



National
Transportation
Safety Board



Organizational Issues

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Human Performance

Organizational Issues

- Flight risk evaluation
- Mission-specific pilot training
- Mission crewing
- Organizational safety culture
- Safety management

Flight Risk Evaluation

- High-risk mission
 - Low IFR weather
 - Low lighting conditions
- No standardized preflight risk assessment process
- No secondary launch approval

Flight Risk Evaluation

- Formal weather minimums
- Standardized risk assessment
- Secondary assessment and approval for high-risk mission

Flight Risk Mitigation

- Augmented Crew
 - Two helicopter pilots
 - Tactical flight officer
- Delegation to another organization
 - IFR-certificated helicopter
 - Instrument-current crew

Mission-Specific Pilot Training

Formal NVG training

- Limits of NVG capability
- Effects of precipitation on image quality
- Tendency to fly lower in marginal conditions

Mission-Specific Pilot Training

Helicopter inadvertent IMC training

- Improve pilot control
- Increase odds of survival
- Recalibrate pilot risk perceptions

Mission-Specific Pilot Training

Helicopter inadvertent IMC training

- Limited validation research
- Best practices not available
- Alaska DPS pilots questioned the effectiveness of post-accident training

Mission Crewing

- Second crewmember (trooper)
 - Not trained on the helicopter's navigational equipment
 - Not trained or equipped with NVGs
- A properly trained and equipped second crewmember could have assisted with flight-related tasks and reduced pilot workload

Safety Management System

- Safety policies
- Safety risk management
- Safety assurance
- Safety promotion

Safety Program Deficiencies

- Lack of adequate high-level support
- Low reporting of operational risks
- Decreasing resources for safety promotion
- Departure of the safety manager
- Cessation of safety committee meetings

Organizational Safety Culture

- SMS involves continuous striving to discover, understand, and mitigate risks
- This requires
 - Just culture
 - Reporting culture
 - Flexible culture
 - Learning culture

Just Culture

- Most accidents involve well-intentioned operators
- Just culture seeks to balance learning and accountability
- Punitive approach to dealing with safety related events discourages sharing of safety information and degrades an organization's ability to identify and adapt to operational risks

Punitive Safety Culture

- Investigations of the pilot's previous events were highly focused on pilot actions and culpability
- Did not adequately identify and address underlying, systemic issues
- Caused the pilot to adopt a defensive orientation
- Impeded the sharing of safety information

Proposed Recommendation Areas

- Flight risk evaluation program
- NVG and inadvertent IMC training
- Tactical flight officer program
- Comprehensive safety management system
- Recurring safety audits



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