the UBEC that may fracture due to the cyclical application of stress. The routed wire fractures at a bend in the wire routing which may create an open circuit in circuit 1970, the headlamp low beam relay control circuit. A fracture at this point would disable the low-beam headlamps. The fracture may separate more as the temperature rises. So the low-beam headlamp's function may be intermittent with the low beam headlight functionality returning after a period of time, typically after the vehicle has been parked. The high beam headlamps, marker lamps, turn signals, and fog lamps would still be available.

The coefficient of thermal expansion of plastic is greater than that of copper. As the plastic of the UBEC expands when subjected to high external temperatures, the copper routed wire is stressed at a bend in the wire routing. In time this cyclical application of stress may fatigue the copper routed wire. Surface cracks visible near the routed wire fracture are consistent with thermal-cyclic fatigue. The point of the routed wire fracture (circuit 1970) is in the portion of the UBEC closest to the engine and its exhaust components, which apply heat to this portion of the UBEC. Circuits

with similar routings and lengths, such as circuits 1314 and 28, face away from the engine and fatigue was not observed in these circuits

The low beam headlamp system mechanization provides isolation from other exterior lighting subsystems. The loss of low beam relay coil circuit continuity will not affect the functionality of the high beam headlamps, marker lamps, turn signals, or fog lamps.

There are 108 warranty claims for labor operation N1730 that indicate loss of function of both low beam headlamps for 2005 - 2007 MY Corvettes. There were 103,096 2005 - 2007 Chevrolet Corvettes manufactured for sale or lease in the United States. The rate of loss of both low beam headlights was 1.04 IPTV at 6.5 years of exposure on June 13, 2013.

The 43 incident reports included with the inquiry allege loss of both low-beam headlights while driving. Some complaints reported that the issue was intermittent and some reported that low beam headlight functionality returned after a period of time, typically after the vehicle has been parked. The high beam headlights and fog lights remain operational. GM has examined UBECs from field returns that exhibited similar operation, which indicate the loss of low beam headlamps resulted from the contributory factors and failure mechanisms noted above. However, after reading blogs from several websites related to this issue, and noting the frequency that the NHTSA's complaint process was mentioned, the number of NHTSA complaints in relation to the actual warranty claim rate is significantly higher when compared to similar, less publicized issues.

While the number of VOQs is disproportionate when compared to the warranty data, this may be in part related to active internet communications on Corvette focused websites. Indeed one of the internet blogs contained a link to click to take the blogger directly to the NHTSA VOQ website. In fact, the VOQ and warranty data show discernible spikes immediately after the first internet posting and again after the opening of the IR.

In summary:

- GM finds there is no unreasonable risk to motor vehicle safety.
- There have been no reports of crashes, injuries or fatalities related to the alleged defect.
- This condition does not affect the functionality of the high beam headlamps, marker lamps, turn signals, and fog lamps, which will be available until the vehicle can be repaired.

- The rate for claims of loss of low beam headlamp function during the warranty period is extremely low and the cumulative rate of known claims after a long exposure period (6.5 years) is not an unreasonable risk to vehicle safety.

* * *

General Motors requested assistance and documents from suppliers in responding to items 8, 9 and 11. This response includes all those documents received from suppliers as of this date.

This response is based on searches of GM locations where documents determined to be responsive to your request would ordinarily be found. As a result, the scope of this search did not include, nor could it reasonably include, "all of its past and present officers and employees, whether assigned to its principal offices or any of its field or other locations, including all of its divisions, subsidiaries (whether or not incorporated) and affiliated enterprises and all of their headquarters, regional, zone and other offices and their employees, and all agents, contractors, consultants, attorneys and law firms and other persons engaged directly or indirectly (e.g., employee of a consultant) by or under the control of GM (including all business units and persons previously referred to), who are or, in or after 2003, were involved in any way with any of the following related to the alleged defect in the subject vehicles:

a. Design, engineering, analysis, modification or production (e.g. quality control);
b. Testing, assessment or evaluation;
c. Consideration, or recognition of potential or actual defects, reporting, record-keeping and information management, (e.g., complaints, field reports, warranty information, part sales), analysis, claims, or lawsuits; or
d. Communication to, from or intended for zone representatives, fleets, dealers, or other field locations, including but not limited to people who have the capacity to obtain information from dealers."

This response was compiled and prepared by this office upon review of the documents produced by various GM locations, and does not include documents generated or received at those GM locations subsequent to their searches.

Please contact me if you require further information about this response or the nature or scope of our searches.

Sincerely,

M. Carmen Benavides, Director
Product Investigations and Safety Regulations

Attachments