

Ames Contractor Council

Improving Safety in Subcontract Performance

ARC Safety Stand-down Day
February 4, 2010



Agenda

- Welcome/Introductions
- Request from Center Management
- Safety Performance in Subcontracting
- Open Session for Suggestions and Best Practices



Request from Center Management

- Message from the Deputy Center Director
2010 - Safety Stand-down Day
 - As many of you know, preventing injuries and illnesses is only as good as the awareness of each individual and the behaviors we take to avoid the next mishap. Almost every day at Ames someone, somewhere, gets hurt and I see the continued negative outcomes that these mishaps have on our staff and the important missions we all support. On Feb. 4, 2010, I am urging each of you to participate in our Safety Stand-down Day events. Our theme for this event, "Safety: Make It Personal," fits into my expectation that each of us must take personal responsibility to act in a manner that supports a safe work environment for ourselves and our coworkers.
 - The safety events for Feb. 4 are as follows:
 1. Centerwide Safety Message
 - a. Mandatory for All Staff
 - b. Available via NASA Television on Channel 20
 - c. Webcast at Windows Media - <http://vanseg-1.arc.nasa.gov/2010/Q100204-01.asx>
RealMedia - <http://vanseg-1.arc.nasa.gov/2010/Q100204-01.ram>
 - d. Time/Location: 9:00 a.m.-10:30 a.m. Main Auditorium (N201)
 - i. Centerwide safety message - Recent mishaps and mishap trends.
 - ii. Mishap Reporting - Discuss mishap reporting procedures.
 - iii. Ask The Experts - Panel Q&A
 2. Safety Committee Member Recognition and Training
 - a. Mandatory for all Safety Committee Members; Open to all staff and Facility Services Managers
 - b. Available via NASA Television on Channel 20
 - c. Webcast at Windows Media - <http://vanseg-1.arc.nasa.gov/2010/Q100204-01.asx>
RealMedia - <http://vanseg-1.arc.nasa.gov/2010/Q100204-01.ram>
 - d. Time/Location: 11:00 a.m.-12:00 p.m. Main Auditorium (N201)
 - i. Briefing to all safety committee members on recent mishaps at Ames and recognition ceremony.
 3. Part Three – Supervisor Lead Safety Meeting
 - a. Mandatory for All Staff
 - b. Supervisor's Safety Staff Meeting
 - c. Time/Location: 1:30 p.m.-2:30 p.m. Supervisor chooses specific location and safety topic of their choice (Suggest supervisor to talk about specific issues related to their local work/environment.)
 - i. This meeting will count for the supervisor's quarterly safety meeting.
 - ii. Code Q will provide prepared discussion topics tied to the day's safety message for those who choose to use a prepared topic.
- 4. Part Four – Contractor Flow-Down of Safety Requirements**
 - a. Audience – Contractors**
 - b. Time/Location – TBD by Contractor Council**
 - c. Contractor Council will provide a venue to educate NASA contractors on safety/health expectations and requirements while performing work at Ames.**

I expect every staff member to take this time seriously and participate in these events as well as those planned or sponsored by your supervisor or organization. Each of us must continue to make safety a paramount aspect of our daily activities, no matter what type of work environment we reside in. Working safely may get old, but so do those who practice it.

- Lewis Braxton III
Deputy Center Director



Safety Performance in Subcontracting

- No longer is “just get it done” acceptable
- We do not subcontract risk
- Safety planning results in safe projects
- Screening of potential service subcontractors is key
- Continuous engagement and oversight is required of subcontract work
- Extreme caution is needed for second and third-tier subcontractors



Just Get it Done

- Ames had a culture which embraced “just get it done”
- Risk can be elevated when projects are rushed
- Safety needs to be designed, analyzed, understood, and implemented in a controlled manner



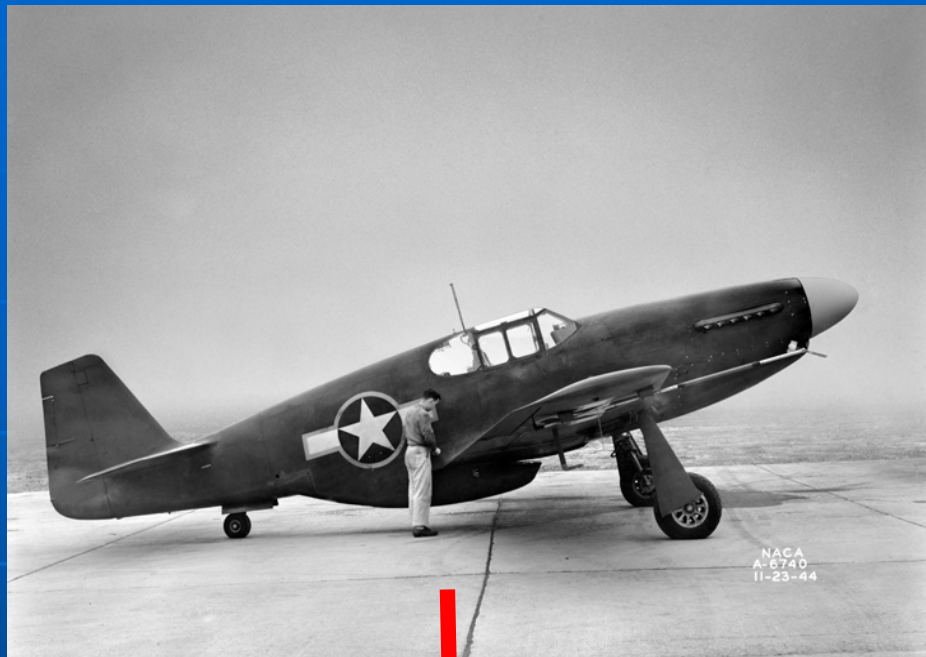


AIAA 2010-0742

CORRELATION OF WIND TUNNEL AND FLIGHT TEST DATA FOR A P-51B AIRPLANE

**Norbert Ulbrich
Jacobs Technology Inc.
NASA Ames Research Center
Moffett Field, California 94035-1000**





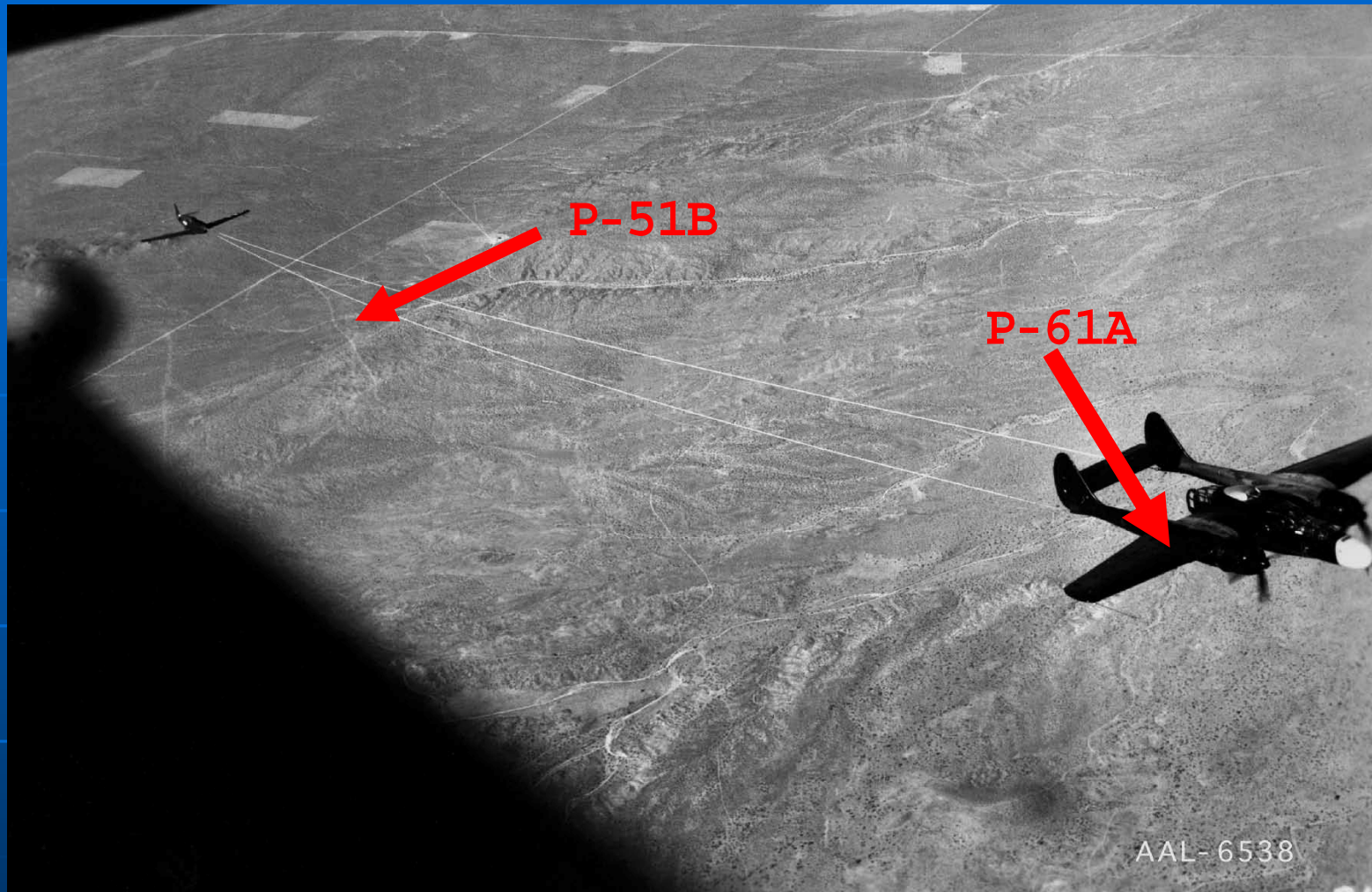
NORTH AMERICAN P-51B & NORTHROP P-61A





TOW ROPE ATTACHMENT ON P-51B & P-61A





NORTHROP P-61A TOWING PROPELLERLESS NORTH AMERICAN P-51B





**PHOTOS OF P-51B AFTER CRASH
(FROM ACCIDENT REPORT)**



Summary

- Edwin Hartman gives his summary of the circumstances that may have contributed to the failed fourth test flight (from Ref. [1], p.83):
*"The hazards to which NACA test pilots were subjected were considered acceptable only if they could not by any reasonable means be avoided. In this case, the whole project had been rushed and a question remained whether, **with a little more deliberation, a little more care and checking, the failure of the cable attachment could have been avoided.** The lesson learned was reasonably cheap, but it could have been otherwise."*

References

- AIAA 2010-742 Copyright © 2010 by Norbert Ulbrich. Published by the American Institute of Aeronautics and Astronautics, Inc., with permission.
- Hartman, E. P., *Adventures in Research – A History of Ames Research Center 1940–1965*, NASA SP-4302, National Aeronautics and Space Administration, Washington D.C., 1970, pp.81–83.



We Do Not Subcontract Risk

- In the past it was common to pass risk to subcontractors
- Subcontract work on our contracts is the same as our people working on our contracts
- Our safety culture demands that we protect our workers no matter what their contract status



Safety Planning = Safe Projects

- Safety clause flow down does not guarantee safe work
- Safety planning in SOW development is key – safety is a critical element of a project, not an afterthought
- Understanding and documenting risks associated with a project allows better mitigation techniques for those risks



Screening of Subcontractors

- Pre-award screening of subcontractors improves safety performance
- Not all subcontractors exhibit the same safety culture
- We may use everything we know in past performance evaluation
- Go with the subs that understand and demonstrate the same safety culture



Continuous Engagement and Oversight is Required

- Planning is key – working in partnership with service contractors fosters good results
- Not all subcontract work has code Q oversight – permits tie in Q oversight
- Several tools assist in safe performance
 - Safety plan
 - Daily toolbox safety meetings
 - Pre-task planning
 - Lessons learned



Second and Third-tier Subcontracts Present More Risk

- It is easy to provide safety oversight to first tier subs
- As they hire subs, safety performance may degrade
- Subs must flow-down safety expectations of the prime to all levels of support





Service Contract Hazard Assessment And Emergency Contact Information

Part I – Task Description and Potential Hazards

INSTRUCTIONS

The Requestor or Project Manager shall complete Part I of this form and submit a copy to Procurement along with their purchase request. Procurement will issue copies of the completed form as part of the purchase requisition or request for proposal. The Requestor or Project Manager shall jointly complete Parts II and III of the form with the successful bidder before the work begins.

A. GENERAL INFORMATION

Task Description: _____

Task Location: _____

Completed By: _____ Date Completed: _____

B. POTENTIAL PHYSICAL AND HEALTH HAZARDS

Check all hazards that could apply:

- | | | |
|--|--|--|
| <input type="checkbox"/> 1. Adjacent Work Activity Hazards | <input type="checkbox"/> 12. Energized Electrical >600V | <input type="checkbox"/> 23. Manual Material Handling |
| <input type="checkbox"/> 2. Cold/Heat Stress | <input type="checkbox"/> 13. Falling Debris Hazards | <input type="checkbox"/> 24. Mechanical Material Handling |
| <input type="checkbox"/> 3. Confined Space – Non-permit | <input type="checkbox"/> 14. Falls from Heights | <input type="checkbox"/> 25. Moving Equipment or Machinery |
| <input type="checkbox"/> 4. Confined Space – Permit Required | <input type="checkbox"/> 15. Hazardous Material – Corrosive | <input type="checkbox"/> 26. Power Tools – Hand |
| <input type="checkbox"/> 5. Contamination - Asbestos | <input type="checkbox"/> 16. Hazardous Material – Flammable | <input type="checkbox"/> 27. Power Tools - Other |
| <input type="checkbox"/> 6. Contamination - Biological | <input type="checkbox"/> 17. Hazardous Material –Irritant | <input type="checkbox"/> 28. Pressurized Components or Systems |
| <input type="checkbox"/> 7. Contamination – Grease/Oil | <input type="checkbox"/> 18. Hazardous Material - Sensitizer | <input type="checkbox"/> 29. Vehicle Traffic |
| <input type="checkbox"/> 8. Contamination - Lead | <input type="checkbox"/> 19. Hazardous Material - Toxic | <input type="checkbox"/> 30. Other: |
| <input type="checkbox"/> 9. Contamination – PCB | <input type="checkbox"/> 20. High Noise Levels | <input type="checkbox"/> 31. Other: |
| <input type="checkbox"/> 10. Energized Electrical $\leq 50V$ | <input type="checkbox"/> 21. Hot Work (Cutting or Welding) | <input type="checkbox"/> 32. Other: |
| <input type="checkbox"/> 11. Energized Electrical >50V $\leq 600V$ | <input type="checkbox"/> 22. Ionizing Radiation | <input type="checkbox"/> 33. Other: |

C. POTENTIAL ENVIRONMENTAL COMPLIANCE/WASTE HAZARDS

- | | | | | | |
|--------------------------|------------------------|--------------------------|--------------------------------|--------------------------|-----------------------------|
| <input type="checkbox"/> | 1. Air Emissions | <input type="checkbox"/> | 7. Flammable Gases | <input type="checkbox"/> | 13. Sewer Discharge - Storm |
| <input type="checkbox"/> | 2. Carcinogens | <input type="checkbox"/> | 8. Flammable Liquids | <input type="checkbox"/> | 14. Toxics |
| <input type="checkbox"/> | 3. Corrosives | <input type="checkbox"/> | 9. Ground Discharges | <input type="checkbox"/> | 15. Other: |
| <input type="checkbox"/> | 4. Combustible Liquids | <input type="checkbox"/> | 10. Oxidizers | <input type="checkbox"/> | 16. Other: |
| <input type="checkbox"/> | 5. Combustible Metals | <input type="checkbox"/> | 11. Reactive Materials | <input type="checkbox"/> | 17. Other: |
| <input type="checkbox"/> | 6. Explosives | <input type="checkbox"/> | 12. Sewer Discharge - Sanitary | <input type="checkbox"/> | 18. Other: |

Part II – Identified Hazard Mitigation and Control

INSTRUCTIONS

Record the potential hazard number (PH#) from Part I, such as "B8" for "Contamination - Lead," and provide a brief description of the planned hazard mitigation or control action. Attach additional pages if needed.

EXAMPLE:

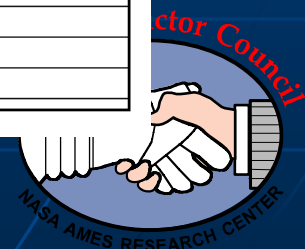
PH# Planned Mitigation or Control Action

B8 Prepare the work area in advance by using approved methods to remove lead-containing paint from the work surfaces to be disturbed. Instruct contract personnel that painted surfaces may contain hazardous lead-based pigments and that they must obtain permission and direction from the project manager before heating, cutting, or abrasively removing any additional paint.

B. IDENTIFIED PHYSICAL AND HEALTH HAZARD MITIGATION AND CONTROL

[illegible]

C. IDENTIFIED ENVIRONMENTAL COMPLIANCE/WASTE HAZARD MITIGATION AND CONTROL

[illegible]

Best Practices

Part III – Acknowledgements and Certifications

A. REQUESTOR/PROJECT MANAGER

The signature of the Requestor or Project Manager identified below certifies that:

1. The described task has been reviewed and that reasonably predictable physical, health, environmental compliance, and waste hazards associated with it have been documented in Part I of this form;
2. The hazards identified on this form have been communicated to the vendor representative identified in Part III B of this form; and
3. The hazard mitigation and control measures identified in Part II of this form are appropriate for the hazards.

Check the Appropriate Role

☐ Requestor ☐ Project Manager

Name: _____ Job Title: _____

Signature: _____ Date: _____

B. VENDOR REPRESENTATIVE

The signature of the Vendor Representative identified below:

1. Acknowledges their receipt and understanding of the hazard and contact information provided in Parts I of this form and Appendix A;
2. Acknowledges that they have been provided with an opportunity to discuss and offer their opinions and suggestions on the hazard mitigation or control methods identified in Part II of this form, and will ensure compliance with them;
3. Certifies that they have a safety plan in place meeting the State of California requirements for an Injury and Illness Protection Program (IIPP); and
4. Certifies their commitment to ensure that personnel who will perform the contracted work will be trained in accordance with the regulatory requirements that apply to the hazards and mitigation or control methods

Check the Appropriate Role

☐ Site Manager ☐ Designated Safety Representative

Name: _____ Job Title: _____

Signature: _____ Date: _____

APPENDIX "A" – SUBCONTRACT CONTACT INFORMATION

Ames Emergency Contacts

ANY Site Phone Including Pay Phones:

Dial 911

Cell Phones:

Dial (650) 604-5555

Work Location

Building: _____ Room: _____

Physical Location: _____

Project Contacts

Contractor Site Manager: _____ Office: _____
Cell Phone: _____
Pager: _____

Project Manager: _____ Office: _____
Cell Phone: _____
Pager: _____

Alt. Project Manager: _____ Office: _____
Cell Phone: _____
Pager: _____

Procurement: Matt Rumsey Office: 650-604-4196
Eric Mattox Office: 650-604-1261
Pager: _____

Division Safety Office: SCOTT NIKODYM Office: 650-604-6823
Pager: _____

ALL injuries, property damage, and environmental release mishaps MUST be reported to the Project Manager, Alternate Project Manager, or the Division Safety Office.



Best Practices

- Discussion

