

GENERAL MOTORS NORTH AMERICA Safety Center

NHTSA-99-5862-6

August 31, 1999 USG 3433; Part 12

Mr. L. Robert Shelton III Associate Administrator for Safety Performance Standards National Highway Traffic Safety Administration 400 Seventh St., S.W. Washington, D.C. 20590

<u>(</u>_)

Subject: Information Request NSA-31CCa/PE:208980925G

Dear Mr. Shelton:

On June 10, 1999, General Motors Corporation (GM) filed with the Administrator a petition seeking an exemption from the requirement to notify its dealers and customers of an apparent noncompliance with Federal Motor Vehicle Safety Standard (FMVSS) 208 involving certain Model Year (MY) 1999 C/K vehicles. The agency invited comments from the public, to be filed before July 26, 1999. General Motors Corp.; Receipt of Application for Determination of Inconsequential Noncompliance, 64 Fed. Reg. 34309 (June 25, 1999). Only one set of comments was filed within the comment period, by Advocates for Highway and Auto Safety [hereinafter cited as "Advocates"]. Additionally, on August 2, 1999 -- after the prescribed deadline -- comments opposing GM's petition were jointly filed by the Center for Auto Safety, Consumers Union, Parents for Safer Air Bags and Public Citizen [hereinafter cited as "CFAS comments"].

This matter has become an unusual one for which GM is aware of no precedent, at least at our company. With no precedent, we have tried to follow the course of conduct that seems the most reasonable to us under the circumstances.

Confirming our recent communications with the agency regarding this matter, GM considers that the S13 alternative sled test in FMVSS 208 is complete for regulatory purposes when the prescribed crash pulse has been achieved, since the sled deceleration pulse after that time is <u>not</u> prescribed by the standard. During the prescribed time period, these MY 1999 C/K vehicles meet all applicable injury criteria, including the passenger neck extension requirement of S13.2. Concurrence by NHTSA with our interpretation would therefore make it unnecessary to address our petition for inconsequentiality. Accordingly, we are providing further detail on this fundamental regulatory interpretation issue in Part I, below.

We recognize that the agency has always regarded the S13 sled test as a temporary measure and indeed has already proposed to phase it out. Federal Motor Vehicle Safety Standards; Occupant Crash Protect, 63 F.R. 49958, 49971 (September 18, 1998) [hereinafter cited as "Advanced Air Bag Proposal"]. We also believe that our June 10 petition makes a compelling case that any noncompliance involving the MY 1999 C/K vehicles is inconsequential to motor vehicle safety. For these reasons, we believe that it is in the present interest of both parties to leave our June 10, 1999 petition before the agency so that NHTSA can resolve this matter by granting it if the agency determines not to address GM's interpretation



of the standard. This letter responds to the comments of the CFAS and Advocates in Part II below. In addition, Part II discusses the safety risk to an individual exposed passenger and GM's risk calculations for the subject C/K fleet.

I. INTERPRETATION OF FMVSS 208 S13

GM reads S13 as imposing performance requirements that apply only during the regulated crash pulse, since the sled pulse after that point in time is <u>not</u> prescribed by the standard. For a sled test to be valid under S13, the crash pulse applied to a test vehicle must be within the maximum and minimum "corridors" shown in Figure 6 of the regulation. 49 C.F.R. § 57 1.208 S 13.1 (1998). Nowhere in the regulation is there any suggestion that the test continues after the prescribed crash pulse, let alone what would be required if it did. Since the movement of the sled is not regulated after approximately 130 milliseconds, a manufacturer could, consistent with the regulation, stop the sled immediately. In NHTSA's words, "Manufacturers would be required to assure that their vehicles comply with the standard's performance requirements for all tests within the specified corridors." *Federal Motor vehicle Safety Standards; Occupant Crash Protection*, 62 Fed. Reg. 12960 12971 (March 19, 1997) [hereinafter cited as "Sled Test Final Rule."]

In the rulemaking leading to adoption of the S13 alternative sled test, several manufacturers protested that the test was not sufficiently well-specified to provide an objective basis for compliance. See, e.g., Comments of Mitsubishi Motors at 2. Ford raised a particular concern about the aftermath of the sled test, stating that it should be considered complete as soon as the sled brakes are applied. Ford explained that the "dummy rebound kinematics and instrumentation readings are not representative of a highway collision during the braking deceleration phase of [the] sled test." Sled Test Final Rule at 12972.

In response, NHTSA assured manufacturers that "dummy measurement recorded during the rebound phase will not be considered by this provision because sled braking is not regulated by the standard." <u>Id.</u> Moreover, NHTSA acknowledged that "it would be inappropriate to reference a brake application point because sled braking varies depending on the type of sled." <u>Id.</u>

The agency's response to Ford makes doubly clear that the regulated portion of the test must be considered complete when the crash pulse is over. At any point after that, a compliant manufacturer could apply the brakes to the sled. In practice, GM, like other manufacturers, usually continues to collect data after the prescribed crash pulse, but that practice does not make those data relevant to compliance with FMVSS 208.

In the TRC test that led to NHTSA's investigation of the subject MY 1999 C/K vehicles, the peak extension value occurred well after the end of the prescribed crash pulse, during "the rebound phase." The same is true of GM's own tests. See Attachment A. Moreover, the neck extension values observed during the regulated crash pulse all fell far below the prescribed limits. <u>Id.</u> Accordingly, these test data confirm that the MY 1999 C/K complies with all applicable limits of FMVSS 208.

An interpretation of S13 that would require the neck injury criteria to be met after the end of the prescribed crash pulse would not only lack a textual basis but also would raise serious questions about the lawfulness of the standard. As shown in Attachment A, GM has found extraordinarily wide variability in the peak neck extension measurements occurring after the regulated crash pulse. If the standard were interpreted to include these measurements, its objectivity would be called into question. Indeed, even apart from this issue, Ford warned that there might be "high variability in the testing for compliance with the criteria, especially the neck extension criterion." Sled Test Final Rule at 12970.

In their comments on NHTSA's proposal, manufacturers also questioned the basis and need for the neck injury criteria. See <u>e.g.</u>, Comments of Mitsubishi Motors at 2-3 (Feb. 7, 1997); Comments of Nissan Motor Co. at 2 (Feb. 5, 1997). GM agrees that the neck injury criteria adopted by NHTSA are far stricter than necessary to meet the need for motor vehicle safety. The neck extension limits were set far below the human injury risk levels allowed by other requirements in FMVSS 208. For example, the HIC criterion of 1000 represents a sixteen percent risk of AIS 4 or greater head injury, while the 57 Nm neck extension requirement represents a minuscule 0.09 percent risk of an AIS 3 or greater neck injury. NHTSA never provided a safety rationale for this extremely low value in the preamble or elsewhere.

In summary, GM believes that the neck extension limits of S13 are to be met during the regulated crash pulse, and NHTSA appears to have endorsed this view in the preamble to the regulations. To require values after the prescribed pulse is not only inconsistent with NHTSA's preamble but also would raise questions as to the lawfulness of the standard.

II. GM'S PETITION FOR INCONSEQUENTIALITY

Rather than addressing the requirements of FMVSS 208, the agency may resolve this matter by granting GM's petition for exemption. It is to that issue that we now turn our attention.

Broadly speaking, the CFAS and Advocates comments raise two challenges to the GM petition. First, the commenters take issue with several factors used by GM in calculating the incremental risk posed by the neck extension performance in the MY 1999 C/K population. Second, they dispute GM's conclusion that the risk at issue is inconsequential. We address these subjects in turn in parts B and C of this Section. However, another perspective for the risk to safety that also could be examined is the risk to the individual. This is discussed in Part A of this Section.

A. The Risk to an Individual Exposed Passenger

Neither the Center nor the Advocates disputed GM's determination of the neck injury risk presented by a neck extension moment of 67 Nm versus the risk at 57 Nm. This factor is obviously of central importance to our petition since it permits an evaluation of the incremental neck injury risk to an individual right front seat passenger of a subject C/K vehicle who happens to experience a severe crash while not wearing a seat belt. (The other factors in GM's calculation essentially address the issue of exposure – what percentage of occupants may realistically find themselves in the position where the neck extension issue is a potential concern – and the risk to any one individual appropriately takes that low probability into account as well.)

GM's petition included risk estimates for occupants with and without "muscle tone." It should be emphasized that the numbers for "without muscle tone" are not representative of the risk faced by the great majority of occupants. They would be a better indicator of risk only for the relatively rare case in which the unbelted passenger has no opportunity at all to tense up in anticipation of a crash. GM strongly believes that the vast majority of in-position passengers have at least some warning of a major frontal collision and so have at least an instant in which they reflexively tense their neck muscles. For these passengers, the risk numbers for "80% muscle tone" are a more appropriate (and still conservative) estimate of the risk of neck injury. A further discussion of the significance of muscle tone and the basis for GM's judgment is contained in Mertz, Prasad, & Irwin, *Injury Risk Curves for Children and Adults in Frontal and Rear Collisions*, at p.5 (Nov. 1997)(SAE 97-33 18). Assuming 80% muscle tone as explained, GM estimates that an individual who experiences a 67 Nm neck extension moment would face a 0.3 percent risk of an AIS 3 or greater neck injury. At 57 Nm, the same individual would face a 0.09 percent risk of the same injury. The basis for these neck estimates appears in Attachment C to AAMA's comments on the Advanced Air Bag Proposal.

This risk is very minimal compared to other injury risks that have been deemed acceptable by NHTSA. For example, the same standard, FMVSS 208, establishes a head injury criterion (HIC) of 1000 as the limit. That level represents a 16% risk of an AIS 4 or greater brain injury. That risk of AIS 4 level brain injury - which is allowed by the current standard – is more than fifty times greater than the risk of neck injury posed by a neck extension of 67 Nm. A person would have to experience a neck extension moment of 139 Nm in order to have a 16% risk of AIS 3 or greater neck injury. Again, a 16% risk of AIS 4 or greater head injury is permitted by FMVSS 208.

It is worth noting that FMVSS 208 establishes no maximum level of neck injury whatsoever for barrier crash tests, and it never has. In other words, apart from the S13 alternative sled test, the agency currently permits an unlimited level of neck injury.

Another way to put the risk at issue in perspective is to look at NHTSA's recent Advanced Air Bag Proposal. There, the agency is proposing to continue the 1000 HIC requirement and the corresponding 16% risk of AIS 4 or greater brain injury. For the first time, the agency is also proposing neck injury criteria for a barrier crash test. Specifically, NHTSA has proposed "an improved neck injury criterion called Nij." Advanced Air Bag Proposal at 49976. As explained there, the goal of this criterion is to account for "the superposition of loads and moments, and the additive effects on injury risk." <u>Id.</u> It is worth noting therefore that the MY 1999 Tahoe tested by TRC has a neck tension/extension Nij that is well below the 1.4 value proposed by NHTSA. Indeed, in every FMVSS 208-representative test to date, the subject MY 1999 C/K vehicles have had neck tension/extension values below the proposed limit. In all but one test, the neck tension/extension index was even below the much more stringent 1.0 index level being considered as an alternative requirement. In short, the performance of the subject 1999 C/K vehicles is such that they would meet the neck injury criteria NHTSA has proposed for future model year vehicles.

Another way to depict risk to an exposed individual is by comparison to the five star system used by NHTSA in connection with the New Car Assessment Program (NCAP). The star ratings depend on a combination of HIC values and Chest G Values obtained in the 35 mph NCAP test. Attachment B shows two vertical lines related to risk of injuries superimposed on the five star map. For the neck injury risk line labeled "Neck Extension" (shown in blue), the upper end corresponds to the 0.3 risk for the 67 Nm value observed in TRC testing while the lower end corresponds to the 0.09 risk for the 57 Nm requirement of S13. These risks properly reflect the effect of 80% muscle tone as appropriate for inposition occupants. As the chart illustrates, the risk at issue here is comparable to a level of risk that would qualify a manufacturer for a five star rating in an NCAP test.

The vertical line labeled "Insignificant Injury Increase" (shown in red) on Attachment B shows the difference between HIC levels of 240 to 340. NHTSA recently stated that an increase in HIC levels from 240 to 340 would properly be regarded as "insignificant to the probability of injury." NHTSA Preliminary Economic Assessment for the Advanced Air Bag Rulemaking at IV-4 (August, 1998). As shown in Attachment B, the difference between 67 and 57 Nm neck extension moments is similarly insignificant. On this ground alone, therefore, the risk at issue should be deemed insignificant.

B. GM's Risk Calculations for the Subject C/K Fleet

GM's petition demonstrated that over a ten year period not even one additional person would likely experience an AIS 3 or greater neck injury. This is because only a small number of occupants could be exposed to the small individual risk explained above.

The commenters challenge several factors in GM's calculation of fleet-level risk. These are addressed individually showing why GM's estimates are in fact conservative – that is, they exaggerate the risk to safety.

1. Number of Vehicles

The Center's first complaint is that GM did not provide detailed information on the affected vehicles. CFAS Comments at 5, Advocates at 2-3. In fact, GM has included in its calculation the entire subject vehicle population, <u>i.e.</u>, all MY 1999 Chevrolet, GMC and Cadillac C/K vehicles (pickups and utilities) subject to the FMVSS 208 requirement that were built from September 1, 1998 through May 4, 1999. The total number of such vehicles is 279,132.

Prior to a test being conducted, GM has identified no method for distinguishing whether the type of performance observed in the TRC test will occur, within the population of subject vehicles. GM estimated, based upon extensive testing, that less than half of the subject vehicles would exhibit the type of performance observed in the TRC test. GM then used a figure of fifty per cent to be conservative.

2. Ten Year Lifespan

The Center also objects to GM's use of a ten-year time horizon in its calculation, observing that some of the affected C/K vehicles will certainly last longer than ten years. CFAS comments at 5. This comment overlooks both the nature and effect of GM's calculation.

To begin with, GM's calculation assumes that *all* the affected vehicles will last ten years. While it is certain that some of the affected vehicles will last beyond that period, it is equally certain that some of the affected vehicles will be retired earlier. GM obviously did not intend the ten year period to be a precise estimate of the life span of the C/K vehicles. Rather, the ten year period was intended to capture the long term effect of the neck extension performance at issue. Some vehicles may last far longer than ten years, but the risk for the population as a whole will obviously decline as the vehicle population ages. This is partly due to vehicle retirements and partly due to reduced driving in older vehicles.

More fundamentally, the risk analysis is not significantly affected by this, because the lifespan assumption will not only affect the risk in the relevant vehicles but also the "baseline" risk, <u>i.e.</u>, the risk allowed under the 57 Nm neck extension requirement. To illustrate the point a different way, the incremental risk of actual human injury at 67 Nm versus 57 Nm would be less than one additional individual with AIS 3 or greater neck injuries if the entire C/K fleet at issue remained in service for fifty (50) years.

3. Air Bag Deployment Rate

The Center finds fault with GM's assumption that the subject vehicles will experience 5,700 air bag deployments per million vehicle years. CFAS Comments at 6. GM derived this number by dividing the number of airbag deployments estimated from 1995-1996 NASS GES by the number of airbag equipped vehicles on the road in those years. NHTSA Preliminary Economic Assessment for the

Advanced Air Bag Rulemaking, Table II-4 at II-6 (August, 1998). GM believes that the MY 1999 C/K vehicles will likely experience a lower deployment rate. This is because the C/K vehicles are larger and heavier than the average vehicle included in the calculation. Hence, GM's calculation again is conservative.

4. Percentage of Most Severe Crashes

The Center questions GM's assumption that twenty percent of crashes involving the subject vehicles would produce a crash pulse as severe as the crash pulse of the FMVSS 208 sled test. CFAS Comments at 5. This assumption is based on an analysis of NASS that was submitted to NHTSA in the Advanced Air Bag rulemaking. See Attachment 3A to GM Comments to Docket 98-4405 (December 17, 1998 - USG 3454). Specifically, GM's analysis shows that of all occupants who receive AIS 3 or greater injuries, 81 % are involved in crashes whose change in velocity, or Delta V, is below 30 mph. This means that only nineteen percent of such occupants experience a crash with a Delta V that is at or above 30 mph. It should be pointed out that some of those crashes would be so severe that occupants would be at great risk even with full-powered air bags. See Attachment B (35 mph NCAP star ratings.) GM's use of twenty percent in its incremental risk calculation was, again, conservative.

5. Safety Belt Use

Both commenters take issue with GM's assumption that thirty percent of C/K occupants would be unbelted. CFAS Comments at 5, Advocates at 3. As the Center acknowledges, this number reflects NHTSA's latest data on belt use nationwide. Nevertheless, the Center argues that GM should have taken into account that trucks historically have lower belt use.

The Center overlooks that GM is calculating the incremental risk over the next ten years. While predicting future belt usage accurately would require a crystal ball, there is no reason to assume, as the Center apparently does, that belt use in C/K vehicles will never increase above 1996 levels. Moreover, as noted earlier, the risk analysis is not significantly affected by this because any change in the factor would affect both the number of people exposed to the baseline neck extension risk as well as the number exposed to any higher neck extension values. Therefore, any reasonable estimate of seat belt usage will have relatively little impact on the incremental risk calculation.

6. Unchallenged Factors

Although the commenters raised no issue about the other elements in GM's calculation, the agency may find it helpful to have more detail concerning derivation of these factors as well. These are touched on briefly here.

Rightfront seat occupancy. This factor was calculated by GM using data from the 1993-96 NASS Crashworthiness Data System. The calculated ratio of right front passengers to drivers is 0.29. To be conservative, GM used the factor one third.

Passenger Size. Based on conservative engineering judgments, GM concluded that the neck extension observed in the TRC test applies only to passengers who are of the same size as the 50% male ATD or larger. To determine the number of passengers who fit this profile, GM analyzed passenger height and weight data from 1993-96 NASS CDS. Based on this analysis, GM estimates that less than half of right seat occupants are as large as a 50 % male ATD. To be conservative (and account for the possibility that some fraction of slightly smaller occupants could also be affected), GM used a factor of 60 percent. Although the sled test applies only to in-position occupants, GM has made no adjustment to account for the unknown percentage of right front seat occupants who might be out of position.

Neck Extension Moment. To estimate the increased risk of the exposed C/K occupants, GM used the neck extension value observed in the TRC test. As noted earlier, GM has seen a broad range of peak neck extension values when measured after the prescribed crash pulse. See Attachment A. TRC's value is somewhat above the mean peak value observed in the tests to date. For this reason, GM concludes it would be an appropriately conservative number in a calculation involving the whole fleet.

C. GM's Determination of Inconsequentiality

In addition to their stated concerns regarding GM's risk calculation, the commenters also argue on various grounds that the risk at issue here is not inconsequential. These arguments are addressed below.

1. The "Zero Risk" Argument

According to the Center, a petition for exemption must be denied if it contemplates *any* increased risk of serious injury or death. CFAS Comments at 2. But this argument would read the provision for exemption out of the law, and this cannot be what Congress intended. Indeed, as the Center itself observes elsewhere, there are indications from the legislative history that Congress expected exemptions where the effect of a noncompliance would be "de minimis in its impact on the number of traffic accidents and deaths and injuries to persons" (CFAS Comments at 1 n. 1 quoting Senate bill). In GM's view, the actual human injury risk at issue here clearly is de minimis as well as inconsequential by any rational definition of those terms.

2. The "It's Not Inconsequential If It Can Be Remedied" Argument

The Advocates and the Center also suggest that a noncompliance cannot be exempted if it can be remedied instead. CFAS Comments at 3; Advocates at 3. Again, this argument proves too much, because most, if not all, noncompliances could be remedied in some way. Moreover, the fact that GM found a way to improve its design going forward should not be a basis for denying its petition. Such an outcome would give manufacturers a perverse incentive <u>not</u> to implement improved designs. The comments are without legal basis and invite the agency to adopt an unwise policy.

3. The "A Noncompliance Involving Air Bags Is Per Se Consequential" Argument

The Advocates and the Center also seem to suggest that a noncompliance involving air bags can never be inconsequential. CFAS Comments at 3,5; Advocates at 1-2. To suggest, as CFAS does, that a violation of this "particular standard" is unique because it is more likely to result in hazardous consequences than other standards indicates a complete lack of understanding of the associated risk level. This is true not only with respect to the risks acceptable under other standards, but, more importantly, even with other aspects of this same standard. This private agenda argument finds no support in the law. Congress instructed the agency to permit exemptions in all cases where the risk is inconsequential, not just those involving noncompliances of lesser interest to the Center for Auto Safety or other special interest groups.

4. The risk tolerated by FMVSS 208

The Center asserts that "GM's compliance failure ... would yield almost three times the risk tolerated by FMVSS 208." According to the Center, a "noncompliance scenario that results in an injury

risk so much greater than that allowed by the standard certainly cannot be reasonably construed as 'inconsequential'." CFAS Comments at 4; see also Advocates at 2.

GM agrees that the amount of risk tolerated by FMVSS 208 is a highly relevant consideration, but the Center is quite wrong in suggesting that the Tahoe neck extension comes anywhere near exceeding that risk level. As pointed out in Part II A above, the risk of a 67 Nm neck extension is less than 1/50 the risk of head injury that is currently permitted by FMVSS 208. The MY 1999 C/K vehicles also meet the Nij neck injury criterion that NHTSA has proposed for the future.

-8-

III. CONCLUSION

For the foregoing reasons, General Motors believes that NHTSA can fairly resolve this matter by concurring that the neck extension value recorded by TRC does not constitute a noncompliance because it occurred after the completion of the S13 test. In the alternative, the agency may dispose of the matter by granting GM's petition to treat the apparent noncompliance as inconsequential to motor vehicle safety.

* * *

The information in Attachment A is confidential information within the meaning of Section 1905 of Title 18 of the United States Code, and is entitled to confidential treatment pursuant to Section 552(b)(4) of Title 5 of the United States Code (Exemption 4 of the Freedom of Information Act) and Section 112(e) of the National Traffic and Motor Vehicle Safety Act of 1966, as amended and implemented in Part 512 of Title 49 of the Code of Federal Regulations. Accordingly, GM respectfully requests that it be given such treatment for an indefinite period.

The information for which confidentiality is being requested consists of engineering test data. This is the type of information the agency has determined would presumptively result in competitive harm if disclosed (Part 512, Appendix B). The information for which confidential treatment is requested includes trade secrets and confidential commercial information. The confidential information has been marked "GM Confidential", and is being furnished with a copy of this letter to the Office of the Chief Counsel.

This information has great value to GM and would be of competitive value to other motor vehicle manufacturers. Knowledge of the test data could enable a competitor to alter its vehicle strategy without expending the resources that were necessary for GM to expend in order to develop these confidential business practices. Thus, disclosure of this information would be likely to result in substantial competitive harm to GM.

GM treats the information for which confidential treatment is requested as confidential, proprietary information available only to authorized personnel of GM and selected suppliers and customers, and is not otherwise available to the public. Documents containing information of this type are maintained under a recordkeeping system which is intended to control dissemination of these materials within GM, and to assure that the materials are not disseminated outside GM. To the best of our knowledge, none of the information for which confidentiality is being requested has been disseminated outside GM, except to GM suppliers and customers who have entered into appropriate confidentiality agreements. To the best of our knowledge, no prior determinations of the confidentiality of this specific information have been made by NHTSA, other Federal agencies, or the Federal courts. Should NHTSA receive a request for disclosure of these materials, GM requests that it be notified of the request, and be given an opportunity to provide further information, as necessary, as to why the confidentiality of these materials should be maintained. If there are any questions regarding this request for confidential treatment, please contact Mr. Charles W. Babcock (810/986-1819), GM Legal Staff, Warren, Michigan.

We welcome the opportunity to discuss any aspects of this with you or members of your staff. If there are any questions, please do not hesitate to contact Mr. John E. Kromrei (810/947-1735) of my staff, or Mr. Richard F. Humphrey (202/775-5071) of GM's Washington Office.

Sincerely,

Aunios

C. Thomas Terry, Director Safety Affairs & Regulations Safety Center

attachments

cc: Office of Chief Counsel, NHTSA; 2 copies with & 1 copy without confidential information Ms. M. Jacobs, NHTSA; 1 copy without confidential information

CERTIFICATE IN SUPPORT OF REQUEST FOR CONFIDENTIALITY

I, C. Thomas Terry, pursuant to the provisions of 49 CFR Part 512, state as follows:

(1) I am Director of Safety Affairs & Regulations, Safety Center, and I am authorized by General Motors Corporation (GM) to execute documents on its behalf;

(2) The information in Attachment A which has been marked "GM Confidential" consists of engineering test data. It is being submitted with the claim that it is entitled to confidential treatment pursuant to 5 USC 552(b)(4) and Section 112(e) of the National Traffic and Motor Vehicle Safety Act of 1966, as amended and implemented in 49 CFR Part 512;

(3) I, or members of my staff, have personally inquired of the responsible GM personnel who have the authority in the normal course of business to release the information for which a claim of confidentiality has been made to ascertain whether such information has ever been released outside GM;

(4) Based upon such inquiries and to the best of my knowledge, information and belief, the information for which GM has claimed confidential treatment has never been released or become available outside GM, except as needed by GM's suppliers and customers which have entered into appropriate confidentiality agreements or in response to court orders;

(5) I make no representations beyond those contained in the certificate and in particular, I make no representations as to whether this information may become available outside GM because of unauthorized or inadvertent disclosure; and

(6) I certify under penalty of perjury that the foregoing is true and correct, to the best of my information and belief.

Executed on this day the 31st of August, 1999.

Alone Kiry

C. Thomas Terry, Director Safety Affairs & Regulations Safety Center

Attachment A

USG 3433; Part 12

2 pages (including this cover) * * * * *

Confidential

Information

Removed

* * * * *

Attachment B

USG 3433; Part 12

2 pages (including this cover)

р ATTACHMENT



