APPENDIX: V

DOCUMENT NUMBER: NTSB Record 9

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DESCRIPTION OF DOCUMENT: Graph titled "Free Response to

Mass Prop and Aero Changes: Variation due to Thrust"

The NTSB received this document from The Boeing Company Air Safety Investigation Team, which is part of its Commercial Airplane Group (CAG/ASI). The document, which was voluntarily tendered by CAG/ASI to the NTSB, was intended to provide data to the NTSB investigative team concerning the longitudinal aspects of the flight path of a Model 747 aircraft, taking Boeing into consideration certain other changes in flight characteristics. The data involving mass properties, aero changes and variation of thrust concerning Boeing Model 747 aircraft, which are considered by Boeing to be commercial and confidential information, were needed by the NTSB investigative team to analyze the possible flight path responses of the accident aircraft following a catastrophic event, such as the loss of the forward section of the aircraft. Boeing marked this

document with the legend "Preliminary # 1." The document, according to Boeing, also contains proprietary data of a Boeing supplier, which data, according to Boeing, is used under the terms of an agreement between Boeing and the supplier, which restricts the public disclosure of the supplier's proprietary data. The document, in addition to the confidential, commercial information concerning the mass properties, aero changes and thrust characteristics of Boeing Model 747 aircraft, also contained information identifying professional staff members of Boeing who were involved in the preparation of the document and who are knowledgeable concerning the Boeing confidential, commercial information contained in the document. document contained certain identifying information concerning particular NTSB personnel who participated in the analysis and application of this data. By virtue of the application of exemptions (b)(4) and (b)(6) of the Freedom of Information Act (FOIA), this document withheld in its entirety.

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The data concerning mass properties, aero changes and variation in thrust, in baseline configuration and configuration without the forward section of the aircraft, is considered by Boeing to be commercial information, the

release of which would disclose to the public, including the competitors of Boeing, operational information regarding the Boeing fleet of 747 aircraft. All of the data contained in this document are employed by Boeing to optimize the performance of its aircraft, which, fundamental activity of any aircraft manufacturer, requires innumerable staff-hours and other resources. In this case, it also involves commercial information of a commercial supplier of Boeing, which data was secured by Boeing in a commercial agreement with its supplier. Ιt understanding of the NTSB that the information contained in this document is not of the type that is customarily released by Boeing to the public. Further, as Boeing states in its submitter letter (Exhibit II-10), these data form part of a "...training simulator database that was developed at a considerable expense by Boeing. If a competitor were to obtain this information through a public release, without having to go to the effort and expense Boeing did, Boeing could be competitively harmed." (Letter of M. Henry (Hank) Halle, dated March 13, 2001, Exhibit II-Thus, according to Boeing, the release of this information under the FOIA would permit a competitor to acquire this valuable and highly sensitive engineering data without requiring the competitor to expend the time and

money that Boeing invested in developing the data. Given the voluntary provision of these commercial and confidential data in this document to the NTSB by Boeing, the fact that the data are not customarily released to the public by Boeing, and the fact that the data were not identified by the NTSB as commercial information that, for the protection of public safety, was required to be published in a report or the public docket of the NTSB, the data contained in this record were found to be confidential and exempt from release under the FOIA and were withheld pursuant to exemption (b) (4).

As a further consideration, public disclosure of the withheld technical data, to the extent that it may cause substantial harm to Boeing's competitive position and the position of its business partner, would also be likely to its commercial Boeina reluctant to share proprietary technical data with the NTSB in the future. which would impair the NTSB's ability to have direct access to the technical data that is required for proper analysis and investigation in aviation accidents. Restriction of access to these data would significantly impair the NTSB's ability to complete its accident investigation work. example of the cooperation of Boeing, the NTSB was able to incorporate certain of Boeing's proprietary engineering

data into the NTSB program to simulate the flight path of the main wreckage of TWA flight 800 after separation of the forward fuselage. The results of this simulation are included in the Main Wreckage Flight Path Study, which is a publicly available document, accessible through the NTSB's web page at www.ntsb.gov.

The names, telephone and facsimile numbers for Boeing employees were redacted pursuant to exemption (b)(4). The redacted information, voluntarily submitted by Boeing, is considered by Boeing to be commercial in nature and to reveal commercial operations, which from Boeing's perspective, makes the withheld information confidential in nature.

Boeing's employees, including the engineers and technical staff in CAG/ASI, are vital to the design, manufacture, sale and support of commercial aircraft, which are a primary product of the company. Boeing invests a great deal of time, money and other resources educating and training its personnel in order to develop their skills and usefulness to Boeing's commercial operations. Boeing engineers and technical staff in their daily work routinely create, have access to, and use Boeing proprietary information that is commercially valuable to Boeing.

Further, they routinely access and use the proprietary information of Boeing's suppliers and customers, information was provided to Boeing by its suppliers and customers with the expectation that it would be held and disclosure of confidential. Use proprietary information, whether that of Boeing, a supplier customer, is restricted by agreements between Boeing and employees, suppliers, and customers. Boeing its policies and procedures to prevent disclosure proprietary information, which is not customarily made available to the public.

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Disclosure of withheld information the concerning Boeing's employees would identify the professional staff of Boeing that are involved in the technical and professional activities of CAG/ASI, which would link particular employees with particularized commercial operations Boeing. Additionally, it would identify and disclose those employees of Boeing that are in possession of and familiar with the proprietary information of Boeing and suppliers and customers. Boeing therefore has a commercial interest in withholding from disclosure the identifying information concerning its employees and the proprietary information they have created, accessed, or used in the course of their employment.

As a normal business practice to prevent burdensome or improper contact between Boeing's employees and third parties who might have an adverse interest in Boeing's business, Boeing generally does not release direct contact information for its employees. If the withheld information were released, names and contact information for employees who have access to or knowledge of Boeing's commercially valuable proprietary data would be available to the public general and to Boeing's competitors in particular. Armed with the basic knowledge of the employees' knowledge, skills, and responsibilities, Boeing's competitors could attempt to hire these individuals away from Boeing or otherwise seek to gain information from them. In short, public disclosure of the withheld information, to extent that it may cause substantial harm to Boeing's competitive position, would also be likely to impair the ability to have direct access and information concerning the professional and technical staff of Boeing. If, as a result of disclosure of identifying information concerning its employees, the employees were subject to burdensome or improper contact, it would be more difficult and expensive for Boeing to offer its most experienced and knowledgeable employees to support NTSB investigations.

Loss of the investigative asset that the Boeing employees represent would significantly impair the NTSB's ability to complete its accident investigation work. For Boeing, loss of members of its highly skilled workforce would have a detrimental effect on Boeing's ability to compete in a very demanding global marketplace.

The names and other identifying information concerning the employees of Boeing were also withheld pursuant to exemption (b)(6). These individuals are not government employees; rather, they are employees of corporation. Given the commercial value of the information that is in the possession of these individuals and the curiosity that has arisen surrounding the accident investigation of the crash of TWA Flight 800, release of the names, telephone and facsimile numbers of these Boeing employees would permit the invasion of the employees' personal privacy and would make them subject to unwanted possibly unmanageable and contact from host of individuals unknown to them. It is clear, therefore, that the employees of Boeing have a privacy interest in their names and other identifying information and in the nondisclosure of their names and other identifying information.

Taking into consideration the public interest in the disclosure of the material withheld under (b)(6), as public interest is defined in the FOIA, it does not appear that the withheld information is of the type in which there is a public interest or, if an interest exists, it is minimal. That is, the names and identifying information of Boeing employees do not shed light on the agency's performance of its statutory duties. Thus, it appears that there is little to no public interest in the disclosure of this information and that the Boeing employees' right to privacy outweighs any such interest. The disclosure of the information, without revealing information concerning how the NTSB performs its statutory duties, would constitute a clearly unwarranted invasion of the personal privacy of the Boeing employees.

The names and other identifying information, including telephone numbers, of the employees of the NTSB that participated in the evaluation and study of these data were also withheld pursuant to exemption (b)(6). Although these individuals are government employees performing their assigned duties, given the commercial value of the Boeing information that is in their possession and the curiosity

that has arisen and continues to exist regarding the accident investigation of the crash of TWA Flight 800, release of the names, telephone and facsimile numbers of these government employees would permit the invasion of the employees' personal privacy. This disclosure would make subject to unwanted and possibly these employees unmanageable contact from a host of individuals unknown to It is clear, therefore, that these government them. employees have a privacy interest in their names and other identifying information and in the non-disclosure of their names and other identifying information.

Taking into consideration the public interest in the disclosure of the material withheld under (b)(6), as public interest is defined in the FOIA, it does not appear that the withheld information concerning the government employees is of the type in which there is a public interest or, if an interest exists, it is minimal. is, the disclosure of the names and identifying information of the NTSB employees would not shed light on the agency's performance of its statutory duties. Thus, it appears that there is little to no public interest in the disclosure of information and, as a result, the government this employees' right to privacy outweighs any such public interest. The disclosure of the names and other information

concerning the NTSB employees, without revealing information concerning how the NTSB performs its statutory duties, would constitute a clearly unwarranted invasion of the personal privacy of these employees.