

## 2.0 Departmental Organization

### 2.1 PNNL Aviation Staff Directory

Title	Name	Address	Company	Telephone Number
Director, Environment, Safety, & Health (ES&H)	R. Enge	337/3180/300	PNNL	(509) 376-1186
Aviation Safety Point of Contact (ASPOC)	R.V. Hannigan	ETB/2322	PNNL	(509) 372-6176
Level II Manager, Global Environmental Change	W.T. Pennell	ETB/2336	PNNL	(509) 372-6256
Atmospheric Sciences Technical Group	W.R. Barchet	ETB/2346	PNNL	(509) 372-6158
Director of Flight Operations	R.V. Hannigan	ETB/2322	PNNL	(509) 372-6176
Chief Pilot	R.V. Hannigan	ETB/2322	PNNL	(509) 372-6176
Director of Maintenance	K. Bergstrom	Pasco Airport	Bergstrom Aircraft	(509) 547-6271
Pilots Captain (PIC) Copilot(s)	R.V. Hannigan R.D. Hone A.B. Robinson E.W. Svancara	ETB/2322 Pasco, WA Richland, WA W. Richland, WA	PNNL PNNL PNNL PNNL	(509) 372-6176 (509) 547-7911 (509) 942-1835 (509) 967-5147
Scheduler	W.R. Barchet	ETB/2346	PNNL	O: (509) 372-6158 H: (509) 375-6074
Contract Specialist	N.M. Nichols	RTL520/75	PNNL	(509) 375-2989
DOE/RL Aviation Safety Officer (ASO)	G.M. Bell	825 Jadwin/668	DOE/RL	(509) 376-0680

### 2.2 Qualifications, Duties, and Responsibilities

PNNL staff that serve in positions of authority and exercise control over operations conducted for PNNL and DOE/PNNL must be qualified through training, experience, and expertise, and have a full understanding of the following flight operations.

- Aviation safety standards and safe operating practices
- All appropriate maintenance and airworthiness requirements of the PNNL *Flight Operations Manual*
- 14 Code of Federal Regulations (CFR) Chapter 1 (FAR) (for example, Parts 1, 21, 23, 25, 43, 45, 47, 61, 65, 91, and 135)
- PNNL may request from the DOE/RL Aviation Safety Officer (ASO) authorization to employ a person who does not meet the applicable airman, managerial, or supervisory experience requirements of a specific position as stated in this manual. If that person has comparable experience, and can effectively perform the functions associated with the position, such requirements can be waived.

### **2.2.1 Level II Manager**

A Level II manager within the Fundamental Science Directorate will be designated by the Associate Director to be responsible for aircraft operations. The designated Level II manager, along with Laboratory Safety, is responsible for implementation of aviation safety policy and for conducting periodic reviews of the *Flight Operations Manual*. The designated Level II manager has the authority to employ, discharge, promote, give awards to, and assign staff to support aircraft operations.

### **2.2.2 Aviation Safety Point of Contact**

The Aviation Safety Point of Contact (ASPOC) for PNNL reports to the Director of the ES&H Directorate and acts as the top-level PNNL contact with RL and the FAA.

#### **2.2.2.1 Qualifications**

The ASPOC for PNNL must hold a current Airline Transport Pilot (ATP) certificate for any aircraft operations for which the PIC is required to hold such a certificate (FAR 119.69). In addition, to hold this position the ASPOC must have successfully completed the required DOE Aviation Managers/Safety Officers training program described in Section 5.6 of this manual.

#### **2.2.2.2 Duties and Responsibilities**

The Aviation Safety Point of Contact (ASPOC) shall:

- When appropriate, conduct periodic safety reviews of PNNL flight operations and contractor aviation operations/activities in accordance with DOE Order 440.2, and this manual.
- Provide status reports to the DOE/RL ASO regarding the reviews made of aviation functions/activities.

- Conduct safety assessments of proposed charter aircraft operators.
- On a periodic basis, review the contractor and subcontractor aviation services procurement process.

## **2.2.3 Director of Flight Operations**

The Director of Flight Operations reports to the designated Level II Manager for Aviation Safety matters and has operational control of all Laboratory flight activities.

### **2.2.3.1 Qualifications**

The Director of Flight Operations for PNNL must hold a current Airline Transport Pilot (ATP) certificate for any aircraft operations for which the PIC is required to hold such a certificate (FAR 119.69) and either:

- Have at least 3 years supervisory or managerial experience within the last 6 years in a position that exercised operational control over any operations conducting passenger transportation or
- In the case of a person becoming Director of Flight Operations for the first time ever, have at least 3 years experience within the past 6 years, as PIC of an aircraft operated for passenger transport or
- In the case of a person with previous experience as a Director of Flight Operations, have at least 3 years experience as PIC of an aircraft operated under Part 121 or 135.

### **2.2.3.2 Duties and Responsibilities**

The Director of Flight Operations is responsible for:

- Supervising the Chief Pilot and other PNNL employees whose duties require work on, in, or around the aircraft.
- Safely conducting all flight operations and ensuring they are performed in compliance with DOE Aviation Procedures, FAA, and PNNL policies, rules, and regulations.
- Acting for Battelle/PNNL, including the signing of FAA correspondence and operations specifications.
- Communicating with the Federal Aviation Administration (FAA) Standards District Office and the National Transportation Safety Board (NTSB) and filing all required documents.
- Maintaining personnel, maintenance, and official correspondence files for PNNL flight operations.

- Revising this manual as needed, submitting the proposed revisions to DOE, receiving concurrence from DOE that revisions are accepted, and distributing those revisions to all manual holders.
- Ensuring that all aircraft are maintained in compliance with all applicable FAR, PNNL, and DOE directives.
- Coordinating with the Director of Maintenance regarding the timely correction of mechanical or electrical irregularities and discrepancies.
- Monitoring security and environmental affairs, including complete material safety data sheets on all chemicals, fire drills, and safety training.
- Scheduling aircraft availability in consultation with the Chief Pilot and the Scheduler.
- Directing the employment, oversight, and performance reviews of Flight Crew personnel.
- Managing the development of organizational, facility, and equipment recommendations.
- Providing input to the G-1 aircraft annual business and operating plans.
- Participating in industry associations.
- Completing special projects as assigned by PNNL management.
- Establishing and maintaining rapport with corporate executives, customers, and industry associates.
- Approving flight crew assignments in accordance with this manual.
- In the event of an incident/accident or off-normal event, the Director of Flight Operations will notify Battelle Columbus Operations' Vice President for Environment, Safety, Health & Quality (ESH&Q) with the pertinent details.

## **2.2.4 Chief Pilot**

### **2.2.4.1 Qualifications**

The Chief Pilot (FAR 119.69) for PNNL must hold a current ATP certificate with appropriate ratings and be qualified to serve as PIC on all PNNL aircraft. In addition,

- In the case of a person becoming Chief Pilot for the first time ever, have at least 3 years experience, within the past 6 years, as PIC of an aircraft operated for passenger transport or

- In the case of a person with previous experience as a Chief Pilot, have at least 3 years experience as PIC of an aircraft operated under Part 121 or 135.

#### **2.2.4.2 Duties and Responsibilities**

The Chief Pilot reports to the Director of Flight Operations, and may be delegated operational control of the flight operations in the absence of the Director of Flight Operations, and is responsible for:

- Establishing flight schedules, assigning aircraft and flight crews to specific flights, and determining that such assignments and flight schedules are within the guide-lines set forth in the sections on flight time/duty time limitations and the days scheduled.
- Ascertaining that crew members are assigned in a manner that will maintain the currency requirements outlined in this manual; in addition, keeping records and monitoring the flight crew currency requirements.
- Scheduling and notifying the crew members, at least one week in advance, of recurrent training and flight checks.
- Scheduling aircraft flight crew in support of approved operations.
- Monitoring and ensuring that all requirements of FAR 61 are complied with concerning pilot certificates, medical certificates, training, and currency. The Chief Pilot is the primary contact for all communications with the FAA concerning PNNL flight operations.
- Continually reviewing all flight operations and their conformance to safe operating procedures.
- Coordinating closely with the lead scientist or technician regarding research equipment matters. The Chief Pilot ensures that all research equipment installations and modifications are accomplished in a manner that satisfies structural load limitations, as well as flight performance limitations.
- Coordinating schedules for crew member training, vacation, and days off, as approved by the Director of Flight Operations.
- Providing to each passenger a Customer Satisfaction Survey form that is returned to the Chief Pilot following the completion of the flight. This survey contains questions on the passenger safety briefing, condition/cleanliness of the aircraft, pilot/crew member professionalism, and flight conducted in a safe manner (see Appendix A, page A.7).
- Disseminating information to all crew members about routes, airports, notices to airmen (NOTAMS), navigation aids (NAVAIDS), PNNL directives, proficiency records, pilot files, flight schedules, duty time records, reports, and correspondence about flight operation activities.

- Maintaining proficiency as PIC on all PNNL aircraft.
- Conducting and documenting periodic safety meetings. Prior to each extended field program, a safety meeting will be conducted with all personnel included in the flight operation, including the project manager, to discuss and assess the specific risks of the program.
- Designating the PIC for each flight who is directly responsible for and is the final authority as to the operation of the aircraft. In matters affecting the safety of a flight operation, the PIC may deviate from any rule of the FAR and this manual to the extent required for ensuring the safety of the operation (FAR 91.3).
- Maintaining a file of applicable Material Safety Data Sheets for all on-board chemicals.
- Participating in industry associations.
- Completing special projects as assigned by PNNL managerial staff.
- Establishing and maintaining rapport with corporate executives, customers, and industry associates.

## **2.2.5 Director of Maintenance**

### **2.2.5.1 Qualifications**

The Director of Maintenance for PNNL [(FAR 119.69(a))] must hold a mechanic's certificate with airframe and power plant ratings, Inspectors Authorization, and have either of the following:

- 3 years of experience within the past 3 years maintaining aircraft as a certified mechanic, including, at the time of appointment as Director of Maintenance, experience in maintaining the same category and class of aircraft as PNNL uses or
- 3 years of experience within the past 3 years repairing aircraft in a certified airframe repair station, including 1 year in the capacity of approving aircraft for return to service.

### **2.2.5.2 Duties and Responsibilities**

The Director of Maintenance reports to the Director of Flight Operations. The Director of Maintenance has responsibility for the following:

- Inspection/Maintenance Program [FAR 91.409f(3)]
  - PNNL aircraft shall be maintained in accordance with the FAA-approved manufacturer's recommended maintenance inspection program.

- Major Work (Contractor to outside vendors)
  - Request for Proposals: The Director of Maintenance, in association with the Director of Flight Operations, shall solicit proposals from qualified vendors. Vendors shall be approved FAA repair stations, factory-trained technicians, or factory-authorized service centers.
  - Evaluation of Proposals: The Director of Maintenance, in association with the Director of Flight Operations, will evaluate all proposals and make vendor selection.
- Aircraft Maintenance Records
  - It shall be the responsibility of the Director of Maintenance to ensure that all aircraft log entries are accurate and current.
  - A (Manufacturers') Computerized Aircraft Maintenance Program (CAMP) will be maintained on the PNNL aircraft in order to assist the Director of Maintenance in tracking aircraft maintenance status.
- Aircraft Parts
  - All parts, when ordered from home base, will be ordered by the Director of Maintenance or his designee (maintenance technician).
  - The Director of Maintenance will check all maintenance material for condition and accuracy, and accept them for use upon their arrival at home base.
  - Inventory Control: All maintenance material will be rotated on a first-in-first-out-basis to ensure the timely usage of parts and supplies.
  - Periodic inventory and replacement of maintenance materials.
- Maintaining compliance with DOE, FAA, and PNNL directives.
- Ensuring appropriate and adequate tools and equipment are available.
- Maintaining budget responsibility for applicable budget line items.
- Ensuring tools and equipment are calibrated or certified and maintaining associated records.
- Maintaining all necessary work records and logbooks, including certification of the aircraft permanent maintenance records indicating the aircraft is approved for return to service. Maintaining the weight and balance records for aircraft.

- Participating in industry associations.
- Completing special projects as assigned by the Director of Flight Operations/Chief Pilot.
- Training and supervising maintenance personnel.
- Assisting with development of aviation policies, short- and long-range plans, the annual operating budget, and salary structure.
- Recommending the proper staffing and performance standards for maintenance.
- Establishing maintenance safety rules and procedures.
- Ensuring that maintenance personnel are thoroughly familiar with DOE and PNNL directives, applicable FAR, pertinent manuals, practices, and publications.
- Establishing programs for maintenance technician proficiency training, reviews, and upgrades in accordance with FAA and PNNL requirements.
- Establishing aircraft handling procedures.
- Coordinating maintenance activities with flight operations.
- Providing efficient and timely scheduling of all maintenance.
- Directing compliance of minimum equipment list (MEL) maintenance procedures.

## **2.2.6 Captain/Pilot in Command**

The Captain reports to the Chief Pilot. The Captain/PIC is responsible for ensuring the aircraft is in an airworthy condition prior to flight and for operating the assigned aircraft. The PIC is directly responsible for the safety of the passengers, crew, and cargo. The decision regarding whether a flight may be safely completed rests with the PIC, the final authority regarding the operation of the PNNL aircraft. The Captain must comply with this *Flight Operations Manual*, and with DOE and PNNL directives, and FAA regulations.

### **2.2.6.1 Qualifications**

An individual shall be considered qualified for the position of Captain when the following requirements are met:

- Total flight time - 5000 hours
- Multi-engine turbine time – 2500 hours
- Time in type – 100 hours
- Airline Transport Pilot (ATP) Certificate
- Type Rating in equipment to which assigned
- Second Class Medical Certificate (current)

### **2.2.6.2 Duties and Responsibilities**

The following list describes the duties of the Captain/PIC:

- Notifying the Chief Pilot if he or she does not meet the currency requirements of this manual. No crew member will be scheduled for flight duty if any of the required certificates are not current.
- Performing a preflight self-evaluation of his/her mental and physical condition to competently and safely perform a scheduled mission and, without penalty, may cancel or refuse to fly that mission.
- Obtaining up-to-date weather, airport, and NAVAID condition reports, prior to each departure.
- Obtaining required training, regarding the handling of Classified or Business Sensitive material, as to how it shall be packaged and marked to meet the DOE or DoD requirements for the appropriate classification level.
- Ensuring complete material safety data sheets for all on-board chemicals are on board the aircraft and the flight crew is trained in their use.
- Maintaining contact with the Scheduler while on a trip to coordinate changes, as necessary.
- Completing Trip Sheet, Flight Logs, and Aircraft Discrepancy Reports, as necessary (see Appendix A).
- Completing administrative assignments as directed by the Director of Flight Operations/Chief Pilot.
- Ensuring the aircraft is clean and prepared for flight with all provisions on board for the safety and comfort of the passengers.
- Calculating and reviewing the aircraft weight and balance, fuel on board, and performance charts.

- Complying with published standard operating procedures.
- Supervising the first officer [Second in Command (SIC)] in any duties necessary for the smooth, safe, and efficient operation of the aircraft.
- Coordinating the functioning of all crew members assigned to the flight.
- Making decisions necessary to
  - Start, delay, or cancel the flight
  - Deviate the flight from the planned route or destination when operating conditions dictate.

## **2.2.7 Copilot and Contract Copilot (First Officer)**

The Copilot and the First Officer report to the Chief Pilot and are accountable to the PIC of the flight for the conduct and execution of assigned duties.

### **2.2.7.1 Qualifications**

An individual shall be considered qualified for the position of Copilot when the following requirements are met:

- Total flight time - 1500 hours
- Multi-engine time – 500 hours
- Time in type – 25 hours
- Airline Transport Pilot (ATP) Certificate or Commercial Pilot Certificate with appropriate category and class rating
- Second Class Medical Certificate.

### **2.2.7.2 Duties and Responsibilities**

Responsibilities of the copilot include:

- Assisting the Captain with discharging safety responsibilities.
- Performing duties as assigned during flight preparation and in flight.

- Being prepared to assume the PIC duties, in the event the PIC is incapacitated.
- Being familiar with and following all FAR, DOE, and PNNL directives pertinent to assigned duties.
- Notifying the Chief Pilot if he or she does not meet the currency requirements of this manual. No crew member will be scheduled for flight duty if any of the required certificates are invalid.
- Performing a preflight self-evaluation of his/her mental and physical condition to competently and safely perform a scheduled mission and, without penalty, may cancel or refuse to fly that mission.
- Notifying the Chief Pilot, if it appears he or she will exceed duty or flight time limitations.

### **2.2.8 G-1 Research Crew**

Personnel that install, operate, or maintain research equipment on the G-1 comprise the G-1 research crew and have the following responsibilities:

- Installing, operating, maintaining, and removing equipment according to the guidelines published in this manual.
- Providing to the PIC a copy of the complete material safety data sheet for all chemicals brought on board the G-1.
- Managing the safe transport, use, and disposal of all hazardous materials associated with their equipment.
- Having themselves and their research equipment ready for flight at least 15 minutes prior to the scheduled departure time.
- Knowing and adhering to the provisions of this manual.
- Following the directions of the PIC.
- Understanding and following in-flight emergency procedures.
- Stowing securely all tools, supplies, and hand-held equipment for takeoff and landing.
- Using their seat belts as instructed by the pilots and whenever seated during flight.
- Removing all refuse and unneeded supplies and equipment post-flight.

If research electrical power is to be used, at least one member of the research flight crew must be trained in the operation of the research power distribution system.

If the aircraft research data acquisition system is to be used, at least one member of the research flight crew must be trained in its operation.

The Principal Investigator for a research mission, should submit to the Scheduler an Initial Aircraft Support Request Form at least 6 months prior to the intended date of use and a final Research Aircraft Deployment Document at least 1 month prior to scheduled use.

## **2.2.9 G-1 Research Aircraft Scheduler**

All inquiries about or requests for the use of aircraft for extended field study operations shall be directed to the G-1 Aircraft Scheduler using the Initial Aircraft Support Request form or the Research Aircraft Deployment Document found in Appendix A, pages A.30 and A.31, respectively. Requests should be submitted as early as possible to avoid any scheduling conflicts with aircraft availability and the flight crews.

The Scheduler is the manager of flight activities and reports to the cognizant Level II manager. Duties include:

- Coordinating and assimilating master flight schedules for the aircraft.
- Coordinating the schedules of remotely based aircraft and crew members, if applicable.
- Reporting aircraft usage to Laboratory officials.
- Formulating contingency plans for mechanical and weather delays, if appropriate.

### **2.2.10 Contract Specialist**

This senior position is responsible for evaluating proposals, negotiating, placing, and administering all subcontracts and/or purchase orders for charter aircraft services, in support of programs, projects, and related support services. These are typically complex and specialized in nature requiring the incumbent to secure the best balance of price, quality, delivery, and services available within the guidelines established by Battelle, the client, and applicable government acquisition regulations.

The position is responsible and accountable for ensuring that contractual business is accomplished in accordance with established Department of Energy (DOE) and Battelle, Pacific Northwest Division (Battelle) and Corporate policies. The position is responsible and accountable for maintaining and enhancing the business reputation of the client and Battelle Memorial Institute (BMI) at the highest of ethical standards.