

NATIONAL TRANSPORTATION SAFETY BOARD

AVIATION INVESTIGATION MANUAL

MAJOR TEAM INVESTIGATIONS

November 2002

FOREWORD

NOTE: This manual is a National Transportation Safety Board (NTSB) staff product and is intended to provide information and guidance to NTSB employees who are involved in organizing and conducting investigations. This manual has not been adopted by the NTSB Board Members, is not regulatory in nature, is not a binding statement of policy, and is not all-inclusive. The recommended procedures are not intended to become obligations of the NTSB or to create any rights in any of the parties to an NTSB investigation. Deviation from the guidance offered in this manual will at times be necessary to meet the specific needs of an investigation. However, such deviations from the guidance offered in this manual shall be within the sole discretion of the appropriate NTSB employees and shall not be the prerogative of parties to the investigation or other individuals not employed by the NTSB.

The procedures in this NTSB *Aviation Investigation Manual—Major Team Investigations* apply to “Go Team” investigations of major aviation accidents. An investigation of this type could involve more than 100 technical specialists, representing as many as a dozen parties and multiple Federal and local government agencies.

This manual provides general information to assist the investigator-in-charge (IIC), group chairmen, and others who may participate in a major aviation accident investigation. It is intended to provide guidance on the process of conducting a major investigation, from initial notification to the adoption of the final report, probable cause, and recommendations by the Members of the Safety Board.

Although this publication includes some technical information related to investigative activities in major aviation accidents, it is primarily intended to provide guidance of a procedural or administrative nature. Investigators should refer to Annex 13 of the International Civil Aviation Organization (ICAO) for procedural references and to the ICAO *Manual of Aircraft Accident Investigation* for technical information and examples of investigative techniques. Other sources, such as military investigation manuals, can also be used to supplement information in the NTSB’s *Aviation Investigation Manual*.

The Major Investigations Division (AS-10) will be responsible for keeping this manual updated. The “Record of Revisions” on the preceding page should be used to acknowledge receipt of new or amended pages. The manual’s original printing date will be indicated in the lower left corner of the cover page. The effective date of any page change will be indicated by the entry on the revision sheet. All recipients of this manual are encouraged to submit information to be considered for inclusion.

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1. Pre-Investigation Preparation

1.1 The Go Team

The Go Team is a group of investigators who are on-call for immediate assignment to major accident investigations. The Major Investigations Division (AS-10) provides the IIC for the Go Team. Divisions of the Office of Aviation Safety (OAS) and the Office of Research and Engineering (RE) provide specialists and laboratory support. Regional investigators may be used on the Go Team when headquarters investigators are unavailable and as the needs of the investigation dictate. On some investigations, an investigator from a regional office might be assigned as the IIC.

A full Go Team may consist of the following specialists: air traffic control, operations, meteorology, human performance, structures, systems, powerplants, maintenance records, survival factors, aircraft performance, cockpit voice recorder (CVR), flight data recorder (FDR), and metallurgy. Additional groups may be formed to interview witnesses, examine the response of aircraft rescue and firefighting (ARFF) personnel, or other duties, as required, to support the investigation. Each of the NTSB specialists will be the chairman of an investigative group. NTSB specialists who are in training will be assigned as members of investigative groups, under the supervision of another NTSB employee, usually a group chairman or IIC.

1.2 The Go Team Roster

The Go Team roster is a spreadsheet of names and telephone and pager numbers of all Board personnel assigned current standby duty for major accident investigations and their Division Chiefs. The Go Team list also identifies the names and numbers of all Board Members, the Public Affairs (PA) Officer, the Executive and Managing Directors, the Directors of the Offices of Government Affairs (GA), PA and Transportation Disaster Assistance (TDA), and the Directors of the Regional Offices. A new list is prepared once each week or when necessary after a change of duty officers or the launch of a prior group of Go Team members.

The current Go-Team roster is available on the intranet to authorized personnel. Copies are distributed to all Board Members; the Offices of the Managing Director (MD), Aviation Safety (OAS), Research and Engineering (RE), General Counsel (GC), Safety Recommendations and Accomplishments (SR), GA, PA, and TDA; and each Division Chief and investigator in the OAS headquarters office. Copies are also transmitted to each OAS Regional Office, the Federal Aviation Administration's (FAA) command center and accident investigation office, the Safety Board's Communications Center and the Department of State's Office of Aviation Policy (EB/TRA/AVP).

All personnel on call should arrange their personal affairs such that they are able to depart for the scene of an accident with a minimum of delay. Regardless of when they are notified about an accident, Go Team members should be able to arrive at the airport within approximately 2 hours of being notified. For launches that occur during duty hours, Go Team members who live too far to travel home and return to the airport within this timeframe should bring clothing and other launch essentials to the office. Go Team members and their Division Chiefs should always ensure that the information listed on the Go Team sheet concerning their phone/pager numbers is correct. In addition, personnel should always ensure that they can be reached when on call. This includes “testing” the pager for proper operation, forwarding alternate phone numbers to the Communication Center, IIC, and supervisors in advance of expected travel, and maintaining contact with the NTSB communication centers at the Safety Board. When changes to Go Team assignments are made, the persons involved shall ensure that the IIC/duty officer, the Chief of the Major Investigations Division, the OAS Director, and the Safety Board’s Communications Center are notified and provided updated phone and pager numbers.

2. Notification And Initial Response

Early notification is essential to initiate and organize the investigation. Initial information concerning the facts and circumstances of the occurrence will often be incomplete and erroneous. For this reason, early factual information transmitted for alerting purposes must be handled with considerable discretion. Parties notified are to be cautioned about the preliminary nature of the data.

2.1 Headquarters Responsibilities and Procedures

2.1.1 Domestic Investigations

Initial notification of a major aviation accident will usually be received by the Safety Board’s Communications Center. The Communications Center will advise the IIC on duty and the Chief or Deputy Chief of the Major Investigations Division, who will inform the Director of OAS or, in his absence, the Deputy Director. The OAS Director or Deputy Director, with input from OAS Division Chiefs, will decide whether to launch a Go Team in consultation with the Safety Board’s Chairman and/or the Executive or Managing Director.

Following a decision to dispatch the Go Team, the Chief of the Major Investigations Division, the OAS Director, or the Deputy Director, will:

- (1) notify the Chairman, the Executive or Managing Director, and the on-call Go Team Board Member of the preliminary circumstances of the accident;
- (2) obtain the Go Team Board Member's decision regarding travel; ascertain if he/she will accompany the team, and notify the IIC accordingly;

- (3) notify GA, PA, and TDA;
- (4) notify the other Board Members (this can be done by pager);
- (5) notify the NTSB Communications Center and the involved Regional Office(s) of plans (e.g., travel, arrival, number of personnel, etc.)

2.1.2 International Investigations

The Chief of the Major Investigations Division, the OAS Director, or the Deputy Director of Technical/Investigative Operations will advise the Chairman and Executive Director of any major accidents outside the United States or its territories involving a U.S.-manufactured, operated, or registered aircraft. If the Board is sending a U.S. Accredited Representative, GA, PA, and TDA will also be notified. Section 5 contains NTSB policies and procedures for international accidents. The Chief of the Major Investigations Division (or his designee) will notify the FAA, interested parties, and the Department of State of an intended NTSB launch to a foreign country.

2.1.3 Role of the Safety Board Communications Center

The Safety Board's Communications Center was established to provide a centralized operation to support all modes of transportation at critical periods during the accident investigative process. Before a Go Team launch, the Communications Center can provide important initial accident information through alphanumeric pagers and logistical support through arrangements for air travel and rental car and hotel accommodations. After the launch, it can assist the IIC with setting up the on-scene command post, configuring cellular telephones, laptop computers, and pagers, and providing satellite telephone capabilities and language translation services. The IIC is responsible for coordinating with the Communications Center on logistics.

2.2 Regional Office Responsibilities and Procedures

During duty hours, Regional Offices will notify headquarters via the Communications Center whenever an accident (or incident with serious implications) occurs that involves the following:

- air carrier, commuter, or air taxi operations,
- public figures or officials with widespread recognition or prominence,
- fatal midair collisions or collisions involving ATC, or
- matters of potentially high public interest.

During nonduty hours, the designated Regional Office duty officer shall notify the Communications Center duty officer by the most expeditious means if receiving notification of a

major accident or incident of the type described above. Travel to the accident scene will be initiated without delay.

2.2.1 Regional Office Responsibilities Related to a Go Team Launch

NTSB Regional Offices are responsible for implementing notification procedures in their geographic areas of jurisdiction. These offices will ensure that specific personnel are designated to be on-call. The Regional Office with geographic jurisdiction for the accident will typically provide at least one investigator to travel immediately to the site and perform initial public affairs and “stakedown” coordination duties of the IIC. The regional investigator will continue to function in this role until relieved by the IIC. After briefing the on-scene Board Member, IIC, and Go Team, the regional investigator may be assigned as a chairman of one of the working groups, provide support as necessary, or be released from the investigation. NTSB Regional Office personnel who travel to a major investigation site will be considered part of the investigation team until the IIC releases them from their duties.

2.2.2 Stakedown Guidelines

Regional Office personnel assigned to the initial stakedown of a major accident have important duties that contribute to the overall success of the investigation. Those personnel include investigators dispatched to the scene, as well as those handling administrative affairs (see [Appendix C](#)). Personnel assigned to respond to the accident scene are obligated to reach the scene as quickly and as safely as possible and to remain at the scene until properly relieved. NTSB representation at this time is essential to convey to the news media, local authorities, and the public that the investigation is under NTSB jurisdiction. The only information released to the media should be that the Go Team is en route, name of the Board member on scene, name of the IIC, name of the media contact, and when the team is expected to arrive. Initial activities, in addition to those listed herein, should be aimed at gathering as much pertinent information as possible to brief the Board Member and Go Team upon their arrival.

Remoteness of the crash site or difficult accessibility does not diminish the need to establish NTSB jurisdiction. Every effort should be made to get to the crash site, even if environmental conditions preclude remaining at the site for any appreciable length of time.

2.3 Notification and Assignment of Go Team Specialists

Once the initial notification of an accident has been received and the decision to launch Go Team members has been made, the composition of the Go Team must be determined. This decision will be based on the probable scope of the investigation and the magnitude of the tasks but will also include the following factors: the number of injuries/fatalities, type of aircraft, previous

accidents of this type, location of the accident, extent of aircraft or ground damage, weather, public interest, and specialist workloads.

Because information about the nature of the accident is often incomplete and frequently erroneous at the time of the launch, there may not be sufficient information with which to make a final decision about the composition of the Go Team. If questions persist about requesting a particular specialty, the specialist should be requested to accompany the Go Team. If his or her expertise is later considered to be unnecessary, he or she should be released by the IIC at that time. Regardless of the circumstances, accidents involving large air transport or “new generation” aircraft will normally be staffed with a large Go Team.

The Office of Aviation Safety may determine that some accidents do not require full Go Teams. For example, under most circumstances, a runway collision would require that air traffic control (ATC) and operations specialists participate in the investigations, with possibly a human performance specialist assisting in examining human performance factors. If an accident occurred during potentially restricted visual conditions, icing conditions, or convective activity, the participation of a weather specialist would be required. If evidence in an accident indicates a probable aircraft malfunction, the participation of structures, systems, powerplants, and maintenance records specialists would be required.

For partial Go Team launches, the participating specialists (and maybe even the IIC) might be responsible for multiple areas of the investigation. Such a launch might result in the assignment of an airworthiness group chairman responsible for any of the structures, systems, powerplants, and maintenance records investigative areas. Likewise, an operations group chairman might be assigned to cover any of the operations, air traffic control, meteorology, or human performance areas.

2.4 Party Notification

2.4.1 Domestic Participants

The Safety Board typically extends party status to those organizations that can provide the necessary technical assistance to the investigation. The IIC typically confers party status to the operator, aircraft, systems, and powerplant manufacturers, and labor organizations involved because of the accident circumstances. Most aviation-related organizations that the NTSB might work with are familiar with NTSB procedures and will have their own sources to notify them of an accident. However, this may not be the case with some parties. With the assistance of the Safety Board’s Communications Center, the IIC should ensure that the appropriate parties are informed of the accident, the location of the command post, and the time and location of the organizational meeting.

By statute, the FAA is automatically a participant in Safety Board investigations. Many FAA personnel have worked closely with Board investigators over the years and are familiar with major investigation procedures. The role of the FAA representatives is to support the Safety Board's investigation and determine if immediate regulatory action is necessary to prevent another accident. FAA representatives are not to use their participation to develop information for punitive actions or issuing violations.

Police, firefighters, National Guard, Department of Defense (DoD), Federal Bureau of Investigation (FBI), Federal Emergency Management Agency (FEMA), National Disaster Mortuary Team (D-MORT), Red Cross, Salvation Army, and other agencies can provide assistance at the scene and attend on scene meetings but are not made parties to the investigation.

2.4.2 International Participants

International standards (Annex 13 to the Convention on International Aviation) provide for the participation of an Accredited Representatives and their advisors. With the assistance of the Safety Board's Communications Center, the IIC will ensure that the appropriate state accident investigation authorities and technical advisors (usually foreign manufacturers and foreign certification authorities) are informed of the accident, the location of the command post, and the time and place for the organization meeting.

2.5 Travel Arrangements

Typically, the IIC will have sufficient support from the Safety Board's Communications Center and other personnel for much of the initial coordination effort necessary to make arrangements for the Go Team launch. During off-duty hours, the IIC should expect assistance from the Safety Board's Communications Center, back-up duty officer, other IICs, and management personnel to help with such important items as travel arrangements, hotels, rental cars, and on-site administrative support.

Whenever possible, the entire Go Team will travel together to the accident site. It is important that all Go Team members begin the investigative process as soon as possible and with the most current and accurate information. Investigators who travel separately should report to the on-scene command post promptly upon their arrival.

2.5.1 FAA Aircraft

An FAA airplane can be the most efficient and convenient way to get to or near the accident site. The Chief or Deputy Chief of the Major Investigations Division, the OAS Director, or the Deputy Director should submit the request for an FAA airplane to the FAA's Accident Investigation Division (AAI-100) at (202) 267-8190. After hours, the AAI-100 duty officer can be reached through the FAA's communication center at (202) 267-3333 or (202) 863-5100.

If an FAA airplane is available, the FAA representative will require a complete list of the names of the Safety Board individuals who will comprise the team. At a minimum, seating on the airplane should be provided for the IIC, the Board Member on duty, group chairman, and the GA, PA, and TDA representatives. The FAA uses a Cessna Citation; a Lear Jet, and a Gulfstream IV (G-IV) for transporting accident investigators to an accident site. The Cessna and Lear Jet can hold 5 to 6 passengers, and the G-IV can hold 16 passengers. The G-IV has intercontinental range, but passenger capacity may have to be reduced to obtain long-range capability.

If space on an FAA airplane is limited, team members should be selected according to the importance of accomplishing their duties during the first few hours of the investigation. Give priority to group chairmen whose initial presence on site with the IIC is critical. Typically, the structures and systems group chairmen is needed to ensure oversight of on-site activities and the operations group chairman is needed to interact with air carrier and pilot labor association personnel on site. Other team members should be given priority on FAA aircraft according to the circumstances of the accident. In all cases, if space is limited, Safety Board personnel who are in on-the-job-training status should not be transported on the FAA airplane. Ensure that all intended passengers on the FAA airplane understand the proper reporting time to appear at Hangar 6 at Reagan Washington National Airport (DCA). The reporting time is generally 30 minutes before departure time.

Those who will not be transported on the FAA airplane may be required to make their own transportation arrangements, with the understanding that they should arrive at the site as soon as practical, either by first available commercial flight, rental car or train. Team members who are traveling separately should notify the Communications Center of their travel plans. The Communications Center will relay this information to the IIC. All Go Team members not traveling on the FAA airplane must be informed of the location of the command post and the approximate time of the organizational meeting. If the location and time of the organizational meeting are not yet known, Go Team members arriving after the rest of the team should contact the Safety Board's Communications Center to obtain this information. All Go Team members will be expected to report to the command post in sufficient time to participate in the organizational meeting. A late arrival or an unexplained absence from the organizational meeting or other official on-site duties may result in disciplinary action.

2.5.2 Commercial Aircraft

If an FAA aircraft is unavailable and the distance to the site is beyond reasonable driving distance, commercial aircraft will be used to transport the team. The Safety Board's Communications Center can arrange airline tickets and rental cars through the travel agency used by the Safety Board. Because return times may vary among the team members, open returns should be requested for travel back to Washington, DC. Normally, prepaid or electronic tickets should be requested for team members to pick up at the airport. This will allow everyone to obtain his or her tickets, particularly during off hours, with relative ease. Investigators traveling to the scene via

airline jumpseat should check “Must Fly” on their jumpseat authorization forms (NTSB Form 7000-5) and ensure that the carrier understands the urgency of their travel. Investigators returning from an accident via jumpseat should not check “Must Fly” on the form.

2.5.3 Rental Cars

Rental cars should be reserved for NTSB personnel when initial travel arrangements are made. The number of required rental cars may vary, but a good rule of thumb is to initially reserve one car for the IIC, one for the Board Member, and one for each group chairman. Because additional cars can be rented and returned if they are not needed, reserve more rather than fewer cars if in doubt. In some cases, SUVs or vans will provide greater comfort for personnel and more capacity for parts, equipment, etc.

2.5.4 Hotels

The Chief of the Major Investigations Division or his/her designee will coordinate arrangements for accommodation and meeting rooms for the Go Team with the Safety Board’s Communications Center. NTSB Regional Office personnel, FAA FSDO staff, the NTSB’s travel agency, or local law enforcement or military officials can also be used to assist in obtaining hotel accommodations and facilities for the command post. The following factors should be considered when selecting a hotel:

- Proximity to the accident site,
- Availability and adequacy of guest rooms for Safety Board personnel,
- Availability of two meeting rooms of sufficient size for a) a Command Post, and b) a press briefing room,
- Cost of accommodations and meeting room, and
- Compliance with government hotel/motel requirements.
- Separate from the hotel where TDA staff are staying

If at all possible, major hotel chains are preferable to smaller, individual establishments. When communicating with hotel personnel, NTSB personnel should identify themselves and the purpose of the visit. A sufficient number of rooms to accommodate the entire team should be requested, with people assigned the following priority: 1) the Safety Board, 2) other Federal agencies, 3) International participants and 4) other organizations. The Safety Board cannot “guarantee” rooms for other agencies or organizations.

2.5.5 Backup IIC Duties

The backup IIC or another AS-10 staff member will log the accident information into the AS-10 accident record (green) book, the Board's Accident Data Management System (ADMS), and NTSBKeys, and will draft the initial notification memo.

3. On-Scene Activities

3.1 Command Post/Meeting Room

The number of people expected to participate in the investigation will dictate the size of the meeting room. This will depend on the expected number of groups established, parties designated, and personnel from each party. In general, regardless of how small the team dispatched, the meeting room should accommodate at least 30 people. On major air transport accident investigations, the room should accommodate 100 to 150 people. Remember to account for the space required by support personnel, furniture, phone lines, fax machines, copiers and the like when considering whether the meeting room will be large enough to accommodate the number of people anticipated.

For large investigations, instruct the hotel personnel to set up the room theater style, with tables and chairs set up in rows. If possible, an aisle should bisect the room, with aisles on either side of the rows of tables and chairs. The hotel should set up a head table at the front of the room to accommodate the IIC, the Board Member, and his/her assistant, and Accredited Representatives. The hotel should be requested to provide a chalkboard and/or whiteboard. A table should be placed at the rear of the room where reports, documents, and other material to be distributed to the parties can be placed. If possible, a separate room or area should be made available for PA use. If this is not possible, a table for PA should be set up in the Command Post and located away from the head table. It is important to note that the Safety Board is not authorized to pay for any food or beverages for accident investigation participants. If the hotel provides coffee or other amenities, ensure that the Safety Board is not billed for such items.

3.1.1 Press Briefing Room

The hotel containing the Command Post should also have an available room for press briefings. The size of the room depends on the magnitude of the accident and the amount of media present. GA, PA, and TDA are responsible for the setup of this room, which should include a lectern with a pull-out shelf, if possible; 6 to 10 rows of seats with 8 to 10 seats per row, arranged theater style; and risers behind the seats for cameras. Two entrances are preferred, one allowing the Safety Board briefer to enter and exit without having to pass through a phalanx of reporters and camera persons. It is also preferred that the press briefing room not be adjacent to the Command Post.

3.1.2 Telephones and Communications

The Safety Board's Communications Center will make arrangements with the hotel and the local telephone company for the installation, on an emergency basis, of outside telephone lines in the meeting room. For a full Go Team investigation, the IIC should instruct the Communications Center to request 10 outside lines or more, as required; for a partial Go Team launch, the Communications Center should request four outside lines. The telephones are for investigative team members to communicate with their home offices. All calls will be billed to the Safety Board. Instruct team members that the phones are for official use only.

The IIC should reserve at least one outside line for exclusive use by the PA officer and for incoming media calls. Because this line will likely receive extensive use, it should be placed away from the other lines so that it will not disturb the work of others in the Command Post. In addition, the IIC should reserve one line for his or her exclusive use to receive calls from headquarters; this phone number should not be given to team members. This line will facilitate communications between headquarters and investigative personnel on site. A list of all onsite phone numbers should be sent to the Communications Center for distribution.

All Go Team members have cell phones, which should always be turned on when on scene (team members should ensure that their cell phone batteries are charged and should carry a spare set.) In remote locations where cell phone coverage is inadequate or in situations where secure communications are necessary, the IIC can request the FAA coordinator to provide on-site communications support. Also, unique communications requirements should be directed to the FEMA representative who can access major national resources.

3.1.3 Equipment/Supplies

The Command Post/Meeting Room should be equipped with many of the tools of the modern office, including the following:

- two photocopy machines (with sorters, toner, and paper),
- IBM compatible portable computers, if issued laptop computers are unavailable,
- printers and printer paper (two printers are available from AS-10),
- facsimile machine,
- a telephone message board and telephone message pads, and
- mailboxes and a table to place mail and materials for each of the parties.(the top of a large box can be used for this purpose)

Because it may be unreasonable to ask the hotel to acquire this equipment on short notice, the IIC should be prepared to arrange with local vendors to rent the equipment and the needed supplies. Find potential vendors in the *Yellow Pages* or through recommendations or suggestions of the hotel. If possible, survey several sources to determine prevailing rates and

confirm that the rental costs are in accordance with prevailing rates. The Safety Board's Communications Center can assist with efforts to secure the appropriate equipment and supplies.

The IIC should ensure that the following items are available in the Command Post:

- NTSB laptop computer with Accident Data Management System (ADMS) program and supplements (as required) installed
- Pilot/operator accident report form (NTSB form 6120.1)
- Attendance rosters
- Subpoena forms
- Witness Statements
- Wreckage Release forms
- Party Coordinator Signature form,
- Guidance to Party pamphlet (See [Appendix F](#))
- On-Scene Organizational chart (see [Appendix D](#))
- NTSB telephone directory
- Annex 13 (if appropriate)

Many of these items are available from the Safety Board's intranet site or on the IIC Checklist CD available from AS-10.

3.1.4 Administrative Support

Depending on the size of the team, the scope of the investigation, and the availability of administrative support personnel from the Board, temporary clerical/secretarial assistance may be hired for the Command Post. The IIC may request on-scene support from the NTSB administrative staff. On a major investigation, a Command Post secretarial assistant will be needed to answer the multitude of phone calls and to take and distribute telephone messages. Secretarial services will also usually be needed toward the end of the on-scene phase when field notes will be prepared, photocopied, and distributed. When arranging for secretarial services, be sure to inform the temporary agency that the services will be needed at the NTSB Command Post and that the secretarial assistant should expect to work unusual and long hours.

3.1.5 Contracting for Services or Supplies

The IIC will enter into any necessary agreement with vendors and will be responsible for ensuring payment after the Command Post is closed. Where possible, purchases should be made using the government purchase card. When using the government purchase card to acquire goods or services, form SF44 may be used to document the terms of agreement with vendors. If this form is used, it should be attached to the purchase card statement as supporting documentation for the charge. Where purchases cannot be accomplished using the government

purchase card, form SF44 should be used to document the terms of the agreement and provide billing instructions to the vendor. Accordingly, the IIC must fully understand the details of the agreement made to obtain services or supplies and obtain accurate estimates of the charges incurred for those services or supplies. Before leaving the site, arrangements should be made to settle vendor accounts (i.e., the charges are billed to the government purchase card, or the SF44 has been issued to the vendor indicating the services that were provided and the address to which to send their invoice). Board Orders regarding financial matters must be followed.

If translation services are required, the Department of State's Operations Center (listed on the Go Team roster) should be contacted for the appropriate personnel. The memorandum of understanding (MOU) developed by the Office of Transportation Disaster Assistance and the Department of State will be used.

3.1.6 AS-10 Support Equipment

AS-10 has two "flyaway" suitcases available for use during the investigation. The two kits contain such things as a video camera and tape, laptop computer, printer, various charging devices, film, administrative supplies, and copies of the investigator's manual. Mailing labels attached to the kits allow them to be mailed quickly to an accident scene upon direction by the IIC. The kits are intended for use with large accident investigations, where a considerable amount of supplies or equipment might be needed. The IIC is responsible for the equipment in the kits and for mailing them back to Washington after the on-scene phase of the investigation has been completed. The kits, or at least the electronic equipment, should be secured each evening.

Each suitcase is equipped with a programmable combination lock that should be set by the IIC prior to departure, if possible. Otherwise, AS-10 will set the combinations and inform the IIC of the combinations while the kits are en route.

Additionally, two computer printers in the AS-10 area are boxed and can be shipped to the command post.

3.2 Organizational Meeting

The manner in which the IIC conducts the organizational meeting will establish the tone of the investigation. Therefore, the importance of being organized, articulate, assertive, composed, and understanding cannot be overstated.

As the formal opening of the investigation into an aviation accident, the organizational meeting serves several purposes. It will:

- Provide the opportunity to share preliminary information on the accident;

- Introduce the participants of the investigation to each other and identify those eligible to participate;
- Organize participants into investigative groups;
- Establish rules of conduct for the investigation; and
- Reiterate safety and health considerations for all participants.

All on scene activities should be shut down pending the organizational meeting. If search and recovery operations are still in progress, the IIC should designate an NTSB representative to remain at the site during the organizational meeting. The organizational meeting should be held as soon as practicable upon arrival of the Go Team at the accident site according to the time of day and the number of parties that have arrived. For example, if the Go Team members arrived at the site during the night, key personnel from the parties may not arrive until the next morning. Therefore, the meeting should not be held until after the key parties have arrived. If the team has arrived in midafternoon and most of the parties will be expected to arrive in late afternoon, the meeting should be in the early evening.

The IIC will prepare an outline of the issues to be covered in the organizational meeting. The IIC will identify himself/herself and, after calling the meeting to order, ask reporters, attorneys, and others not technically qualified or needed for the investigation (e.g., an accountant with the airline) to leave the room. The IIC should then distribute the attendance roster for each person to sign and make sure that business cards (or equivalent information) have been collected. Photocopying the cards and distributing copies to investigation participants will allow participants to maintain contact with each other after the on-scene phase has been completed. Then, depending on which of the following are present, the IIC will introduce the Board Member, the Board Member's assistant, the GA, PA, and TDA representatives and all other Safety Board employees. Following the introductions, other personnel in the room should identify themselves, their organizations, and their positions within their particular organizations. Potential parties or individuals should understand that, with the exception of the FAA, participation in the Board's investigation is a privilege, not a right. All party-group members are to be employees, not contractors, and are there to contribute to the investigation or otherwise be helpful to the investigation.

After introductions, the IIC should state that the primary purposes of the meeting are to explain operating procedures and to assign specialists to the investigative groups. The facts of the accident will be reviewed and should include the following:

- Operator;
- Aircraft type and registration number;
- Type of flight, origin and intended destination;
- Number of fatalities (or best information presently known);
- Condition and location of crewmembers;
- Extent of aircraft damage; and
- Other information considered relevant (e.g., hazardous material (HAZMAT) and site considerations)

After preliminary information about the accident has been given, the IIC will discuss the information contained in the "IIC's Opening Statement at Organizational Meeting" (see [Appendix E](#)). This statement advises the participants of Board policies relevant to the investigation. The opening statement will include the following points:

- Safety Board authority to conduct the investigation
- Role of the Board member
- Role of PA, TDA, and GA;
- Role of parties to the investigation;
- Role of international participants in investigation (accredited representatives and technical advisors)
- Organization of the team into groups of specialists;
- Qualifications of personnel to participate in the investigation;
- Expected participation of participants for the duration of on-site activities and follow-up activities;
- Dissemination of information among investigation participants;
- Public release of information about the investigation;
- Site safety and security;
- Roles of party coordinators, group chairmen, accredited representative and advisors;
- Identification of the appointed Safety Board group chairmen;
- Who will be allowed at the progress meetings;
- CVR and FDR group participation; and
- On site commander

Following the IIC's opening remarks, the Board Member present should be offered an opportunity to speak to the group. After the Board Member's remarks, the IIC will begin assigning party participants to individual investigative groups in consultation with the group chairmen. The IIC should bring handouts that explain such things as the NTSB's authority and investigation process and the role of parties in the investigation (see [Appendix F](#)). These handouts should be distributed to the parties after the organizational meeting. The IIC should adjourn the organizational meeting (and all progress meetings) by stating the time of the next meeting.

3.2.1 Identification and Assignment of Personnel

The IIC determines who will be parties to the investigation and should be selective when making these designations. During the party designation process, party coordinators are also identified. A party coordinator is the main spokesperson/representative for a party and is the IIC's main point of contact within a party during the investigation. This individual should have sufficient authority within the party's organization to be able to make decisions without a great deal of consultation with his/her supervisors. Additionally, he or she should be available to the IIC at all times during the investigation. Only party coordinators and participants will be allowed to attend future meetings.

As the investigative groups are formed, the party coordinators will be given the opportunity to propose personnel from their organizations for assignment to one or more of the groups. Only technically qualified individuals with the necessary expertise will be permitted to participate in the investigation. Specialists typically include representatives of the operator, manufacturers of the aircraft, powerplant, and accessories, labor associations, and other parties who can contribute knowledge and expertise. The group chairmen and the IIC will assess the qualifications of proposed group members when assigning them to the working groups. The group should be limited to those personnel having the expertise to contribute to the investigation by studying, evaluating, and documenting a particular discipline. The final decision regarding the assignment of specialists will be made by the IIC in coordination with the respective group chairmen.

For investigations involving international participation, Accredited Representatives may have technical advisors under their supervision. The IIC and Accredited Representatives may assign technical advisors to groups based on their technical qualifications.

For parties that are unfamiliar with Board procedures, such as small airlines, it is advisable that the IIC fully explain the methods used to conduct the investigation, outline the major tasks that will be expected to be accomplished during the subsequent days onsite, and explain that a progress meeting will be held at the end of each day. It may be necessary for the group chairmen to discuss the areas that their particular group will be focusing on and the type of expertise needed by members of that particular group. The parties must be informed that all participants are expected to be available for the duration of the investigation and that substituting personnel is not allowed except in extreme situations.

Participants will be asked to report to their respective group chairmen after the organizational meeting for further instructions.

3.2.2 Forms and Badges

As the investigative groups are being formed and party personnel are being assigned, the IIC should use an “On Scene Organizational Chart” to assist in registering the investigative members, their group assignments, and party affiliation. The IIC should also distribute the form "Statement of Party Representatives to NTSB Investigation" to each party coordinator and obtain their signatures (see [Appendix D](#)). This form contains pertinent excerpts from 49 *Code of Federal Regulations* (CFR) Part 831 and explains that, by signing the form, the coordinators are obligating and indicating the organizations they represent and all personnel assigned to the investigative groups that they understand the rules and that they are willing to abide by them. It should be noted that the FAA coordinator, Accredited Representatives and Technical Advisors to Accredited Representatives are not required to sign this form. In subsequent phases of the investigation (CVR and FDR analysis, component testing, etc.), all participants may be required to sign the form or a similar nondisclosure form as a condition of their participation.

The IIC has the option of distributing identification badges to the group chairmen for investigation participants. The badges provide a method of restricting access to the accident site and Command Post to only those individuals approved by the group chairmen or the IIC. Other arrangements may be made with local authorities depending on the level of security desired and the location of the accident site. If identification badges are used, the group chairmen will be responsible for keeping track of their group members' badges.

3.3 Accident Site Safety Precautions

Aircraft wreckage sites may expose investigators to certain risks, including biohazards, airborne hazards, adverse terrain and adverse climatic conditions. The NTSB safety officer will coordinate with the local Incident Commander (local police, National Guard, or fire and rescue), if present, to determine hazards at the accident site and safety resources available to the investigative staff. Personnel involved in the recovery, examination, and documentation of wreckage may be exposed to physical hazards from such things as hazardous cargo, flammable or toxic materials and vapors, sharp or heavy objects, pressurized equipment, and disease. The IIC and/or a designated NTSB safety officer will be responsible for conducting a risk assessment of the accident site, which will identify possible hazards, and determine the level of risk (high, medium, low) at the work site. An environmental risk assessment can be conducted while en route and a more detailed assessment accomplished following the initial visit to the accident site. The safety officer will then develop countermeasures to identified risks and ensure that the appropriate countermeasures are applied at the accident site (see [Appendix G](#)). The safety officer or the on-scene commander will conduct daily safety briefings with all individuals who are working at the accident site. Throughout the on-scene phase of the investigation, the IIC and the group chairmen will monitor everyone to exercise good judgment, use necessary protective devices and clothing, and use extreme caution when working in and around the wreckage.

It is the job of the Incident Commander to ensure that hazardous material is identified at the accident site, and decisions to either remove the material or reduce the risk of contamination or injury must be made before the investigative team is permitted to enter the site. Once such actions have been taken, work at the site will be permitted. All team members should be advised to be on the alert for any undeclared hazardous material and, if such material is found, should immediately notify a group chairman or the IIC so that appropriate measures can be taken.

During the IIC's opening statement, the IIC will state that the Safety Board will not assume responsibility for any personal injuries incurred during the course of an investigation by representatives of organizations participating in the investigation as a party or by an authorized observer nor will the Board provide protective equipment to party participants. Safety Board investigators shall remind all participants to use extreme care and to provide for their own needs on site. Any safety concerns should be promptly expressed to the group chairmen or the IIC. Parties not properly protected will not be allowed on site.

All Safety Board personnel traveling to an area with certain known public health risks or suspected diseases will be cleared by their supervisor before departure. The supervisor will ensure that adequate personal protective equipment (PPE) is provided and the employee is medically qualified for the work to be done. The Safety Board's physician and the Department of State health clinic can be excellent sources of information on the risks associated with certain countries or areas. Inoculations can typically be arranged through an individual's personal medical care facility or through government agencies with which the NTSB has agreements.

The scene of an airplane accident may contain bloodborne pathogens. Bloodborne pathogens are viruses, bacteria, and parasites that are present in the blood, tissue, or other body fluids of infected persons. They could include, but are not limited to, hepatitis B and C virus (HBV) and the human immunodeficiency virus (HIV), which causes AIDS. Some of these viruses do not die upon contact with oxygen or when the fluids dry out. Studies, in fact, show that certain climatic conditions may prolong the infectiousness of HIV. Those who work in or around the wreckage must use extreme caution to minimize direct contact with bloodborne viruses. At a minimum, heavy leather work gloves over nonpermeable rubber gloves should be used and in some case will be required when touching the wreckage. Under certain conditions, such as within the wreckage where investigators may come into contact with blood or human remains, full face masks, protective goggles, and disposable overalls and booties shall be worn. Protective biohazard suits are also available in Hangar 6 at Washington's Reagan National Airport. Occupational Safety and Health Administration (OSHA) requirements concerning training and on-scene protection procedures and equipment are included in the Safety Board's Exposure Control Plan, a copy of which is included in [Appendix T](#). The Safety Board's Occupational Safety and Health Coordinator is responsible for maintaining the plan and ensuring that it is updated annually; copies of the plan may be obtained from the intranet. Each investigator who will be working on-scene will have two packages of biohazard equipment as part of his or her go-team equipment.

3.4 Observers

The IIC may allow properly accredited members of Congressional oversight, designated military personnel, representatives of other Federal agencies, or representatives of foreign governments to be observers to the investigation. Training and familiarization with the Safety Board's investigative process is the sole purpose of the observer status. Observers should not have any self-interest in the investigation, and they will be permitted access to only those portions of the investigation deemed appropriate by the IIC. Observer status must be coordinated and approved in advance. Although observers will sometimes work with one of the investigative groups, they will be under the overall authority of the IIC and will be given factual information on a "need to know basis." The restrictions concerning public dissemination of accident information apply to all observers.

3.5 Lines of Authority

The IIC is the senior person on-scene and all investigative activity at the site is under his/her control. The IIC has the overall authority and responsibility to resolve any difficulties that may arise on scene.

Group members will first attempt to resolve problems directly with their respective group chairmen if any difficulties arise among the team members during the on-scene investigation. If a resolution is not reached, the group members should alert their respective party coordinators. Concurrently, the group chairman will notify the IIC. The IIC and the party coordinator will discuss the problem and attempt to resolve it, informing the group member and group chairman of the decision.

If the IIC and party coordinator cannot reach resolution of a problem, they will then discuss it with the Chief of the Major Investigations Division. If the issue cannot be resolved at that level, it will be elevated to the OAS Director or other senior NTSB management levels for final resolution (see the investigation organization chart in [Appendix D](#) for a detailed delineation of the lines of authority).

3.6 Group Chairmen Responsibilities

Immediately following the organizational meeting, each group chairman should meet with his/her group members. Since some group members will be unfamiliar with the procedures of an NTSB accident investigation, several things should be discussed with the group, including the scope of the group's investigation, assignment of duties, and NTSB protocol concerning field notes. It should be explained that for all matters related to the accident and the investigation, the team members' primary responsibility is to their working group and respective group chairman—not to their respective organization. They must arrange their personal schedules to conform to the schedule determined by the respective group chairman and commit to staying with the group until released by the IIC and their respective group chairman.

3.6.1 Field Notes

Each group chairman is required to compile field notes documenting the on-site activities of his/her group. Field notes represent the summation of factual material gathered and information obtained by each investigative group participating in the investigation. Each group will have one official set of field notes. The field notes will contain applicable information outlined in a set of checklists (see [Appendix H](#)), as well as other information collected or documented by the group. Appendix H also contains information on the responsibilities of each working group.

At the end of each day of the on-site investigation, each group should discuss its efforts and review the progress of its field notes. This is most conveniently accomplished before the daily progress meeting (see section 3.7). At the end of the on-scene investigation, every member of each working group must sign the group's field notes. These signatures indicate and clearly convey

that each member of the group has read all of the field notes and either agrees with the information included in the notes or has indicated, in writing, specific areas of disagreement and the reasons for that disagreement. If group members do not attach written statements of disagreement to the field notes, it will be assumed that they agree with the content and completeness of the information contained in the field notes.

The IIC will draft a summary of the accident for each group chairman to use in his or her field notes.

At the conclusion of the on-scene investigation, the group chairman will present the group's field notes to the IIC for review and signature. After the IIC's approval, the group chairman should make copies of the field notes for his/her group members and for each party coordinator. The IIC should inform the party coordinators that factual information will be shared with all parties unless it is proprietary in nature or there is other concern for the dissemination of sensitive material. **The group chairman and, therefore, the group members will not be released until the field notes have been approved and distributed.** The IIC should be aware of the group's future plans and provide direction, as required, to obtain information that has not been included in the field notes.

Following the on-scene phase of the investigation, the group chairman may reconvene the group in whole or in part to conduct followup work such as witness/crew interviews, maintenance records reviews, flight testing/simulations, or the testing/teardown of powerplants, instruments, and system components. Field notes will also be required to document any such additional investigative work.

3.6.2 Followup Activities

Followup activities may or may not include the group. The group chairman should ensure that the group discusses in advance the scope of any planned followup work. Upon reconvening, the group chairman should meet with the group and, if necessary, other technicians who might be assisting in the activity to review the planned activity and resolve any remaining questions. Group members should be reminded that only the Safety Board may release information about the investigation. (This does not prevent group members from providing factual information to their organization after it is approved by the group chairman.) The IIC and the group chairmen's Division Chief should receive periodic updates during the followup activity.

If the followup work involves representatives from an organization that is not a party to the investigation and the IIC authorizes the organization to become a party, the group chairman should have the party's coordinator (or one of the party's representatives) sign the "Statement of Party Representatives" form. Status as a party allows an organization to participate in certain Safety Board meetings and to receive all public docket material generated during the investigation. This allows the organization access to specific information that it might not otherwise have, as well as information it could use to initiate preventive or corrective action quickly. The IIC may grant limited party status, such that a party will only receive specific factual information and not all factual reports produced during the investigation.

If an organization is not a party to the investigation but will only provide assistance necessary for the investigation (e.g., testing facility or specific technical expertise) the form will not be signed. However, the representatives and the organization(s) should be informed about limitations regarding discussion with anyone outside the investigation and/or dissemination of any investigative information. If there are any questions or problems involving these issues, the group chairman should contact the IIC and, as necessary, other OAS management and the Board's General Counsel for resolution. The IIC or group chairman and the organization providing assistance need to reach an understanding regarding "ownership" of the work product, subsequent testimony about it, and other conditions or limitations. The Board's General Counsel can provide draft agreement or contract language.

As with the on-scene investigation, signed field notes of the followup work will be required. A closeout meeting should be held to review the field notes and to discuss future activities involving the group's work. It might also be helpful to discuss the Board's process regarding the overall investigation and the preparation of the final report and to seek opinions from the group regarding conclusions or corrective actions related to the group's work.

3.7 Progress Meetings

On-site Progress meetings are held daily to disseminate information obtained during the day's activities and to discuss plans for subsequent investigative activities. The meetings also provide factual information to the Board Member, PA officer, and TDA representative for dissemination to the media at press briefings and family meetings.

The IIC will schedule progress meetings as he or she sees fit. However, when possible, progress meetings should be scheduled to begin late enough for participants to clean up after spending time on site but early enough for everyone to have dinner afterwards and get sufficient rest for the next day's activities. Generally, 1800 is a good time to start the first progress meeting. Because participants become tired and stressed during the course of the on-scene phase of an investigation, progress meetings should be scheduled earlier as the on-scene work progresses.

The IIC will begin the meeting by calling the group to order and asking any reporters and attorneys representing possible claimants to leave. The IIC will then distribute the attendance roster and ask those who are new to the investigation to stand and identify themselves, their organizations, and their roles in the organizations. For the first few meetings, all attendees must identify themselves at the start of the meeting. Any new persons who are acceptable to the IIC and the group chairmen will be assigned to investigative groups. This must be coordinated before the start of the progress meeting. Each group chairman will then present the prominent facts obtained that day and the investigative activities planned for the next day and also request needed support or establish coordination meetings with other groups (see [Appendix I](#)). The group chairman should be prepared to respond to any questions about his/her area of responsibility. Questions or discussions on group chairmen's presentations should be limited to factual material only. Analytical questions to

the group chairmen on the implications of their findings will not be allowed. The progress meetings should not be used for a discussion of accident causation. Each group chairman's report should take 5 to 10 minutes, unless it is absolutely necessary to relay more facts to the audience.

The IIC should present a brief outline of activities performed by the FDR and CVR groups, as well as other groups, working at Safety Board headquarters. A telephone or facsimile contact should be made before the progress meeting begins.

The IIC should take notes during the group chairman's presentations. The notes will be beneficial during discussions with the Board Member before the press conference and at later briefings to headquarters personnel.

After all group chairmen have completed their presentations, each party coordinator and the Board Member present should be allowed time to make comments and the next evening's progress meeting should be scheduled. The IIC should remind participants not to discuss the investigation in public areas or in places in which their conversations can be overheard. Participants should also be reminded to remove their personal belongings and notes from the Command Post overnight or at other times when the room is unattended.

3.8 Initial Notification and Status Reports

While the Go Team is conducting the on-scene phase of the investigation, an official-use-only initial notification memo and subsequent status reports will be distributed to the Board Members, GA, PA, TDA, and OAS management. An initial notification memo is provided by the Chief, Major Investigations Division, the Deputy Chief of Major Investigations, the standby IIC, or can be delegated to another IIC, and is usually distributed within a day of the launch of the Go Team. The initial notification briefly describes the circumstances of the accident and lists the members of the Go Team and the parties. Status reports on the progress of the investigation are issued to notify the Board when significant new information is obtained about an accident under investigation. A status report might be issued upon the return of the investigative team from the site but only if new information is obtained following the distribution of the initial notification and subsequent status reports. If the results are potentially significant, status reports will be issued to disseminate the results of teardowns, records examinations, and interviews. During the on-scene phase of the investigation status reports will be written by the IIC for the signature of the Chief, Major Investigations Division, and either mailed electronically or faxed to NTSB headquarters.

3.9 Press Briefing

Press briefings are normally conducted after the progress meetings when information concerning the facts of the investigation is fresh. Members of the press are not allowed in any progress meeting and should not be allowed in the Command Post. Guidelines for the conduct of press briefings follow.

3.9.1 Board Member Present

The Board Member will brief the press after the progress meetings. With the help of the PA officer, it is the IIC's responsibility to prepare the Board Member for the briefing. Before the briefing, the IIC should review the high points of the progress meeting with the Board Member and the PA officer. The IIC should be alert for information that is unconfirmed or unsubstantiated and ensure that the Board Member is aware of any such information and the advisability of not releasing information unless it is confirmed. Any information that might inhibit the Safety Board's ability to gather other needed factual information (e.g., controversial or spurious witness observations) should not be released. Group chairmen may be requested to provide briefing notes or other assistance for this preparation.

The Member, IIC, and PA officer should attempt to anticipate potential press questions that could be expected to follow the release of certain information. Reporters want to know the cause of the accident and are often unfamiliar with Board procedures regarding the determination of probable cause. A reference to the pilot will often lead to a question about "pilot error." A discussion of alcohol or drug testing could lead reporters to ask if the Board suspects that the pilots were under the influence of drugs or alcohol at the time. Information about a failed check ride some years before the accident could lead to questions about the competency of the pilots involved in the accident. Similarly, a reference to a mechanical malfunction or Minimum Equipment List (MEL) item often leads to a question about the quality of the airplane or its maintenance and whether either one caused the accident. In each of these examples, the answer must convey only confirmed factual information and should not contain any speculation as to probable cause.

The IIC should attend the press briefing and be available nearby. The IIC should be aware that reporters may be looking to him/her for body language or facial expressions during the Member's briefing and should, therefore, maintain as neutral an expression as possible during the briefing. Assistance to the Member should **not** be provided during the briefing unless requested. The IIC should determine in advance what action the Member would want if he/she has misstated a fact or omitted information. Other NTSB investigators should not interrupt the briefing **under any circumstances** unless specifically directed to by the Member.

3.9.2 Board Member Not Present

If no Board Member is present, the IIC or the PA officer may brief the press. The same guidelines for Member-conducted briefings apply to IIC briefings. The IIC is discouraged from giving multiple press briefings in a single day.

The IIC should not speculate on the accident cause and should limit the briefing only to a presentation of facts obtained during the day. Rely on tried and true phrases such as, "That is one of the many things we will be looking at;" "It is much too early to tell at this point;" "Right now we are not ruling anything out;" "At this stage we are only gathering evidence;" and "The Board will consider all potential causes after we have reviewed the evidence." The IIC should be prepared to

answer questions following the briefing and be suitably attired to be photographed and videotaped during the briefing.

If material gathered during the day is highly technical, the particular group chairmen should be requested to attend the briefing and be prepared to assist, if necessary. This will not usually be necessary because of the relatively nontechnical nature of the briefings and the preliminary stage of the investigation.

3.9.3 Transportation Disaster Assistance Briefings

The TDA representative will coordinate with the IIC to determine the factual information about the investigation that will be released during the evening news media briefing. Simultaneously with the news media release, TDA staff members will provide families with the appropriate synoptic information about the investigation.

The family briefings will occur daily, as necessary, at a location separate from the on-scene Command Post. During these briefings, families will also receive an update on the progress of the victim recovery and identification effort, personal effects process, and other areas of family interest. Every effort will be made to minimize the time the IIC spends in support of these efforts. The assistant IIC may be assigned to these efforts.

3.10 Daily Activities of the IIC

As part of the responsibility for oversight of the investigation, the IIC will serve as a liaison between Safety Board headquarters and the investigative team and between the Command Post and the accident site. Liaison with headquarters is primarily carried out through the daily briefing; however, the IIC should always be available for additional headquarters inquiries.

3.10.1 Headquarters Briefing

The IIC is expected to brief headquarters personnel on a daily basis. These briefings provide headquarters staff with the opportunity to 1) obtain an update of the recent findings 2) assess the progress of the investigation, 3) communicate relevant technical information to the on-scene team, and 4) provide assistance to the IIC as needed. The daily briefings with headquarters are independent of any briefings between group chairmen and their respective supervisors. The Chief of the Major Investigations Division will provide notice to other Division Chiefs and Directors to allow for their participation in the briefings. OAS and RE supervisors should be informed of any details reported during after-hours briefings.

The IIC should schedule the briefing for a time that is mutually convenient for the IIC and headquarters personnel. The IIC should allow at least 1 hour for the briefing and ensure that

he/she will not be needed at the Command Post or other location during that time. The briefing should be held in a location where there will be no disturbances and where sensitive material may be discussed. A hotel room or an office with complete privacy is recommended.

The IIC will review notes carefully before the briefing and be prepared to discuss in detail each group's activities and findings. If any of the reported findings are unclear, contact the appropriate group chairmen before the briefing for clarification. During the briefing, the IIC should note suggestions or questions from the headquarters staff for which answers must be researched. The IIC will also provide headquarters with a written status report every night.

The IIC may be asked to convey messages or specific requests from headquarters staff to group chairmen. This information should be conveyed to group chairmen at the progress meeting or some other appropriate time.

3.10.2 Safety Board Staff Meeting

Meetings will be held on-site daily, or as needed, with all Safety Board staff during the investigation; 7:00 am usually works best. These meetings provide an open forum for Board staff to raise issues that they may be reluctant to raise during the progress meetings. This can also provide the IIC with an informal setting to provide guidance to the group chairmen or convey messages from headquarters. These meetings should be convened before the progress meetings or first thing in the morning to avoid potential conflicts with the group chairmen's plans. More frequent meetings may be necessary depending on the size of the investigative staff, their need for guidance, and the complexities of the issues. The meetings should be used as a way of preventing small problems from becoming disruptive to the investigation.

3.10.3 Party Coordinator Meeting

The IIC will also meet daily with the party coordinators to explain rules and procedures that coordinators may be unfamiliar with and to review and discuss issues that may come up during the on-scene phase; 7:30 am usually works best. The potential exists in any investigation for parties to conflict. The IIC should be aware of this potential and be prepared to assist in the resolution of such conflicts. These meetings should be used as a way of determining the parties' level of satisfaction with the investigation and their ability to cooperate with each other and with Safety Board group chairmen. Guidance and input should be provided to them, as needed, to prevent potential problems from escalating.

3.10.4 IIC Site Visit

The IIC should visit the site regularly to get a good understanding of the nature of the accident; twice a day is preferable. The visits enable the IIC to learn about the progress of the

investigation and any particular problems, to observe working conditions of the team, and to provide supervision, as necessary, to ensure that the investigation is making satisfactory progress.

The structures group chairman or another experienced airworthiness investigator will serve as the on-site commander during the on-scene phase. On larger accidents, another IIC will be sent to act as the on-site commander. The on-site commander will maintain regular contact with the IIC during the investigation by cell phone, if possible, to keep the IIC informed of the investigation's progress and any difficulties encountered on scene.

3.11 Final Progress Meeting

After a several days, the groups will begin to present less information. Some groups will complete their activities and be released by the IIC. When the IIC determines that little new information remains to be obtained from the remaining groups, it is appropriate to end the progress meetings and wrap up the on-site activities. During the final progress meeting, the IIC should update the participants on the status of the investigation, advise them of any proposed followup activities, and approve and distribute field notes to the group members with a complete set of notes to the party coordinators.

3.12 Release of Wreckage

When the IIC and the group chairmen have determined that parts or all of the wreckage is no longer needed for investigative purposes, the IIC (or a group chairman so designated), in consultation with the OAS Director, will be responsible for preparing and signing Part I of the wreckage release form (NTSB form 6120.15). The form shall be executed by the NTSB representative and signed by someone acknowledging his/her receipt of the wreckage (usually, but not necessarily, the aircraft owner or the owner's representative). A copy of the form shall accompany the released wreckage and the original retained by the NTSB.

Part II of the wreckage release form will include a detailed list of any parts or components of the wreckage that will be retained by the NTSB for further examination. After the NTSB has completed any subsequent examination of retained parts, the NTSB designee will sign Part II of the wreckage release form, send the form and the parts to the owner or person responsible for receiving the parts, and have him/her sign the form acknowledging receipt of the parts and return the form to the NTSB. In the event that portions of the wreckage are returned at different times or to different individuals, it will be necessary to send copies of Part II of the form for the appropriate signatures.

The signed wreckage release form constitutes transfer of the wreckage from the NTSB to the owner or representative. The wreckage release form(s) and any related correspondence will be placed in the NTSB public docket for the accident. There should be no pressure to release all of the on-scene wreckage. Often it is better to arrange for wreckage removal and storage and to retain control of the wreckage in case there is a need to examine it later.

3.13 Materials Laboratory Examinations

In the event that a material failure is suspected or that detailed examinations of a part are desired, group chairmen should enlist the assistance of the NTSB Materials Laboratory. Even if an outside laboratory or manufacturer's facility is used for an examination, the Materials Laboratory should be consulted. [Appendix J](#) contains recommended procedures to submit parts, as well as certain steps to preserve their condition.

3.14 Closing the Command Post

The IIC will read and approve all field notes. Group Chairmen and their groups are not to be released from the site until after the IIC approves their field notes. After the field notes are completed, approved, and distributed, the IIC is responsible for closing the Command Post. Arrangements should be made to return rented supplies and equipment and to settle vendor accounts. The IIC should expect to pay or arrange to pay for such things as telephones, photocopy machines, computers and accessories, meeting room, and supplies. Bills should reflect that all charges have been levied at the prearranged rate and only for the services that had been received and agreed to beforehand. The IIC should settle accounts for \$2,500 or less with a purchase card before leaving the site and retain copies of all bills and payment receipts for processing upon return to the office. The IIC should use form SF44 for purchases and accounts that are more than \$2,500.

4. Post-On-Scene Activities

Following the on-scene phase of an investigation, the IIC will schedule a debrief meeting after the go-team's return to headquarters to discuss a tentative schedule of activities based on guidance provided in Board Order 300. These items include meetings to discuss the progress of the investigation, due dates of the group chairmen factual and analysis reports, preparation of the final report, and the possibility of a public hearing.

4.1 Administrative Tasks Upon Return to Headquarters

Once the IIC returns to headquarters, he or she will check to make sure the investigation was entered into the Safety Board's workload management database, NTSBWork, and make sure that the relevant Division Chiefs do the same. The Board's Accident Data Management System (ADMS) and NTSBKeys should also be updated. The IIC should write and distribute a status/progress report and update the Board Member on scene in person about the latest investigation activities, as necessary. A basic summary opening paragraph should be composed for use in factual reports and distributed to group chairman to facilitate consistency in the basic facts recited in all

reports. Other tasks to be performed at this stage in the investigation can be found in the “IIC Advisory Checklist.”

4.2 IIC Duties for Work Planning

The purpose of the work planning meetings is to discuss activities that will follow the on-scene phase of investigation (e.g., component teardowns, followup interviews, etc.). It also allows all involved staff to agree on realistic schedules to complete required work products. Refer to Board Order 70 for detailed requirements.

The IIC shall prepare a memo announcing the meeting, its location, date, and time. The memo should be accompanied by a summary outlining the major issues of the investigation and distributed to each group chairman, his or her supervisor, and the respective Office Directors and Deputy Directors several days before the meeting.

The IIC should anticipate the investigative activities that each group chairman should pursue and suggest avenues for followup investigation, if necessary. By the end of the meeting, the group chairmen and managers should agree to the accident-related issues, the general activities that remain, the type of report to be generated, the recommendation on whether to convene a public hearing, and the deadlines for the factual and analysis reports. Report completion deadlines may need to be negotiated with the group chairmen and their supervisors depending on their workloads and priorities. The Office Directors or their Deputies will resolve any conflicts regarding deadlines.

The IIC will prepare a memo summarizing items of agreement achieved during the meeting, a revised issue outline, and any unresolved issues. All deadlines for report submissions and anticipated milestones should be included. The memo should be distributed to each group chairman, his or her supervisor, the respective Office Directors and Deputy Directors, and the Managing Director.

The IIC will maintain contact with the group chairmen during the course of the investigation and be aware of the progress of their followup activities. The group chairmen will notify the IIC if they can not meet report deadlines and provide a new date for completion of their reports. The IIC will integrate the activities of related investigative groups if it is determined that they are proceeding in similar directions. For example, if maintenance training becomes an issue, the systems, maintenance records, and structures groups might examine maintenance practices together. Likewise, the human performance and the operations groups may work together in carrying out interviews and records examinations. If two group chairmen are working together, the IIC should ensure that each of them will cover a specific area to avoid overlap among the groups. Identical areas of investigation should not appear in the reports of two separate groups.

The IIC should ensure that he or she is informed of all group activities and group findings. The IIC is responsible for ensuring that the appropriate group chairman will cover all relevant issues. The IIC is also responsible for keeping abreast of potential discrepancies, loopholes

and conflicts about the findings of the various group chairmen and either resolve these issues or bring them immediately to the attention of upper management. The IICs should also ensure that the group chairmen's efforts are coordinated and that they are aware of each others' findings.

4.3 Public Hearing Action Memo

The IIC shall draft an action memo to the Board (through the Managing Director) for the signature of the OAS Director recommending whether or not to convene a public hearing within 20 days of returning from the accident site. A signature sheet for the signatures of the General Counsel and the Office Directors of RE, SR, GA, PA, and TDA shall accompany the memo. The memo should present a logical discussion supporting the hearing recommendation based on previous accidents and subsequent followup actions, Board action on these issues, public interest, local and national media attention, and Congressional and local government interest. A summary of the major issues and the key findings of the investigation should be included. The memo should also include the views of the Board Member who was on scene and the parties regarding the need for a public hearing. The Board's administrative practice regarding the conduct of public hearings is to ensure that before opening the accident file to the public, all parties to the investigation are given the opportunity to record in writing whether or not they want a public hearing to be conducted on the accident. Accordingly, the IIC should ask each of the parties to indicate via fax, e-mail, or regular mail whether they believe a public hearing should be conducted for a particular accident.

4.4 Group Chairman Factual, Studies, and Analysis Reports

The IIC will maintain a list of open action items or issues for the investigation and ensure the completion of each item by coordinating with the group chairmen or their division chiefs.

Upon completion of a group's factual documentation, the group chairman will prepare a factual report based on the field notes and subsequent investigation activities, using the standard factual report outline contained in [Appendix K](#). A draft of the factual report should be made available to the group members for comments that can be incorporated into the group chairman's factual report. Incorporation of group member comments is at the discretion of the group chairman. Concurrence of the group members is desired but not required. If a group member is dissatisfied that his/her comments were not included in the factual report, the party should contact the group chairman's supervisor or the Director or Deputy Director OAS to discuss the issue. If the party remains concerned, they may write a letter to the IIC detailing their position. This letter will be entered into the public docket for the accident. The group chairman should ensure the objectivity and accuracy of information in the factual report, with input from the IIC and approval and sign-off by the IIC and his or her supervisor. If a group chairman for a major investigation is a regional investigator, his or her draft factual and analysis reports must be reviewed and approved by the headquarters Division Chief in the appropriate specialty before they are finalized and provided to the IIC.

Each group chairman will submit a PDF version of his or her final factual report to DMS for approval by the supervisor, and subsequent release by the IIC. The group chairman will also submit a signed hardcopy of the report directly to the IIC, along with sufficient paper copies to send to each party coordinator plus three copies for internal use. Once the IIC has received most of the factual reports, he or she will e-mail them to the party coordinators and the report writer before the docket is opened. If there will be a public hearing, the IIC will e-mail the CVR report to coordinators **on the morning of the day** that the public docket is opened. As it is expected that most parties will attend the hearing, the IIC will distribute the CVR transcript to the parties on the morning of the hearing. Subsequent factual reports will be sent to the parties in time for their use in the public hearing if one is held. The IIC is responsible for entering preliminary data and factual information into ADMS and for scanning in the Pilot/Operator Accident Report (NTSB form 6120.1). In addition, the IIC is responsible for ensuring the accuracy of all material and that no information or material is overlooked.

Group chairmen should be aware of 49 CFR Part 831.6, which establishes procedures for handling a company's "trade secrets" (i.e., confidential or proprietary information). Each page of proprietary information must be stamped that it is so or have another indication by the company that it is proprietary. Further, Safety Board staff is obligated not to release unmarked material if staff has substantial reason to believe it is a trade secret or confidential commercial information. Unless the needs of the investigation require including the information in the public docket, group chairmen must honor the party's request to withhold disclosure of the information. If it is determined that the material must be made public, the Safety Board's General Counsel must be consulted so that Part 831.6 notice procedures can be implemented. If the material is not necessary to include in the public docket, and there is no pending Freedom of Information Act (FOIA) request for it, the material should be returned to the party that submitted it.

Each group chairman shall submit an analysis report based on the information contained in his or her factual report. Group chairmen should begin writing their analysis reports as soon as appropriate and should not wait until the entire factual portion of the investigation is complete. The analysis report should review and evaluate all facts documented by the group regarding their relevance to the accident and should state the principal findings and their relevance to a probable cause of the accident. Analysis reports (and any drafts) are NTSB internal products and should be marked "For Official Use Only." They are not to be released to the group members or party coordinators for any reason and are not placed into the public docket. After they have obtained approval and sign-off from their respective supervisors, group chairmen will submit their analysis reports in PDF format to the IIC for use in the production of the Board's final accident report. [Appendix K](#) contains guidance on the format and general content for group chairmen factual and analysis reports.

Before the final report has been placed on notation, the IIC shall submit the group chairmen analysis reports into the Safety Board internal section of the docket marked, "For Official Use Only." Organizing the docket in this way will give the Board Members easy access to the analysis reports when they are considering the final accident report and will also be useful to other

Board staff in their preparation of other documents, such as petitions for reconsideration. The “For Official Use Only” section of the docket might also contain such things as autopsy results or interoffice correspondence concerning the accident. Although this material will be placed in the accident docket, it is restricted to the Safety Board's internal use and is exempt from FOIA requests provided it meets one of the FOIA exemptions.

4.5 FOIA Requests

Following notification of a FOIA request, the IIC should cease discarding any documentation related to the investigation, including paperwork, photographs, videotapes, audiotapes, electronic files and electronic correspondence. Group chairmen, technicians, Board Members, and other appropriate staff should then be notified that they should also cease disposing of documentation. The IIC and Board employees should not attempt to determine which items in their possession are subject to the FOIA request. If Safety Board FOIA personnel request material before an investigation is completed, investigative staff should photocopy all items that may be needed in the future to complete the investigation. The IIC should then deliver the originals of all investigation material to FOIA personnel, except that material that has been placed in the public docket. Be aware that it will be extremely difficult to retrieve items once they have been surrendered, so it is important that investigative staff make copies of whatever they will need. Following the initial delivery of material to FOIA personnel, the IIC should make copies, as necessary, of all material that he or she receives for use during the remainder of the investigation and provide the originals to FOIA personnel immediately thereafter.

4.6 The Public Docket

Title 49 CFR 845.50 states that all factual information, proposed findings that parties have submitted (that is, submissions), petitions for reconsideration, and the Board's rulings will be placed in the public docket, which will be made available to the public. The IIC is responsible for assembling the public docket and will retain the original copy of all docket material for one year from the date that the accident report is adopted. Board Order 700 explicitly outlines the docket's structure and contents. If it is unclear whether to place material into the docket, the Office of the General Counsel will make a determination. The manner in which material is entered into the docket is the same regardless of the circumstances; however, the timeframe for opening the docket is determined by whether a public hearing is convened on the accident (see below). When the docket is opened, the IIC should also update the ADMS record to “Factual” status.

Generally, copies of the following shall be entered into the docket: factual reports, addenda to the factual reports, errata sheets, photographs, and pertinent correspondence from the parties (other than routine requests for information). Photographs are acceptable from either digital cameras or scanned prints, but should meet minimum defined quality standards (see Docket Procedures manual); until further notice, associated negatives should also be provided whenever

they exist. It is NTSB policy to retain materials, such as documents and photographs scanned into the docket, for 1 year after the final report is adopted before their disposal.

After the accident report has been adopted and prepared for printing and subsequent recommendation letters have been completed, any material not needed for the public docket or a pending FOIA request should be discarded. This will ensure that the public docket will contain all pertinent data and that this material will not subsequently be contradicted by unverified or preliminary data.

Dockets are created and managed using the Board's web-based application, Docket Management System (DMS). It is available on the intranet, along with a procedures manual and other user guides at <http://inside/projectlook/docket/description.htm>.

It is important to remember that it is a violation of the Board's regulations to release information that the Board has not already formally released by way of the docket, press releases, or a published report to anyone outside the Board (other than parties to an investigation when their having the information is critical to the investigation). It is also a violation of the Board's rules to release "official-use-only" and any other analytical work to **anyone outside the Board**. Unauthorized release can be prosecuted as a criminal act. Staff should allow Public Inquiries Branch to handle all requests for publicly releasable material; when there is any doubt, consult with the Records Officer or General Counsel advisors.

4.6.1 No Public Hearing

If the Board has voted not to hold a public hearing and a CVR recording tape has been transcribed, the docket can be opened when a majority of the factual reports have been completed and released with the CVR transcript.

When the majority of the factual reports have been completed, the IIC should assemble packages of the factual reports for each of the parties. The IIC should assemble this material in a timely manner and should not succumb to outside or public pressure to gather this material by a date set arbitrarily. The IIC should also make sure that the OAS's electronic docket contains the same factual material that has been assembled for the party packages.

To open the public docket, the IIC will prepare a memo to the MD, Directors, GA, PA, and TDA giving notice that factual material is about to be made available to the public. The memo will include an attached table of contents listing the factual reports and information contained in the docket. Subsequent material that is introduced into the docket does not require such a memo. The IIC, after coordinating with OAS, GA, PA, and TDA, and Public Inquiries, will then select a date for opening the docket.

After the exact date and time for opening the docket have been selected and announced by means of a memo from the IIC to the Members and offices, the IIC will brief the

appropriate PA staff on salient information about the accident that is contained in the factual reports. At this time, the IIC should also e-mail a “warning memo” to the parties notifying them that the docket will likely be opened on the date selected by GA, PA, TDA, and the Office of Public Inquiries. If the IIC has not already done so, he or she should mail the factual reports and the CVR transcript (if there is one) to the parties so that these documents are received on the morning of the day that the docket is opened. If the docket does not contain CVR information, the parties may receive final factual reports at the time of their completion.

4.6.2 Public Hearing

If a public hearing is held, the docket should be released on the morning that the hearing begins. This will ensure that all reports are made available to the public at the same time as they are distributed to the press at the public hearing. The CVR transcript will be among the reports entered into the docket to coincide with the opening of the hearing.

4.7 Conducting Public Hearings

Public hearings allow the Safety Board to gather more facts about an accident and to put on record a substantial amount of information about circumstances relating to the accident. Hearings also allow the public to learn more about the Board's investigation of an accident for which there is substantial interest. For this reason, hearings have historically been held near the location of the accident. However, in May 2000, the Board opened its new Board Room and Conference Center at its headquarters in Washington, D.C. This facility will generally be used for all public Board events, including hearings, unless circumstances or considerations dictate otherwise.

After the Board has voted to convene a public hearing, the first official action is the issuance of the Order of Hearing, which is signed by the NTSB Chairman (see Appendix M). Thereafter, the OAS Director designates a hearing officer, who is typically the IIC but can be a different designee if circumstances warrant. The hearing officer is formally granted the authority to issue subpoenas (typically issued as “friendly subpoenas” to reimburse nonparty witnesses), swear witnesses into the hearing, and to generate the Notice of Hearing, which announces the hearing's date, time, and location. These powers are not continuing powers vested in the hearing officer but, rather, are conferred for each hearing.

4.7.1 Preparation

Public hearings require extensive preparation to ensure that all necessary details have been addressed and to ensure the success of the hearing. Inadequate preparation in either administrative matters or technical details can be detrimental to the success of the hearing and create unnecessary work later. A complete preparation guide is being developed and will be available on the intranet.

The IIC/hearing officer is responsible for overseeing all preparations for the hearing, both administrative and technical. Often, many of the administrative details, such as hearing site selection, material preparation, supply, equipment and material acquisition, and transportation can be assigned to a hearing assistant. The hearing officer or the IIC (if the functions have been divided) must address technical details.

4.7.1.1 Administrative

Administrative items include selecting the hearing date and location, acquiring necessary supplies and equipment, fulfilling Safety Board documentary requirements, assembling the exhibits from the factual reports and addenda, reproducing exhibits, distributing materials to parties and organizations, and arranging for court reporter services (see [Appendix L](#)).

The hearing officer will select the date for the hearing with the concurrence of the Chairman of the Board of Inquiry by considering workload requirements of the hearing participants, the Board meeting schedule, and the schedule of the Chairman of the Board of Inquiry (i.e., the presiding Board Member). These things considered, hearings are typically held 4 to 8 months after the date of the accident, but they may be held at any time during the investigation. Once the hearing date has been established, the hearing officer and the group chairmen must strictly adhere to an agreed upon schedule to ensure that exhibits will be made available to the parties in time to allow their preparation for the hearing.

The hearing will typically be conducted in the Conference Center at the Safety Board's headquarters. This room can be reserved by submitting a [request form](#) that is available on the Board's intranet site under "Projects." Audio/visual equipment and services can also be requested using this form.

If it is determined that this facility cannot accommodate the needs of the hearing, another site will need to be selected. If this is the case, the hearing will usually be held in a large hotel meeting room that should accommodate the hearing participants, media personnel and equipment, and public seating. The size of the room needed will vary according to the public interest in the accident. The room should have a raised platform with a table to accommodate about 8 people, table(s) for NTSB technical panel members, tables to accommodate around 10 people for each of the parties to the hearing, a table for the witnesses to give testimony, and a small table for the court reporter (see [Appendix L](#)).

The requirements for public address and electronic support systems must be provided to the hotel. PA can provide information to the hotel on audio and video electronics needs. The hearing officer should follow up as necessary with the hotel to ensure that the microphones and electronic support equipment will be in place and operational for the hearing. It may be necessary to indicate where microphones will be needed and how the hearing will be conducted to ensure the proper preparation.

If the hearing is held off site, supplies and services for the hearing room, including a fax machine and photocopy machine, will need to be obtained as they would for the Command Post. All financial agreements should be in writing. At the close of the hearing, all bills will be collected; those that are \$2,500 or less should be paid with a purchase card. Safety Board supplies, such as the Board seal and banner and a gavel and gavel striker, will require transport to the hearing site. Office supplies will also be necessary.

The hearing officer should contact the GA, PA, and TDA, the Chairman of the Board of Inquiry, and the Director of OAS to determine the sufficient copies of factual reports from the group chairmen and ensure that Board procedures are followed in their assembly. Public Inquiries assigns the docket number for the hearing. Every factual report and attachment must also be given a distinct exhibit identification number. Each exhibit must be identified with these numbers on the cover sheet (see [Appendix M](#)). The hearing officer will resolve any conflicts regarding exhibit numbers.

The group chairmen's factual reports are assigned the letter suffix "A" and will be the first exhibit in each group of exhibits. Additional exhibits follow the group chairman's report and are assigned a letter suffix, beginning with "B" and proceeding through the alphabet, until all attachments have been identified. If the number of attachments exceeds the available letters of the alphabet, use double letters, beginning with "AA". Exhibits should only include that information necessary for the interviewer or witness to refer to during the hearing. Therefore, not all factual information in the Public Docket will be identified as an exhibit. Each page of the exhibit will be numbered in the lower right-hand corner.

The first group of exhibits (and the corresponding exhibit identification number "1") is reserved for documents that establish and designate the following:

- Order of Hearing (Exhibit 1A)
- Notice of Designation of Chairman of Board of Inquiry (Exhibit 1B)
- Designation of Hearing Officer (Exhibit 1C)
- Designation of Parties to the Hearing (Exhibit 1D)
- Notice of Hearing (Exhibit 1E)

All of these documents are to be prepared by the IIC/hearing officer for the signature of the official that is noted on each.

Poster-sized charts and photographs (or material that can be presented on audio/visual equipment) enhance the quality of witness testimony during the hearing. Generally, photographs of the overall wreckage documentation, instrument approach charts, and plots of radar tracks of the accident airplane are appropriate. The group chairmen, the hearing officer, and the Board of Inquiry will coordinate exhibit requirements.

Allow sufficient time for reproducing materials and shipping them to the site of the hearing. Do not wait until overnight mail is the only alternative. Typically, sufficient copies of each

exhibit are made and prepared for distribution to the parties. Coordinate with GA, PA, and TDA to determine the number of copies of each exhibit they will need.

The IIC/hearing officer should inform all parties of the details of the hearing and the prehearing conference (see section 4.7.2) well before both are held. Party coordinators should be contacted first by telephone then by written confirmation. Because of the importance of their notification, parties should be provided written notice of the hearing and prehearing conference through air express or registered or certified mail so that the Board receives confirmation of their receipt of this information.

The IIC/hearing officer should allow sufficient time (at least 2 weeks) for the parties to receive and review the items critical to the hearing before the prehearing conference. These include exhibits, issue list, areas of questioning, and relevant exhibits for each witness. Provide any exhibits, corrections, amendments to exhibits, or other relevant material not previously forwarded to parties at the pre-hearing conference.

The IIC/hearing officer should contact the Safety Board's Office of Administrative Law Judges to arrange for a court reporter to transcribe the proceedings (the Board maintains a court reporter service on contract for this purpose). After the request has been forwarded to the service, contact the reporter assigned to the hearing to confirm all details. Ensure that the court reporter is aware of the importance of his or her arrival before the hearing starts (to allow time for setup and briefing about expectations).

4.7.1.2 Technical Matters

The IIC/hearing officer must accomplish the following to coordinate the substantive aspects of a hearing: determine the issues of interest, identify and request witnesses to address the issues, review areas of inquiry with the technical panel, ensure that parties are designated, and notify parties. The Chairman of the Board of Inquiry will approve all major decisions regarding the technical aspects of the hearing. Generally, two or more meetings will be held with the Chairman of the Board of Inquiry to review issues, witnesses, and general staff preparation.

The staff and OAS management, in consultation with the staff and management of other Safety Board offices with interest in the investigation, will draft the safety issues to be raised in the hearing. An "average" hearing will address about five issues although some hearings have addressed as many as 12.

After the issues have been identified, the IIC/hearing officer should obtain the necessary witness expertise to address the issues at the hearing. Usually, Board management or the group chairmen involved with the hearing issues will be able to identify witnesses whose testimony is appropriate. The witnesses may be from the parties to the investigation or can be suggested by one or more of the parties. For example, if issues, such as flight crew training and preparation for the accident flight have been identified, individuals responsible for flight crew training at the airline

or airframe manufacturer may address these issues. Additionally, according to the desired depth of exploration of the issue at the hearing, witnesses from the FAA with responsibility for approving training in that type aircraft could be identified. Depending on the issues to be covered at the public hearing, Board personnel may be called to testify. When these staff members are called, their testimony will be limited to factual findings relating to the accident under investigation.

If a witness with the desired expertise cannot be located or is not available through the parties to the investigation, the IIC/hearing officer should attempt to locate either an individual with the same expertise from a different organization or an individual with similar expertise from the parties. For example, if the chief pilot of the airline is unavailable to address training on that aircraft type, the airline's Director of Training may be available and may be qualified to address the issue.

Once witnesses have been identified, the IIC/hearing officer should arrange either with the witnesses or with their party coordinators for them to appear and testify at the hearing. If necessary, the Board can issue invitational travel orders and fund travel expenses for witnesses who are not members of a party to the investigation to appear at the hearing.

After witnesses and issues have been identified, witnesses will be “assigned” to members of the technical panel. Technical panel members, usually group chairmen assigned to the investigation, are responsible for asking a witness the questions necessary to address a particular issue. The IIC/hearing officer will serve as the head of the technical panel and is responsible for reviewing issues with members of the panel, ensuring that each understands the issues and the witnesses identified to address specific issues. The IIC/hearing officer should also be prepared to question witnesses to balance the workload among the technical panel.

The IIC/hearing officer should meet regularly with technical panel members to ensure that the technical panel is appropriately prepared for the hearing. The technical panel members will be expected to be thoroughly familiar with the relevant exhibits and their relationship to the areas of witness questioning.

Before the hearing, technical panel members should contact the witnesses they have been assigned and review the general areas of inquiry with them. It is neither necessary nor advisable to review specific questions with them. However, witnesses should be advised of the general areas in which they will be questioned to enable them to be well prepared before the hearing.

The IIC/hearing officer is typically responsible for drafting the Chairman of the Board of Inquiry's opening and closing statements for pre-hearing conference and the hearing.

4.7.2 Prehearing Conference

The prehearing conference allows the parties to review plans for the hearing and provides them with a final opportunity to make suggestions on its conduct. Parties may bring legal counsel to the prehearing conference. The prehearing conference is not a fact-finding activity.

Typically, the prehearing conference is held about 1 week before the hearing at the Safety Board's headquarters in Washington, DC. In unusual circumstances, this meeting may be held at the hearing site. Although the meeting should not last all day, the room should be reserved for the entire day.

The IIC/hearing officer will review the items to be distributed with the parties and will allow each party the opportunity to offer comments on the exhibits, hearing objectives, and witnesses and their areas of questioning (see [Appendix N](#)). The parties will be given the opportunity to suggest additional witnesses or exhibits.

The IIC/hearing officer should describe any administrative procedures that need explanation. The Board Member serving as the Chairman of the Board of Inquiry makes the final decisions regarding the conduct of the hearing. The parties should be made aware that questions or concerns not expressed at the prehearing conference will not be entertained at the hearing.

4.7.3 The Public Hearing

The public hearing usually begins with the Chairman of the Board of Inquiry's opening remarks, which are followed by introduction of the Board of Inquiry, the technical panel, and parties and their coordinators (see [Appendix O](#)). The IIC will make an opening statement summarizing the progress of the investigation. The IIC will not be questioned by the parties to the hearing. Each subsequent witness is called, sworn in, and qualified in the order he or she appears on the witness list. Each witness is then questioned by the member or members of the technical panel identified on the list according to the predetermined areas of inquiry. Other technical panel members should refer their questions for a witness to the NTSB panelist assigned to that witness. Other panelists will not typically ask followup questions.

Each party spokesperson is then given the opportunity to ask questions, followed by the members of the Board of Inquiry asking any remaining questions. There will normally be only one round of questioning for each witness. After all witnesses have been called, the Chairman of the Board of Inquiry will read the closing comments and adjourn the hearing.

4.7.4 Techniques for Questioning Witnesses

Asking proper questions at a public hearing requires that the investigator: 1) become thoroughly familiar with the relevant exhibits, 2) demonstrate mastery of the subject matter the witness will be questioned about, 3) ask brief questions that require the witness to effectively address the issues, and 4) listen to the answers and ask followup questions when warranted.

To prepare for these tasks, the investigator should thoroughly read each appropriate exhibit to gain the requisite familiarity and underline or note sections of the exhibits that could generate comments from the witness. Become familiar with the actual or expected expertise of the witness.

There are two ways to prepare and conduct questioning of a witness: 1) write the questions you wish to ask in advance in the order you expect to ask them, or 2) write the areas of questioning you expect the witness to address. Each method has its advantages and disadvantages. The major advantage of the first method is that you will not overlook any one question. On the other hand, this method may limit your ability to ask followup questions in response to a particular answer from the witness. The latter method provides the most flexibility in tailoring questions to the responses of the witness, but it may allow some questions to be overlooked. Prehearing discussions with the assigned witnesses will allow the panelist to more completely outline the questions needed or testimony desired at the hearing.

Questioning each witness should begin with the qualification process, which entails establishing the identity and business address of the witness (if this has not already been done), the expertise of the witness, and his/her relationship to the issues of the accident. The hearing officer will typically perform this task. The panelist will then direct specific questions about issues relevant to the expertise of that witness.

In addition to the wording of the questions, many factors can affect the quality of the hearing. Tone of voice, mannerisms, attitude, and demeanor of the questioner can be communicated to the witness and affect the nature of his or her answers. Because of the public nature of the hearing, it is of utmost importance to maintain a professional demeanor at all times. Each panelist should strive to be fully prepared, ask questions in an objective manner, and treat the witness with respect.

4.8 Subpoenas/Sworn Testimony

Section 304(b)(1) of the National Transportation Safety Board Act of 1974, as recodified at 49 USC paragraph 1113(a), grants authority to issue subpoenas to Board Members, Administrative Law Judges, and any officer or employee duly designated by the Chairman. The law authorizes any duly designated member of the Board to hold hearings, sign and issue subpoenas, administer oaths, examine witnesses, and to receive evidence at any place in the United States.

Subpoenas shall be issued under the Chairman's signature or his/her delegate and may be served by any person designated by the Chairman or delegate. The power of subpoena must be used judiciously. The information or testimony being sought must be advisable and necessary. There are two basic types of subpoenas: one for the appearance of a person to testify and produce records and one for the production of records only.

The procedure for issuing subpoenas is as follows:

- (1) Each investigator who is likely to serve as an IIC of accident investigations conducted by the Board or any officer or employee of the Safety Board who is

likely to have need for issuing a subpoena should have a supply of blank subpoenas (NTSB forms 6100.1 and 6100.8), which are available on the intranet.

- (2) When there is a clear need to issue and serve a subpoena, the Safety Board investigator, officer, or employee should contact his or her Division Chief and indicate the need. If the Division Chief agrees, he or she will seek the approval of the OAS Director, who will obtain written authority from the Chairman. Any questions should be directed to the Office of General Counsel.
- (3) A form to authorize the issuance and service of subpoenas will require only the:
 - (a) identification of the accident
 - (b) Docket number, if available or applicable
 - (c) name and title of the authorized issuing official
 - (d) signature of the Chairman and date
 - (e) Statutory cite for sub. authority (49 USC paragraph 1113(a))
 - (f) Statement of what office is authorized to do (that is, issue subpoena and administer oaths
- (4) When such authorization is executed, the authorized issuing official should fill out, sign, and serve the subpoena(s).

Although the use of subpoenas is often related to public hearings, there occasionally are situations during the field phase of investigations when sworn testimony (that is, depositions) is required from selected individuals. Such situations include those in which there is conflicting evidence from different sources, reluctant or uncooperative witnesses, or highly controversial and critical information that requires transcribed sworn testimony.

When a situation arises that suggests the need for taking sworn testimony, the IIC shall inform his or her supervisor of the reasons and plans for taking the testimony and obtain the necessary authority to administer the oath. Generally, the IIC would be the person authorized to administer the oath; however, in some cases, the applicable group chairman or other Safety Board investigator could be authorized. The IIC would also contact the Office of Administrative Law Judges to request the services of a court reporter.

In most cases for which sworn testimony would be taken during the field phase of the investigation, the specific group chairman and party group members would participate along with the IIC, who would oversee the proceeding. For example, if the testimony involved a pilot or flight operations manager, the Operations Group and the IIC would conduct the proceeding. The procedures would be very similar to those followed during an informal interview. If the proceeding pertained to an aircraft maintenance issue, the Maintenance Records Group or relevant airworthiness group (Structures, Systems, or Powerplants) would take the testimony.

The provisions of 49 CFR 831.7 for witness representation apply when sworn testimony is taken. The representative may advise the witness, if necessary, when questions are posed; however, the representative may not disrupt the proceeding or address the other members of the group. The senior Safety Board official present will deal with any conflicts or problems that might arise during the proceeding. The General Counsel may be contacted.

4.9 Technical Review

The Technical Review is normally the final step in the factual phase of the investigation and provides the parties with the opportunity to perform a final review of all factual material obtained during the investigation. It allows the parties to raise any investigation problem areas so the issues can be resolved or at least addressed in the report preparation process. In addition, the Technical Review provides a formal review of the accuracy of information contained in the group chairmen's factual reports.

The Technical Review should be held as soon as possible after completion of the public hearing or fact-gathering. The Technical Review will be held after group chairmen have completed their investigative activities, written their factual reports, and collected the documents that will complete the public docket of the Board's investigation. The IIC shall notify the parties of the date, time, and location of the Technical Review in writing. This correspondence should establish the limits of the party review process, noting that discussions will focus on fact-finding only and that no analysis will be discussed.

Group chairmen and their Division and Office managers should be present at the Technical Review. All factual reports should be provided to the party coordinators with sufficient time to allow their thorough review before the date of the Technical Review. The IIC should begin the Technical Review by calling upon each group chairman, as necessary, to discuss the work of his or her group(s) during the investigation. Next, each party coordinator will be asked whether he or she has questions concerning the material presented in the particular factual report. Finally, party coordinators will be given the opportunity to suggest additional avenues of investigation or to submit additional factual information for inclusion into the public docket to ensure that the information is considered by the Board. If necessary, Division or Office managers should advise the group chairmen on how to address questions or suggestions from the parties. Discussions that are not substantive, such as minor wording and grammatical changes, or that do not deal with factual material should be avoided.

The party coordinators should also be encouraged to submit their analysis, conclusions, and/or recommendations that they believe are justified by the facts of the investigation (see section 4.10). All formal correspondence between the parties and Board staff should be retained for possible inclusion in the public docket. After the meeting, the IIC shall write a memo to parties and group chairmen listing agreed upon changes, deletions, or additions to the factual reports.

4.10 Party Submissions

Although the Technical Review provides parties with the opportunity to offer comments on the factual material, parties should be strongly encouraged to submit their proposed conclusions, recommendations, and probable cause under the provisions of 49 CFR 831.14 or, if a hearing has been convened, 49 CFR 845.27. If a hearing is held, closing comments by the Chairman of the Board of Inquiry will contain instructions on submitting proposed findings and conclusions. The IIC will write each party coordinator before the Technical Review, informing him or her of the opportunity to present party submissions. It should be explained that the submissions should contain their proposed conclusions, probable cause, and recommendations relating to the accident. The coordinators should be given 30 days from the day of the Technical Review to provide submissions and be reminded that they are required to send a copy of their submission to each of the other parties.

Parties should submit 1 electronic document and at least 25 hardcopies of their submissions: one for each Board Member, the IIC, OAS, RE, the public docket, and one unbound/unstapled copy. Submissions may be addressed to the Chairman but will receive more prompt distribution if sent directly to the IIC.

The IIC should distribute submissions to the Board Members as soon as they are received. Additional copies should also be sent to Board Members at the same time that the Executive Secretariat distributes the notation draft of the final report. The party submissions will be considered during development of the final report.

4.11 Report Planning Meeting

A report planning meeting should be convened to discuss the report outline and to resolve any outstanding issues identified during the work planning meeting. The IIC shall draft a memo announcing the date, time, and location of the meeting and distribute it (along with a list of major areas of discussion), to the group chairmen and report writer, their supervisors, and relevant Office Directors, including the Director of SR. Coordination between OAS and SR is required throughout the report writing process to ensure SR is aware of all proposed recommendations and review of previous recommendations being used in the draft report. At the conclusion of the meeting, all participants should agree on the major issues to be discussed in the report, recommendation topics, the thrust of the probable cause, and remaining deadlines. The IIC shall draft a memo or e-mail after the meeting that summarizes the major points that were agreed to and distribute it to all participants.

4.12 Preparation of the Final Report

The format of the final report will follow the outline in Annex 13 to the International Civil Aviation Organization (ICAO). Sections 1.1 through 1.17 vary little from one accident to another although certain sections will contain more or less material depending on the circumstances of the investigation. Section 1.18, “Additional Information,” and the analysis sections will be drafted to reflect the major investigative activities of the groups critical to the issues of the particular investigation. Section 1.19, which is not always used in a report, is reserved to highlight new or effective investigative techniques that may have been applied during an investigation. If this section is used, it should briefly indicate the reason for using the techniques and the benefits derived while presenting the results in the appropriate sections (1.1 to 1.18).

4.12.1 Drafting the Report

A report writer from the Writing and Editing Division (AS-70) is generally assigned to write the report soon after the accident. The IIC should provide the report writer with the group chairmen's factual and analysis reports as soon as they become available so that the report writer can begin drafting the final report. The IIC should meet with the report writer to discuss the best method of delivering these reports. All factual material in the draft final report must be supported by material in the docket, and all calculations should be checked for accuracy. Calculations that are culled directly from the group chairmen's factual and analysis reports should be verified by the group chairmen, their supervisors, or the IIC before these reports are given to the report writer. Where possible, the report writer should double check calculations and question the group chairmen or IIC if something does not seem correct. The report writer should check all figures, tables, and photographs for quality of reproduction and, when necessary, will ask the appropriate group chairman or IIC to obtain diagrams, schematics, or photographs that more clearly illustrate a particular concept. Group chairmen should determine whether any figures, tables, or photographs used in their factual or analysis reports require permission for use and obtain permission where necessary. The report writer should ensure that permission from Jeppesen-Sanderson has been obtained if its charts are to be used in the draft final report. If any proprietary information is to be used, the IIC and report writer must coordinate with the Office of General Counsel. This should be done as early as possible in the event the owner of the information objects to its use in the final report.

4.12.2 Report Drafts

The initial drafts of a major report will be circulated to group chairmen and AS management before the Managing Director and other Directors sign off on the report and it is given to the Board Members as a Notation draft (the notation process is the process by which items are sent to the Members of the Safety Board for their consideration and is fully explained in the Board Orders. During the Initial draft stage, several drafts will likely be distributed, sometimes in various states of completion, before the document is ready to progress to the

Directors' draft. At each level of review, reviewers are encouraged to correct any known discrepancies and to suggest textual improvements, which may range from minor changes to substantive revisions. The report writer will evaluate each suggestion and, when necessary, will discuss potential conflicts with the group chairmen or IIC. During this stage, the report writer will internally distribute the report to the group chairmen assigned to the investigation, their supervisors, SR, and other personnel as appropriate. In the early drafting stages, statements of probable cause may not be included.

After comments and corrections from parties' submissions and those who reviewed the Initial draft have been incorporated, the Initial draft becomes the Directors' draft. The report writer then distributes this draft to the Managing Director, the Executive Secretariat, and the Directors of the Offices of Aviation Safety, Research and Engineering, Safety Recommendations and Accomplishments, General Counsel, and relevant Division Chiefs with a memo soliciting their comments and corrections. The Managing Director will then schedule a Directors' Review meeting to discuss the report. After the day, location, and time of the Director's review have been set, the IIC or report writer is responsible for sharing information with the group chairmen, Office Directors, and report writer. Before the Directors' Review meeting, the IIC in coordination with the report writer should identify any dissenting opinions from or between group chairmen and senior staff, keeping in mind that consensus is a goal but not a requirement.

After the accident report has been revised to address issues that may have been identified during the Directors' Review meeting, the Directors' draft becomes the Notation draft. The Notation draft is transmitted to the Board Members via the Managing Director with a Notation memo, which is generally drafted the report writer. The Notation memo summarizes the principal issues of the investigation and the final report and outlines unresolved areas of staff disagreement. It also contains the names of the organizations receiving safety recommendations and the fax numbers of the respective company officials who will most likely be responsible for initiating the recommended action. Please note that the fax recipient may not necessarily be the person to whom the safety recommendation is addressed. The Notation package should include a proposed Board meeting agenda that lists the principal issues discussed in the report and notes the pages in the factual and analysis sections where these issues are discussed. The agenda should also note the corresponding conclusion and recommendation numbers. Twenty copies of all photographs used in the report should accompany the Notation package. The Board Members should receive this package for review at least 2 weeks before the Board Meeting. A longer period is often specified by the MD if the draft report is unusually long. The IIC should ensure that Board Members have copies of all party submissions before the Notation package is delivered to them.

4.12.3 OAS Protocol for Major “Blue Cover” Reports and Safety Recommendation Letters

4.12.3.1 Intended Audience

Reports and recommendation letters (greensheets) should be written so that they are comprehensible to and contain enough explanation to be understood by interested persons who are **not** technical experts.

Safety Board Order 4, (addressing protocol for the preparation, consideration, and adoption of documents by the Board), states the following regarding the Safety Board’s editorial policy:

The primary audience of published Safety Board documents is persons, groups, or organizations who can bring about changes in transportation safety through action on our safety recommendations. The Congress, industry, media, and public, who can influence the actions of the recommendation recipients, are also important audiences. The type of audience and the technical knowledge of the audience vary greatly depending on the document’s subject and the safety issues presented. The Safety Board does not intend its reports and recommendations to be read only by technicians and specialists in the transportation industry....Because Safety Board documents are of interest to a varied audience, the writers, reviewers, and editors are to produce documents that can be read and understood by an educated lay person. Although the reader may not achieve a full understanding of the technical aspects discussed in a document, the reader should be able to follow the discussion and to fully understand the safety issues presented, the Board’s analysis of these issues, and the recommended action.

4.12.3.2 Conclusions and Recommendations

Note in particular the guidelines regarding use of the words “concludes” and “believes”:

Conclusions:

- The words “the Safety Board concludes...” should not be used in the text of a report unless they precede a formal conclusion.
- Do not make a conclusion a statement of fact but, rather, a declaration of what we have drawn from the facts.
- Ensure that each point that is analyzed in the report logically leads to a conclusion that summarizes the Safety Board’s view or position on that issue.

Even if the issue under discussion turns out not to have been a factor in the accident, construct a conclusion indicating that it was not a factor.

Recommendations:

- The words “the Safety Board believes...” should not be used in the text of a report or a greensheet unless they precede a formal recommendation.
- Generally, follow a conclusion with a recommendation. Some conclusions do not call for a recommendation. For example, very innocuous conclusions (“the flight crew was properly certified”) or conclusions that rule something out (“windshear was not a factor in the accident”) do not suggest the need for a recommendation.
- However, when conclusions raise an actual or potential safety issue that requires some sort of follow-up, either propose a recommendation to correct or address the problem or document that some sort of corrective action has already been initiated or completed (by the operator, manufacturer, FAA, etc.)

4.13 Board Meeting

The Board Meeting to consider the draft report, probable cause, and recommendations brings to completion most of the work of the investigation. Because the meeting is held in public and because of the importance of the meeting to the investigative process, the necessity of adequate preparation for the meeting cannot be overstated.

No later than a week before the Board meeting, staff participants will conduct at least two “dry run” rehearsals of their presentations in the Board room. All participants should read the guide “How to Survive a Board Meeting,” which is available from the Safety Board’s intranet site. The IIC and appropriate staff should be prepared to make statements and to use audiovisual equipment and material, as required. Within a day or two of the Board meeting, the OAS Director or the Managing Director may hold a debriefing about the meeting. Regional staff may attend via teleconference.

Board staff should prepare for the meeting by thoroughly reviewing material critical to the key issues of the investigation. It is not necessary to memorize the report or information concerning the finer points of the investigation (e.g., the distance between the takeoff point and main wreckage location). However, good preparation requires anticipating questions that could arise during the meeting and including written notes or other documents to quickly locate key factual material. For example, the IIC should note such information as the flight crew’s total flight hours and their times in type since these questions are often raised during the meeting. If any questions persist during preparation for the meeting, the IIC should locate the person responsible for that area of investigation and review the material with him or her. The IIC should know where key information is in the report for easy reference during the meeting. The IIC should assume that all questions will be directed at him or her and that he or she will be expected to answer them.

Likewise, the group chairmen should fully understand all information relevant to their portion of the investigation.

A Board Meeting begins with the Chairman calling the meeting to order. He or she then describes the agenda items (the particular report or Board items being considered). The Managing Director will be asked to identify the personnel sitting at the staff table. After these actions, the IIC should make an opening statement (see [Appendix P](#)) that summarizes the following facts of the investigation: the launch activities, parties to the investigation, investigative groups, key findings, and major issues.

Graphics may be useful in presenting details of the accident and may include videos of the wreckage scene, poster-sized approach charts, site photos, mechanical parts illustrations, maps, and computer simulations. Assistance with complex graphics should be requested from Information Products Division in RE as soon as the need is identified, using the request form on the intranet. Effective opening statements and staff presentations will demonstrate the depth of the investigation and assist the Board Members and the audience in understanding the issues of the accident.

Answer questions from the Board in a succinct and direct manner. If the IIC does not know the answer and cannot direct the question to someone on the staff, he or she should say so. Staff should avoid sounding defensive in their answers. Facts should be referred to as such, provided that they are addressed in the report. References to staff proposed conclusions or causes of the accident should be stated as such. They do not become final conclusions or causes until after the Board has voted on them.

The Board may adopt the report in its entirety, adopt the report with changes discussed during the meeting, or require further investigation or rewriting before approving the report. After considering the accident report, the Members will discuss and vote on the findings, recommendations, and the probable cause(s) of the accident. Dissenting Members may state their disagreements and include a written dissension for incorporation into the final report. Staff should make note of Members' questions or requests during the Board Meeting to ensure that they are properly addressed in the final report.

Once the report has been adopted, the IIC should coordinate with the editorial staff to update the narrative and probable cause statement in ADMS. The IIC must also ensure that the case appears on the "docketed" list managed in OAS so the ADMS status can be updated to "Final" and released to the public.

4.14 Document Preservation/Archiving

After an accident report has been adopted, the IIC should place original factual and analysis reports in a cardboard box, seal the box, and clearly mark it regarding its contents. The box should be stored in the basement at the Safety Board's headquarters for 1 year from the date of the report's adoption.

4.15 Petition for Reconsideration

After the Board Members have adopted an accident report, recommendations, and probable cause, a party or any other persons with a direct interest in the accident investigation can formally petition the Safety Board to reconsider all or part of the analysis, conclusions, or probable cause under the provisions of 49 CFR 845.41. When petitions for reconsideration are received, their receipt must be promptly acknowledged then assigned to staff for research and evaluation of the issues raised. The petition response will normally be written by a staff member who was not initially involved in the investigation (if staffing and workloads permit). However, that person may consult with those who were involved with the original investigation.

To respond to a petition for reconsideration, determine first whether the petition has met the requirements for consideration by the Board, i.e., whether the petitioner has presented new factual material or has demonstrated that the Board's analysis was faulty. If this has been established, draft a formal response to the petition (see [Appendix Q](#)). The Board's response to a petition consists of three basic elements: a discussion of the Board's original reasoning, a summary of the arguments and/or evidence provided by the petitioner, and the proposed response to the petition.

Staff specialists should be involved in the response to a petition according to its emphasis and content. The staff member who is writing the response should establish deadlines for reports as needed and incorporate specialists' reports into the response. The petition response should begin with a brief summation of the accident followed by the relevant initial Board conclusions, the probable cause, and the areas in which the petitioner has focused the petition. The response should be limited to a point-by-point discussion of the merits of the petitioner's argument and the quality of the evidence he or she has presented. The response to the petitioner should be designed to bring closure to the issues raised in the petition. The Board's response should end with a statement indicating whether and to what degree the petition will be granted, i.e., granted in its entirety or in part or denied in its entirety. Further guidance on handling a petition for reconsideration is contained in Board Order 600A.

5. Other Investigations

5.1 International Investigations

The Safety Board represents the United States in accident investigations involving overseas interests under the provisions of Annex 13 to the Convention on International Aviation. This will typically occur in one of two situations: 1) an overseas manufactured, registered, or operated aircraft is involved in an accident or incident in the United States or its possessions, or 2) a

U.S.-manufactured, registered, or operated aircraft is involved in an accident or incident in the territories of another country.

Annex 13 outlines the entitlements and participation of an Accredited Representative. The ICAO *Manual of Aircraft Accident Investigation* outlines the duties and responsibilities of the Accredited Representative. These duties and responsibilities are contained in [Appendix S](#).

5.1.1 Domestic Accident

If a foreign-manufactured, -designed, -operated, or -registered aircraft is involved in an accident in the United States, the state (country) of manufacture, operations, or registry may send an Accredited Representative and advisors to participate in the investigation. The Accredited Representative is the leader of any officials from another country, such as civil aviation officials or airline and manufacturer advisors. Usually, the investigation will have already begun by the time the Accredited Representative arrives. The IIC should provide the Accredited Representative with all information given to party coordinators and thoroughly brief him or her on the progress of the investigation. Annex 13 provides a list of entitlements to be provided to the Accredited Representatives and their advisors

If necessary, Safety Board rules and procedures should be explained to the Accredited Representative if he or she is unfamiliar with the Board's "open" style of conducting investigations and daily release of information to the press. In addition, explain to the advisors and the Accredited Representative, if present, that the protocol of Annex 13 establishes official interactions between their organizations and the Safety Board through the Accredited Representative. This is true even for situations in which a foreign manufacturer has U.S.-based personnel assisting in the investigation.

ICAO Annex 13 specifies that the draft final report (Director's draft) be sent to the participating states for comment and that 60 days be allowed for receiving any comments. This should be considered when planning the final report schedule.

5.1.2 Foreign Accident

Safety Board personnel sent overseas as technical advisors or an Accredited Representative to assist in foreign investigations are acting as representatives of the U.S. Government. Be aware that, in this capacity, Board investigators are the guests of another country and have been sent to serve as the liaisons between the host country's investigation and the U.S. Government. The U.S. Accredited Representative and his or her advisors should not attempt to direct the investigation or to advise the investigation authority on matters not directly related to the accident. (See [Appendix U](#) for information and procedures on foreign travel).

When working on an overseas investigation, some Safety Board investigators may have difficulty adjusting to the pace of the investigative activities. Be patient and tolerant of an investigation that may appear to be conducted differently than a Safety Board investigation. Most countries to which you would be sent are signatories to Annex 13 and have personnel who should be familiar with its provisions. Offer suggestions when asked or when diplomacy would permit. Offer technical assistance, such as flight recorder readouts or metallurgical laboratory analysis. Contact the FAA, U.S. customs, or U.S. embassy, to coordinate (and airline personnel can facilitate) receipt of the flight recorders or other components into the United States. The FAA will often arrange to have an inspector meet the flight at the gate.

Be sensitive to local customs and be aware of customs, expressions, or gestures that could cause offense. As time permits, the U.S. Accredited Representative should contact the U.S. embassy upon arrival in the host country and maintain contact with embassy representatives during the investigation to facilitate interaction with the host government. Embassy personnel are knowledgeable about local customs and practices and can assist Safety Board personnel overseas.

As in a domestic investigation, communicate regularly with headquarters. However, because communications are sometimes more difficult, there may be no alternative but to telephone when the opportunity presents itself rather than at an arranged time. If possible, establish a time for the call and obtain a private area to make the call. In cases of extreme time zone differences, e-mail exchanges of information between the U.S. Accredited Representative and Board headquarters may be appropriate.

If the host country requests a report about the results of the team's work, reports should be limited to factual documentation only. The host country may be advised as to appropriate conclusions observed by U.S. representatives but should be encouraged to write the report. If asked for conclusions, seek the advice of technical advisors and Safety Board management before advising foreign authorities.

In 1996, U.S. law regarding FOIA was amended as it pertains to releasing information about foreign accident investigations. As amended, the law permits the Board to withhold records or information relating to its participation in a foreign aircraft accident investigation until the country conducting the investigation issues its final report or 2 years following the date of the accident, whichever occurs first. However, the Board may disclose records and information earlier if it has been authorized to do so by the country conducting the investigation.

If the U.S. Accredited Representative receives a FOIA request about a foreign accident, he or she should ask the foreign investigative authority whether the information can be released or whether he or she should wait for the period prescribed in the statute. In the case of sensitive documents or physical evidence, such as a CVR, it may be preferable for the IIC to maintain custody.

ICAO Annex 13 standards require that the country conducting the investigation is to supply participating governments with drafts of the final accident reports for their review and

comment. Expect to comment on the draft after it has been received. Responses to the draft reports of major foreign investigations must be carefully coordinated with Office Directors and staff before release since these comments may be included as an appendix to the final report. After the final report has been released, the Safety Board Accredited representative will enter the report into the public docket using DMS.

Often the government conducting the investigation will issue recommendations on a U.S.-manufactured, -designed or -operated aircraft. If so, the Accredited Representative should encourage the IIC to submit the recommendations to the Safety Board. The Office of Safety Recommendations will then prepare a cover letter (usually to the FAA) for forwarding the recommendations, which will enable the Safety Board to track responses and actions on the recommendations. The U.S. Accredited Representative should maintain contact with the host country's IIC and be prepared to act as liaison with U.S. Government agencies or industry corporations as the final report or recommendations are being drafted. This will allow the U.S. Accredited Representative to collect information that the IIC or report writer will need during the preparation process. Similarly, the Accredited Representative should forward to U.S. Government agencies or corporations the findings of the agency conducting the investigation when the release of the report has been authorized.

5.2 Accidents Involving Known or Suspected Criminal Acts

Aircraft accidents in which criminal activity is suspected may involve the participation of law enforcement officials in the investigation. In such cases, law enforcement agencies are not parties to the investigation; however, the Board should provide the law enforcement agencies with necessary access to evidence. If evidence indicates that a criminal activity was involved, the Board investigation will be conducted to the extent necessary to determine probable cause, address any safety concerns, and, where appropriate, to furnish requested assistance to law enforcement agencies. In the absence of any such evidence, the Board investigation will continue in its normal scope.

In any event, the importance of cooperation and communication cannot be overstated. Because the criminal investigation may overlap the Board's investigation, the IIC should explain Board's procedures and the criticality of preserving and documenting certain forms of evidence. If any problems are encountered in this type of accident investigation, the Board's Office of General Counsel should be consulted. The FBI may provide evidence recovery teams (ERT) to major accidents even when no criminal activity is involved.

5.3 Commercial Space Launch Accidents

The NTSB has a Memorandum of Agreement (MOA) with the Department of Transportation's Office of Commercial Space Transportation (OCST). The OCST is now the FAA Office of the Associate Administrator for Commercial Space Transportation (FAA AST). The MOA

states that the Safety Board would be the lead investigative agency for any commercial space launch accidents that result in 1) certain levels of damage or loss of life or 2) the impact of expendable launch vehicle debris outside the impact limit lines of a launch range facility. The Board would then produce a report on the investigation and include findings, recommendations, and, if required, a probable cause.

Previous Safety Board participation in commercial space launch accident investigations has centered more on the "human" elements involved than possible technical reasons for the accident or incident. Nevertheless, the Board will commit all necessary resources to investigate such an accident and use the same investigative and organizational approach, i.e., party participation and working groups.

5.4 Underwater Recovery of Wreckage

Locating and recovering aircraft wreckage in the water will require a well-coordinated plan. Depending on the circumstances of the accident, locating the wreckage might require that the Safety Board obtain such things as witness statements, weather data, and radar tracking data for the accident aircraft. Trajectory analyses may also be necessary to aid in locating the wreckage.

To assist in quickly and effectively locating and recovering aircraft wreckage in the water, the Safety Board has an MOA with the DoD. The DoD tasks the Navy Office of the Supervisor of Salvage (SUPSALV) with providing assistance in the search and recovery of aircraft in the water. The MOA contains the names and contacts for the SUPSALV personnel.

AS management should immediately contact DoD/SUPSALV personnel to initiate search and recovery planning. They will provide considerable assistance free of charge. For example, they will conduct an initial feasibility and practicality assessment for a potential search and recovery mission. Once they receive the probable coordinates of the accident, they can provide water depth and current information, as well as bottom conditions. They will advise of the best contractors with which to work, and they will provide cost estimates for the mission. The Safety Board should avoid direct contracting with the various companies that perform such work. SUPSALV functions as the Board's contract office, which negotiates the best equipment for the best cost to perform the job.

SUPSALV will not initiate a contract without funding. Once the plan is approved and a contract is agreed upon, a letter from the Chairman to the Chief of Naval Operations (CNO) activates the MOA. Once the CNO approves, funds must be transferred so that work can begin. SUPSALV personnel will oversee the operation; appropriate Safety Board and party specialists will also participate.

For aircraft accidents in which a CVR and/or FDR is installed, the recorders will probably have an ultrasonic underwater locator beacon (ULB) installed. The ULB automatically

activates when submerged and operates on a frequency of 37.5 kHz. The ULB battery is designed to last about 30 days; consequently, a search for the ULB signal must be initiated immediately. SUPSALV personnel can provide advice and on-scene assistance in locating the recorder ULBs. Procedures for handling recorders that have been submerged are contained in [Appendix B](#) of this manual.

Prior to the actual recovery of the aircraft, the respective personnel should be thoroughly briefed on the recommended locations for attaching cables, straps, hooks, etc., to ensure that the structure is properly raised with minimal damage. It is essential to use specialists from the operator or the airframe/engine manufacturer for this task.

Once wreckage is raised to the surface, immediate treatment with the appropriate solvents is necessary to prevent rapid corrosion of parts. Planning for such treatment must be done in advance.

It may be necessary for Safety Board staff to be on the recovery boat(s) for several hours. Therefore, proper attire should be packed.

6. Role of the Office of Transportation Disaster Assistance

The *Aviation Disaster Family Assistance Act of 1996* and the *Foreign Air Carrier Support Act of 1997* gave the Safety Board the additional responsibility of aiding the families of victims of aircraft accidents involving any Part 121 domestic, international, or certificated air carrier. In response, the Safety Board established the Office of Transportation Disaster Assistance. This Office's primary mission is to coordinate the Federal response and provide additional Federal resources to the local community and the affected airline to help aviation disaster victims and their families. The mission has been broadened to support regional aviation investigations and all other modes at the Board.

TDA staff bring diverse backgrounds and experiences to the Safety Board that include law enforcement, commercial aviation, military aviation, licensed mental health services, forensic anthropology, and death investigation. Areas of assistance include family counseling, victim identification and forensic services, communications with foreign governments, and translation services (see [Appendix V](#) for more information about the responsibilities of TDA).

Family support services staff usually accompanies the Go Team to the city of the accident's occurrence. However, family support activities are separate from and should not interfere with aircraft accident investigation activities.

After consulting with the IIC on factual information about the investigation that will be released during the evening news media briefing, family support staff members provide families with the information at the same time or before it is released to the media. The family

briefings will occur daily and will last about 90 minutes. During this time, families will also receive an update on the progress of the victim recovery and identification effort, personal effects process, and other areas of family interest.

Local authorities have the same responsibilities that they had prior to the *Aviation Disaster Family Assistance Act of 1996*, such as accident response, recovery, security, cleanup, and medical examiner operations.

Federal agencies and other organizations that may be involved in the disaster support area are the Department of Health and Human Services (DHHS), Department of Defense (DOD), Department of State (DOS), FEMA, the Department of Justice (DOJ), and the American Red Cross (ARC).

DHHS is primarily responsible for assisting the medical examiner in identifying and returning victims to their families. Upon request of the medical examiner, the Safety Board will ask DHHS to provide a D-MORT team. The team consists of forensic pathologists, odontologists, anthropologists, fingerprint experts, and other technical personnel. DHHS can also provide a fully equipped mobile mortuary to expand the medical examiner's capabilities.

DOD can also support the identification effort by providing military resources, such as personnel from the Armed Forces Institute of Pathology (AFIP) and the use of military facilities.

If any foreign passengers or crew are involved in an aviation accident that occurs in the United States, the DOS will assist the airline in officially notifying the victims' government and in helping affected foreign families travel to the United States. The DOS will also provide translation services to facilitate communication with all interested parties.

The Safety Board can also call upon FEMA to augment the Safety Board's public information efforts with additional staff. FEMA will also provide any communication equipment needed by the Safety Board.

If the accident is the result of a criminal act, the DOJ will provide information to family members about the services and assistance available under the *Victims of Crime Act of 1984*. Such services and assistance may include compensation for loss of support, loss of wages, medical and mental health counseling expenses, and funeral costs. DOJ will also be responsible for keeping family members up-to-date on the progress of the criminal investigation.

The ARC provides crisis and grief counseling to the families. The ARC will activate local, state, and national ARC staff to support the families affected by the disaster. ARC personnel may be found at key locations, such as the airport, the family support operations center, and the morgue.