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# DISCLOSURE OF THE AIR FORCE HUMAN FACTORS INVESTIGATION

GENE R. BEATY\*

Traditionally the findings of military aircraft accident investigations have been shrouded in secrecy. As a result, it has been difficult for civilian attorneys to advise potential plaintiffs about the prospects for successful products liability litigation. New rules, requiring disclosure of information by the Government, have threatened to disrupt longstanding confidential relationships between manufacturers and their military customers and to alter our concept of individual personal privacy. As the frequency of liability suits for defective products increases, it is probable that this longstanding conflict will continue.

Whether civilian or military, an air crash exacts a high cost—the deaths of highly trained and experienced personnel and the loss of expensive equipment. To reduce these losses, the military and civilian accident investigating teams have become increasingly proficient in discovering the cause of aircraft crashes so that efforts can be made to avoid future accidents. Traditionally, manpower and other resources have concentrated on discovering the structural and mechanical causes of a crash, but little attention was paid to the human factors contributing to the accident until the late 1950's.<sup>1</sup> Recently, however, the flight surgeon has assumed an increasingly important role in accident investigation and prevention.

The function of the flight surgeon is to care for the health of

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<sup>1</sup> Armstrong, Fryer, Stewart and Whittingham, *Interpretation of Injuries in the Comet Aircraft Disasters*, LANCET 1143 (1955).

the crew members<sup>3</sup> and to be familiar with their personal and safety equipment so that he can render professional advice in the handling, use, and improvement of this equipment.<sup>3</sup> There is no question that a defect in the design or manufacture of equipment such as pressure suits, oxygen masks and helmets, anti-G-suits, parachute equipment and survival equipment can be fatal. The flight surgeon is expected to understand the significance of the various elements of the cockpit instruments and controls; the shape and dimensions of the work area and emergency escape areas; aircraft ejection seats and the restraint system; the obstructions and distractions of the visual field; breathing and pressurization systems; and inflight procedures. The doctor's awareness of all these factors is very important to both the clinical and the accident investigation phases of the safety program.

#### ACCIDENT INVESTIGATION

The human factors phase of aircraft accident investigation consists of an examination of the psychological, physiological, and environmental variables which determine human performance in aviation.<sup>4</sup> In recent years increasingly sophisticated investigation techniques such as aviation pathology and human factors engineering have been utilized to analyze the actions of the crew members, tower controllers, or others who may have contributed to the crash. The flight surgeon is responsible for performing a thorough medical examination of all surviving crew members or passengers; conducting a comprehensive investigation into the physiological and psychological conditions of the crew prior to and during the flight; and investigating all factors relating to the escape, survival and personal equipment of the crew.<sup>5</sup> The source and sequence of injuries may be determined in these ways and by an autopsy of the fatalities.<sup>6</sup> This investigation is summarized in an oral and written report to the appropriate investigation board.

The Air Force convenes two separate investigations when an

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<sup>2</sup> *The Flight Surgeon's Role in Flight Safety*, FLIGHT SURGEON'S GUIDE 15-2 (Dec. 27, 1968).

<sup>3</sup> *Id.* at 15-3.

<sup>4</sup> *Id.* at 15-11.

<sup>5</sup> These requirements are detailed in AFM 127-1, ch. 14; AFP 161-18, ch. 14; AFM 160-109.

<sup>6</sup> *Id.*

accident occurs which is likely to result in litigation. The Aircraft Accident Safety Investigation is designed to determine all the circumstances in order to avoid recurrence. It is the primary investigation and takes priority over the collateral investigation in interviewing witnesses, obtaining and analyzing evidence, or inspecting the scene of the accident.<sup>7</sup> An important feature of the safety investigation is that much of the report may be withheld from disclosure to the public. Each witness may be told that his testimony or other evidence will be confidential and will not be used for any other purpose except accident prevention. The Air Force considers this confidential relationship to be essential to ensure frank and open communications between the witnesses and the investigators. This investigation is the only one likely to have a flight surgeon assigned.<sup>8</sup>

The Collateral Investigation, on the other hand, is convened to obtain and preserve all available evidence for use in claims, litigation, adverse administrative or disciplinary proceedings or any other purpose.<sup>9</sup> Two separate investigations are justified since the collateral investigation will contain the evidence which should be released to litigants, but the report of the safety investigation will contain some information that should not be disclosed to the public.<sup>10</sup> Also, the collateral investigation is less concerned with making recommendations to improve safety or performance of the aircraft. Since the safety investigation report is more complete, there has been a long history of litigation involving efforts to secure access to it.

#### THE PRIVILEGED STATUS OF SAFETY REPORTS

The Air Force has always maintained that effective aircraft accident investigation requires free access to all relevant information by safety investigators. It is believed that if the safety report of the investigation is freely releasable to Air Force personnel, their

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<sup>7</sup> AFR 124-4 (1973); Watts & Johnson, *Discovery Problems in Aircraft Litigation*, 44 OKLA. B. ASS'N J. 533 (Quarterly Supp. 1973).

<sup>8</sup> Assignment of an experienced aerospace medical officer (flight surgeon or flight medical officer) is required by AFR 127-4, § 11(d)1c.

<sup>9</sup> AFR 110-14, § 1 (Nov. 1, 1973).

<sup>10</sup> Burton, *Aircraft Investigations: An Analysis of the Recent Changes in the New Regulations Governing the Investigations*, 14 JAG L. REV. 233 (1973).

dependents, or other potential plaintiffs, the potential defendants (such as the designer, manufacturer or contract maintenance facility) might refuse to cooperate in an investigation which might disclose their negligence. Representatives of these businesses and all other witnesses are told that information submitted to the safety board will be used *only* for accident prevention purposes. This promise encourages witnesses and board members to speculate about the causes of the crash and recommend changes which will prevent future accidents.

In 1953 the Supreme Court upheld the privileged status of safety reports because the executive branch of the federal government has the authority to withhold information from the public when national security interests are threatened.<sup>11</sup> The Court held that the lower federal court did not have authority to insist upon an examination of the accident report, even in the privacy of its chambers, since the plane was carrying secret equipment. It was apparent that the report of the investigation "would contain references to the secret electronic equipment which was the primary concern of the mission."<sup>12</sup> Although the Supreme Court held that the complete report was privileged, it is unlikely that the same result would occur today because of the impact of the Freedom of Information Act and the present Federal Rules of Evidence.<sup>13</sup>

Subsequent cases foretold the inevitability of the present rules. In 1963 the Air Force was ordered to release the factual findings of Air Force mechanics who had examined the wreckage.<sup>14</sup> The Air Force had argued that disclosure of the factual portion of witnesses' statements would hamper its ability to secure the cooperation and frank testimony. The court conceded that this might be true of nongovernmental witnesses such as technical representatives of various companies that might be at fault, but rejected the argument as it applied to factual determinations by governmental witnesses.

The court distinguished between factual information and deliberations or recommendations about Air Force policies to be

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<sup>11</sup> *United States v. Reynolds*, 345 U.S. 1 (1953).

<sup>12</sup> 345 U.S. at 10.

<sup>13</sup> See text discussion beginning at note 24 *infra*.

<sup>14</sup> *Machin v. Zuckert*, 316 F.2d 336 (D.C. Cir. 1963), *cert. denied*, 375 U.S. 896 (1963).

pursued.<sup>15</sup> This distinction was clarified in a supplemental opinion which held that the mechanics' "opinions" and "conclusions" about possible defects in the propellers were not automatically protected from disclosure because these could be essentially "factual" determinations rather than policy analyses. Nevertheless, the court recognized that this distinction was very subtle and held that the report should be submitted to the trial court for decision. This case introduced a very important distinction, but the court failed to explain it fully.

A later case clarified the distinction somewhat by recognizing "expert opinion" as essentially a factual determination.<sup>16</sup> The court ordered that all factual information be released including the "conclusion of any witness or person who is asked an opinion predicated on facts of the investigation provided such person, including a board member, is qualified as an expert with reference to the particular conclusions requested."<sup>17</sup> The court did not expand on this order, but the decision explains why the mechanics' "opinions" were included as factual information by the earlier court. By the same logic, the medical determinations of the flight surgeon may be considered "expert opinion" in most cases, but, as the courts have recognized, the expert opinion must still be essentially factual in order to be releasable. It is not clear how much confidentiality an "expert" can expect when analyzing or speculating about the cause of an accident, but the court would probably attempt to discern the degree of certainty that the expert had in the judgment.

In 1965 another court held that the privileged status of a report can be waived by the Government.<sup>18</sup> In a series of accident investigations, technical representatives of the aircraft manufacturer worked closely with the manufacturer to prepare several "group reports" on the technical factors in the accident. These final safety reports had been released to the authors (including the industry representatives) in order to improve air safety. Later the manufacturer was sued, and plaintiffs argued that it was unfair for only the manufacturer to have access to these reports—even though the

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<sup>15</sup> *Id.* at 339-40.

<sup>16</sup> *McFadden v. Avco Corp.*, 278 F. Supp. 57 (M.D. Ala. 1967).

<sup>17</sup> *Id.* at 60.

<sup>18</sup> *O'Keefe v. Boeing Co.*, 38 F.R.D. 329, 335 (S.D.N.Y. 1965).

manufacturer denied using the reports for litigation purposes. The court agreed that fairness required release of the factual portions of the reports since it was impracticable to police the manufacturer's use of the reports. The court went on to suggest that even the privilege accorded opinions, conclusions, and recommendations could be waived, but held that this privilege was much weightier than the one for factual information.<sup>19</sup> A special master was appointed to distinguish between factual and other information.

As a result of this case Air Force procedures were changed to prevent industry representatives from being board members or from furnishing any part of the report not otherwise available to the public.<sup>20</sup> Nevertheless, the Air Force recognizes a close affinity of interests with the manufacturers that support the Air Force mission. Because the manufacturers must implement any safety proposals arising from the investigation, the results of the investigation obviously must be shared with them. Also, any judgments against the manufacturer or increased insurance costs will be reflected in the cost of future weapon systems, leaving the Air Force little incentive to aid plaintiffs in products liability litigation. Manufacturers are in a uniquely awkward situation in military crash investigations because they sometimes are forced to defend against allegations that a product was defective while maintaining a continuing business relationship with the best, and often, *only* customer: the Department of Defense.<sup>21</sup> The usual case arises when the heirs of military personnel, who cannot sue the United States,<sup>22</sup> bring suit against the manufacturer or component manufacturer on a products liability theory, placing the manufacturer in the position of defending against suit by an employee while maintaining a healthy business relationship with the employer. It has been suggested that the privilege for safety board reports reflects the sensitivity of courts to this awkward position of manufacturers.<sup>23</sup>

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<sup>19</sup> *Id.*

<sup>20</sup> USAF Deputy Inspector for Inspection and Safety, Policy Letter No. 18 (Dec. 8, 1965).

<sup>21</sup> Finn & Martin, *Discovery in a Military Aircraft Crash—Defendant's Viewpoint*, 41 J. AIR L. & COM. 295, 296 (1975).

<sup>22</sup> *Feres v. United States*, 340 U.S. 135 (1950); Rhodes, *The Feres Doctrine After Twenty-Five Years*, 18 AIR FORCE L. REV. 24 (1976).

<sup>23</sup> Finn and Martin, *supra* note 21, at 305 n.24; Sales, *Discovery Problems in Aviation Litigation*, 38 J. AIR L. & COM. 297 (1972).

## FREEDOM OF INFORMATION ACT EXEMPTIONS

Congress has recognized that the Government needs to maintain certain confidential relationships with industry and to protect certain internal documents from disclosure. The Freedom of Information Act<sup>24</sup> established a policy of open disclosure but provided nine specific exemptions. Four of these are relevant to the discussion of the human factors portion of accident investigation. These are: (1) information properly classified as secret in the interest of national security; (2) confidential data such as trade secrets which have been obtained from a person upon assurance that it would be held in confidence; (3) inter-agency or intra-agency policy memoranda; and (4) medical and similar files that must be maintained in confidence to avoid a clearly unwarranted invasion of personal privacy.<sup>25</sup> Information within the first category includes only information which has been classified as SECRET or TOP SECRET in accordance with proper procedures.<sup>26</sup> Information in the other categories is considered by the military to be "For Official Use Only."<sup>27</sup> Merely classifying information into one of these exempt categories does not resolve the inquiry, however, since there must also be a governmental determination that a significant and legitimate purpose would be served by non-disclosure.<sup>28</sup> Also, whether classified or not, it is necessary to examine the requested document to determine whether portions of it can be segregated and released.<sup>29</sup> The burden is on the Government to justify withholdings,<sup>30</sup> and the exemptions are strictly and narrowly construed.<sup>31</sup>

The second category, information obtained from a person or company outside the Government upon an understanding that the information would be treated as confidential,<sup>32</sup> includes trade secrets

<sup>24</sup> 5 U.S.C. § 552 (1970), *as amended*, (Supp. IV, 1975), *as implemented by* AFR 12-30 (Feb. 19, 1975).

<sup>25</sup> 5 U.S.C. § 552(b)(1)-(a) (1970), *as amended*, (Supp. IV, 1975).

<sup>26</sup> *Id.* at § 552(b)(1).

<sup>27</sup> AFR 12-31, ¶ 1 (July 15, 1974).

<sup>28</sup> AFR 12-30, ¶ 10 (Feb. 19, 1975).

<sup>29</sup> *Ethyl Corp. v. EPA*, 478 F.2d 47 (6th Cir. 1973); *Legal Aid Soc'y of Alameda County v. Shultz*, 349 F. Supp. 771 (N.D. Cal. 1972).

<sup>30</sup> *Benson v. General Services Admin.*, 289 F. Supp. 590, 593 (W.D. Wash. 1968).

<sup>31</sup> *Soucie v. David*, 448 F.2d 1067 (D.C. Cir. 1971).

<sup>32</sup> 5 U.S.C. § 552(b)(4) (1970), *as amended*, (Supp. IV, 1975).

and other commercial or financial information that, if released, might impair the company's competitive position. This exemption protects, for example, life support equipment designers or manufacturers who aid the safety investigation board. The House Report which accompanied the Act states: "a citizen must be able to confide in his Government. Moreover, where the Government has obligated itself in good faith not to disclose documents of information it receives, it should be able to honor such obligations."<sup>33</sup>

In *Brockaway v. Dept. of Air Force*,<sup>34</sup> this exemption was relied on to deny release of a manufacturer's confidential report containing findings and opinions about the possible causes of the crash. The district court recognized that this exemption applied only to trade secrets and information which is (a) commercial or financial, (b) obtained from a person outside government, and (c) privileged or confidential.<sup>35</sup> The plaintiff argued that the requested information was not commercial or financial data since it concerned technical engineering data and judgments. The court recognized that a manufacturer is less likely to be candid about possible manufacturing defects in a report that will be revealed to the public. Publication of such a report would not only endanger its competitive stance in the industry, but also might increase the company's risk of liability claims. Thus, the court decision reaffirmed that the safety investigator may properly request advice, opinions and recommendations from manufacturers or designers with a promise of confidentiality.<sup>36</sup> Finally, it should be noted that this exemption does not protect the statements or other evidence submitted by personnel within the Government.

The third category permits Government personnel to offer recommendations without fear of disclosure.<sup>37</sup> As one federal court stated, this exemption was intended to encourage the free exchange of ideas during the process of deliberation and policy making:

[I]t has been held to protect internal communications consisting of advice, recommendations, opinions, and other material reflecting deliberation or policy-making processes, but not purely factual or

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<sup>33</sup> 2 U.S. Code Cong. and Admin. News 2427 (1966).

<sup>34</sup> *Brockway v. Department of Air Force*, 370 F. Supp. 738 (N.D. Iowa 1974).

<sup>35</sup> *Id.* at 740.

<sup>36</sup> *Id.* at 740-41; Finn & Martin, *supra* note 21, at 307-08.

<sup>37</sup> 5 U.S.C. § 552(b)(5), *as amended*, (Supp. IV, 1975).

investigatory reports. Factual information may be protected only if it is inextricably intertwined with policy-making processes. . . . But courts must beware of the inevitable temptation of a government litigant to give [this exemption] an expansive interpretation. . . .<sup>38</sup>

The federal discovery rules are used as a guide to interpreting these exemptions.<sup>39</sup> Rule 26 states that a party may obtain a discovery of documents prepared by the other party "only upon a showing that the party seeking discovery has substantial need of the materials . . . and that he is unable without undue hardship to obtain the substantial equivalent of the materials by other means."<sup>40</sup> This provision only affects factual information since the mental impressions, opinions, conclusions, or legal theories of a party are protected from disclosure whether prepared by an attorney or other consultants.<sup>41</sup> In determining whether "undue hardship" and "substantial need" exist, the court considers such factors as the need to protect the mental impressions of a party, the lapse of time since the accident, the availability and location of witnesses, whether the witnesses are employees or agents of an adverse party, the availability of evidence after the accident, and whether there were any survivors.<sup>42</sup> In *Brockway* the court decided that an offer to disclose the names of the witnesses and to allow the witnesses to refresh their memories from their previous statements was not the "substantial equivalent" of providing the original testimony since memories fade over time.<sup>43</sup> Also, Air Force witnesses are likely to be scattered around the country, or even the world, by the time litigation occurs and may be reluctant to testify against their employer or a manufacturer having a close relationship with the Air Force.<sup>44</sup> Therefore, if the factual testimony of an Air Force witness is not preserved by the collateral board investigation, it may be secured from the safety investigation report if the court is persuaded that both "undue hardship" and "substantial need" for

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<sup>38</sup> Soucie, *supra* note 31, at 1077-78.

<sup>39</sup> Consumers Union of United States, Inc. v. Veterans Admin., 301 F. Supp. 796, 804 (S.D.N.Y. 1969).

<sup>40</sup> Fed. R. Civ. Proc. 26(b)(3).

<sup>41</sup> *Id.*

<sup>42</sup> Brockway, *supra* note 34, at 741.

<sup>43</sup> *Id.*

<sup>44</sup> *Id.*

the information exist.<sup>45</sup> It is therefore important for the collateral board to interview and preserve the *factual* testimony and evidence of all witnesses. The mental impressions, opinions and recommendations for safety purposes may be confined to the safety board, however, without fear of disclosure.

The fourth category, "medical and similar files" is obviously important to the human factors investigator, but it is also one of the most difficult exemptions to interpret since it applies only to information that would constitute a "clearly unwarranted invasion of personal privacy" if disclosed.<sup>46</sup> This requires a balancing of interests between the protection of an individual's private affairs from unnecessary public scrutiny and the preservation of the public's right to governmental information.<sup>47</sup> It appears that the words "clearly unwarranted" and the general policy set forth by the Act tilt the balance toward disclosure.<sup>48</sup> In determining the proper balance a court might consider "undue hardship" and "substantial need" discussed in the preceding paragraph, but the weight accorded personal privacy is difficult to calculate. Generally, the personal records of deceased persons are not protected,<sup>49</sup> but intimate personal details about decedents which involve surviving associates such as the wife are likely to require a very persuasive showing of "substantial need." In a recent case the court reviewed the medical records requested by a plaintiff and ordered the Air Force to release them since "their disclosure will not threaten the privacy of any individual."<sup>50</sup> It is likely that future decisions will also require a careful case by case analysis. Of course, an individual or his heirs may have access to his own medical information or information gathered about him.<sup>51</sup>

As a result of these cases and statutory clarification of the law,

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<sup>45</sup> *Id.* at 742.

<sup>46</sup> 5 U.S.C. § 552(b)(6) (1970), *as amended*, (Supp. IV, 1975).

<sup>47</sup> Department of Air Force v. Rose, 96 S. Ct. 1592, 1604 (1976); Getman v. NLRB, 450 F.2d 670, 677 n.24 (D.C. Cir. 1971); S. REP. NO. 813, 89th Cong., 1st Sess. 9 (1965).

<sup>48</sup> Johnson, *The Freedom of Information Act: Its Application in the Air Force*, 16 AIR FORCE L. REV. 54, 61 (1974).

<sup>49</sup> OMB Circular No. A-108, 40 Fed. Reg. 28948, 28951 (1975).

<sup>50</sup> Rabbit v. Department of Air Force, 401 F. Supp. 1206, 1210 (S.D.N.Y. 1974).

<sup>51</sup> Privacy Act of 1974, 5 U.S.C. § 552a(f)(3) (Supp. IV, 1974).

it appears that factual determinations must be released to litigants in appropriate circumstances, but that confidential opinions, recommendations and personal medical information may be withheld. The current Air Force safety regulation recognizes this distinction by stating that, despite the restrictions placed on use of some parts of the safety report, factual material (such as wreckage diagrams, maps, transcripts of air traffic communications and so forth) will be released as required by the collateral board, or as otherwise required by law.<sup>52</sup> A more detailed examination of the safety investigation will provide a clearer idea of the type of human factors information that might be released to the collateral board and other interested persons in appropriate cases.

#### THE HUMAN FACTORS INVESTIGATION

Although it will sometimes be necessary for the human factors investigator to perform an autopsy, this responsibility is accomplished by a forensic pathologist whenever possible. It is preferable to select a forensic pathologist with an aviation background since extreme G forces produce effects different from ordinary traffic fatalities. Further, a knowledge of the aircraft environment in which the fatality occurred better prepares the doctor to produce meaningful recommendations which may reduce future accidents. Unfortunately, since a doctor with this special training is hard to find, it is usually necessary for the flight surgeon to work closely with a local pathologist. Whereas the pathologist with an aviation background will only need a short briefing to acquaint him with the medical history and the circumstances of the flight, the pathologist who is unacquainted with aircraft crashes will need the active participation of the flight surgeon to point out special areas of interest associated with the aviation accident. As a minimum, the flight surgeon must take the following steps:

(1) Attempt to identify all fatalities by fingerprinting the victims and footprinting all military aviators.<sup>53</sup> If the remains cannot be identified by these means, he must prepare dental charts or use

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<sup>52</sup> AFR 127-4, § 27(a)(3) (October 24, 1975) (the Office of the Judge Advocate General exercises the discretion to release information in appropriate circumstances).

<sup>53</sup> Simson, 4 THE FORENSIC SCIENCE GAZETTE 1, 3 (Apr. 1973).

other means such as the identification of clothing, documents, jewelry, radiological or seriological examinations.<sup>54</sup> The extreme measures that are sometimes required to identify fatalities have been justified on many grounds; from the purely sociological to a right of every freeborn man to an identity beyond death.<sup>55</sup> Fortunately, most military accidents involve only one or two fatalities and do not create the immense problems of identification associated with the crash of a common carrier. Whenever two or more fatalities occur, however, the seating pattern should be determined prior to the removal of the bodies from the scene. This information can be of assistance to the pathologist in identifying the bodies and may be crucial in determining the operator of the craft. Identifying the operator is often difficult but may be a very important legal concern, particularly in cases of dual control aircraft.

(2) Photographs of both the crash site and of the autopsy must be secured. Upon his arrival at the scene, the flight surgeon should have cameras capable of both black and white as well as color photographs since adverse weather conditions frequently are associated with accidents. It is important that the doctor reach the scene before any human remains are moved so that he can photograph: (a) the body or bodies in relationship to the aircraft; (b) the relationship between the body positions and the restraint system of the aircraft; and (c) the distance of the bodies from other parts of the wreckage.<sup>56</sup>

It is important to use discretion and care in the photography and, most important of all, to take many photographs.<sup>57</sup> It is impossible to take too many photographs in a complex human factors investigation. Generally, it is good technique to begin with overall scene photographs which reveal the relationship of the human factors material to the other portions of the wreckage. Thereafter, closer shots should be taken in order to relate details of the investigation to the overall scene. Finally, detailed shots of the bodies or portions of the wreckage should be taken to disclose important

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<sup>54</sup> Tarlton, *Identification in Aircraft Accidents*, in *AEROSPACE PATHOLOGY* 53-63 (Mason and Reals ed. 1973).

<sup>55</sup> *Id.* at 53.

<sup>56</sup> REALS, *MEDICAL INVESTIGATION OF AVIATION ACCIDENTS* 91, 94-95 (1968).

<sup>57</sup> Besant-Mathews, *Photography and Radiography in Aircraft Accident Investigation*, in *AEROSPACE AUTOPSY* (Mason and Reals ed. 1973).

details. All bodies should be photographed from several angles before they are moved. They should be photographed again after removal to the morgue. Prior to autopsy any bodies should first be photographed with clothing in place, with special concern for the portions of the survival or restraint gear which may still be attached to the body.<sup>58</sup> It is preferable to have a well-trained photographer to take the pictures, but it is important that the doctor carefully supervise the photography since the typical military photographer is likely to be upset by the gruesome nature of an accident scene. In addition, the doctor should inform the photographer about the purpose of the photographs. Furthermore, the photographer and the photographs need to be documented with care for later identification.

During the autopsy photography should be supplemented with the use of a dictating machine to record accurately the progress of the autopsy. Radiography should be employed if fractures are suspected or foreign material appears to be lodged in the body. X-rays are a satisfactory means of recording fractures with a minimum time expenditure by the doctor and may well be a more accurate recording.<sup>59</sup> Complete body x-rays are recommended since numerous fractures usually accompany crash fatalities. Routine x-ray for spinal fractures are of particular interest in aviation pathology, since these injuries are frequently related to escapes by ejection, helicopter, parachute, and rear-engined, high-tail transport aircraft casualties.<sup>60</sup>

One problem unique to military aircraft accidents is securing authority for autopsy of the fatalities. As a general rule, authorization to perform an autopsy must be obtained from a decedent's surviving spouse or next of kin or by state law.<sup>61</sup> There are legal exceptions to this basic requirement which are frequently applicable to aviation disasters. The National Transportation Safety Board is empowered to conduct autopsies or other tests as required except that provisions of local law protecting religious beliefs with respect

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<sup>58</sup> REALS, *supra* note 56, at 95.

<sup>59</sup> Besant-Mathews, *supra* note 57, at 185; See also Simson, *Roetet Geography in the Human Factors Investigation of Fatal Aviation Accidents*, 43 AVIATION MEDICINE 81. (1972).

<sup>60</sup> *Id.*

<sup>61</sup> 18 AM. JUR. 2d *Coroners or Medical Examiners* § 14 (1965).

to autopsies have to be observed "to the extent possible considering the needs of the investigation."<sup>62</sup> This authority applies in cases of air crashes involving collisions between civilian and military aircraft within NTSB jurisdiction. The statute, however, is not considered authority for the military to order autopsies when only military aircraft are involved. Nevertheless, military regulations provide that autopsies may be performed on air crew members believed to have been involved in the actual operation of the aircraft.<sup>63</sup> Autopsies should also be performed on other personnel aboard the aircraft if the examining medical officer believes it will help explain the cause of the accident. In such cases the flight surgeon should recommend to the hospital commander having custody of the remains that a post-mortem examination be performed on *all* persons who sustained fatal injuries.<sup>64</sup> For instance, this procedure might be necessary when a plane explodes in flight.

Local laws governing autopsy should be respected. In doubtful cases the medical officer should seek consent for the autopsy from the next of kin or seek the authority of an official coroner's request under local law.<sup>65</sup> Although it is necessary to perform the autopsies authorized by the regulations, problems occasionally arise with local officials who are jealous of their authority or concerned about enforcing strict compliance with local law. Therefore, to avoid problems it is important that the military doctor actively seek the cooperation of the local officials and involve them in the human factors investigation. When problems cannot be avoided by the use of tact and consideration for the local official's pride in his responsibility, the local Staff Judge Advocate should be brought into the investigation. Generally, however, it will be sufficient to show the local official the regulation directing the senior medical officer to conduct the autopsy and attempt to persuade him that matters related to military aviation are peculiarly a federal concern, justifying his full cooperation with the federal investigators. Unfortunately,

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<sup>62</sup> 49 U.S.C. § 1441(c) (1970).

<sup>63</sup> AFR 160-109, § 3 (Feb. 17, 1964). Nevertheless, clear authority only exists to *order* an autopsy when the death occurs on an installation under exclusive U.S. jurisdiction; otherwise the local law must be complied with. AFM 110-3, § 5-4 (May 17, 1976).

<sup>64</sup> The Commander would exercise authority for the autopsy in accordance with either local or federal law as appropriate.

<sup>65</sup> AFM 110-3, § 16-4(c), (d) (Mar. 26, 1967).

the military regulations are not interpreted to preempt state laws in this area, and local coroners are not always sympathetic to the military concern for a complete human factors investigation. Conflicts are therefore inevitable.

During the investigation the collateral board president will probably request copies of the releasable photographs, x-rays, and other factual information. Photographs of fatalities should not be included in either the collateral or the safety investigation report.<sup>66</sup> These photographs are invariably gruesome and should be treated with care. Generally, unless the photos are very important to the investigation, they will only be released to the next-of-kin or their representative. The accident scene, however, should be described in writing in the report and the photographs (as always) preserved for potential litigation purposes. Photographs of wreckage (even though blood splattered) should be included in Part I of the safety report which is available to the public. Photographs of staged events, other recordings of speculation or analysis,<sup>67</sup> and additional life science information is retained in Part II of the safety report and thus is not available to the public unless requested by the collateral board or ordered to be produced by a court.<sup>68</sup>

#### THE COLLATERAL BOARD INVESTIGATION

The Air Force has increased its emphasis on the collateral board investigation to reduce the legal pressures on the confidential status of information contained in the safety board report.<sup>69</sup> Recent cases have demonstrated that the courts will release medical information from the safety report in appropriate instances. In *Rabbit v. Department of the Air Force*<sup>70</sup> the court released the entire Life Sciences Report since the release did not invade the personal privacy of any individual.<sup>71</sup> The court apparently concluded that this report did not contain any protected findings, recommendations or opinions because after a private examination of the records, the

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<sup>66</sup> AFM 127-1, § 14-4 (Mar. 16, 1972).

<sup>67</sup> AFM 127-2(C)(3), § 3-3(a)(18) (Nov. 28, 1975).

<sup>68</sup> *Id.* at § 3-3(b)(6).

<sup>69</sup> Burton, *Aircraft Accident Investigations: An Analysis of the Recent Changes in the New Regulations Governing the Investigations*, 14 JAG L. REV. 233 (1973).

<sup>70</sup> 401 F. Supp. 1206 (S.D.N.Y. 1974).

<sup>71</sup> *Id.* at 1210.

court refused to relate these kinds of protected information.<sup>72</sup> In a later case the Air Force voluntarily released the bulk of the Life Sciences Report, but refused to release the last page, which contained a summary of the investigator's opinions, speculations, conclusions, and advice to the Safety Board.<sup>73</sup> The court upheld the Air Force's limited claim of privilege for this portion of the report and the statements of eight witnesses since, after a private examination, the court decided that the withheld documents contained "speculations, analysis, opinions, guesstimates, 'brainstorming', and exercises in logic."<sup>74</sup> These releases from the safety report would have been unnecessary if the collateral board report had contained all the factual medical information.

In order to preserve the confidentiality of the human factors portion of the report, increased emphasis must be placed on the collateral investigation by human factors investigators. This will not be an easy task because it is not customary to assign trained medical personnel to collateral boards and because the human factors area involves difficult problems of protecting personal privacy rights. Adequate authority already exists for additional emphasis, however, since the collateral board investigators may examine the wreckage, review any records other than the actual safety board proceedings, and request additional tests and inspections. Further, the collateral board may call any witness, including expert witnesses and members of the safety board, but may not require any witness to reveal the proceedings, recommendations or findings of the safety board. Additionally, if the safety board president is aware of relevant government documents, he is directed to make the original copy available to the collateral board.<sup>75</sup> Several rules, however, limit the effectiveness of the collateral board.

It is the responsibility of the collateral investigator to make sure that each witness understands that the results of the collateral board are intended for purposes other than accident prevention. Each witness must also be advised of his constitutional rights regarding his privilege to refuse to give testimony that is self-incriminating.

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<sup>72</sup> *Id.*

<sup>73</sup> *Theriault v. United States*, 395 F. Supp. 637, 639-40 (C.D. Cal. 1975).

<sup>74</sup> *Id.* at 642.

<sup>75</sup> AFR 110-14, § 1 (Nov. 1, 1975); AFM 127-1, § 15-2d (Mar. 16, 1972).

Obviously, such warnings inhibit frank testimony and (but for the regulatory requirement)<sup>76</sup> they are only really necessary when the board is considering disciplinary action against a service member, or there is suspicion of an improper or unlawful act, or industry representatives are asked to submit testimony which might form a basis of criminal liability. Nevertheless, industry representatives must be made aware that the collateral investigation is different from the safety board investigation.

It would defeat the purpose of having the two proceedings if a collateral investigator is permitted to observe the proceedings of the safety board. Although the two investigations may be conducted at the same time, the safety board takes priority in interviewing witnesses, obtaining evidence and inspecting the scene of the accident.<sup>77</sup> The witnesses may not be required or asked to divulge what was contained in their testimony before the safety board. While this protection does not release the witnesses from any duty to relate factual information needed by the board, it does protect some confidentially submitted facts and all opinions, suggestions, recommendations, evaluations, or similar speculations that witnesses submitted to the safety board or that were incorporated into the safety report.<sup>78</sup>

Since the Air Force regulation governing collateral boards does not define what factual information should be requested by the collateral investigation, Air Training Command (ATC) lawyers have prepared a list of appropriate information. The medical report of the flight surgeon concerning the pilot's physical condition should be included, with the results of any alcohol, drug or barbituate examination before and after the flight and, if appropriate, any relevant psychiatric evidence.<sup>79</sup> Specifically, ATC suggests a factual analysis of the degree and nature of injury, length of recovery period, period of unconsciousness, diseases or physical defects present at time of mishap, the name of the person who conducted the autopsy, as well as x-ray or laboratory results.<sup>80</sup> In addition, the

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<sup>76</sup> AFR 110-14, § 1(d) (Nov. 1, 1973).

<sup>77</sup> *Id.* at § 1.

<sup>78</sup> *Id.* at § 3(f).

<sup>79</sup> ATCP 110-2, § 5(a)(5)(b) (May 1974).

<sup>80</sup> *Id.*, Atch 3, § 3. Further, in assessing escape/egress problems, ATC recommends notation of: location in aircraft, method of escape, intent for escape,

collateral boards should request that sufficient factual data be made available to determine whether all life support equipment (the ejection seat, oxygen hoses, etc.) conformed to the military specifications and functioned as designed. If a defect existed which may have contributed to the cause of the accident or to the injuries, special emphasis should be placed on preserving any evidence of the defect.

### CONCLUSION

The human factors investigator has an important responsibility to discover the nature of injuries, contributing factors, and documentation of the investigator's observations for both accident prevention purposes and sometimes for use in subsequent administrative or judicial actions. Moreover, for accident prevention purposes, the safety investigator has a duty to offer opinions, evaluations, suggestions, and recommendations on the cause of the injury, suspected equipment defects and possible safety improvements. The safety investigator will work with manufacturers' representatives and other witnesses on a confidential basis to collect data on which to base opinions or recommendations. Ordinarily, the opinions of the safety investigator or the safety board, and the information secured by assurances of confidentiality should not be incorporated into the report of the collateral board or otherwise released outside safety channels.<sup>81</sup> Most of the documentary and factual information, however, should be made available to the collateral board upon request. The investigator should understand the narrow basis of the privilege against disclosing information so that he can protect the interests of the Air Force safety program, any confidences properly received from industry or other sources, and the right of the public or interested citizens to information about military accidents.

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exit used, cockpit/cabin condition after impact, order of escape, reasons for escape, communications prior to escape, number of previous ejections, terrain of parachute landings/crash site, aircraft altitude at time of escape, ejection seat/parachute training, ejection or bailout information and facts from pilots, egress difficulties, survival/rescue conditions and/or difficulties. *Id.* at ¶ 3(m).

<sup>81</sup> AFM 127-2(C3), ¶ 3-3(9) (Nov. 28, 1975).

**Comments  
and  
Case Notes**

