Joint Group on Pollution Prevention
Chartered by Joint Logistics Commanders

JG-PP
Partnering for Progress
Aerospace Materials, Processes, and Environmental Technology (AMPET) Conference

Mr. Robert Hill
321-867-8795
Overview

Who is JG-PP?

What does JG-PP do for you?

What has JG-PP achieved?

Where is JG-PP going?
Who is JG-PP

DoD/NASA flag officer group

- Originally created in 1995 at industry request
- Chartered by Joint Logistics Commanders/NASA HQ

Chartered to

- Reduce or eliminate system hazardous material requirements – Project Benefits
- Avoid duplication of effort – Consensus Building
- Reduce technical risk – Stakeholder Ownership
- Transfer technology - Documentation
- Leverage opportunities -- reduce costs – Cost Control

Dual focus on uniform implementation

- Acquisition (Contractor design) and sustainment community (Depot) needs
- Manufacturing and maintenance processes
## JG-PP Leadership

### Joint Logistics Commanders

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<tr>
<th>Commander</th>
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<tr>
<td>General John G. Coburn</td>
<td>Army Materiel Command</td>
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<tr>
<td>Vice Admiral James F. Amerault</td>
<td>Deputy Chief of Naval Operations, (Logistics)</td>
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<td>General Lester L. Lyles</td>
<td>Air Force Materiel Command</td>
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<td>Major General Paul M. Lee</td>
<td>Marine Corps Materiel Command</td>
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<td>Lt. General Henry T. Glisson</td>
<td>Director Defense Logistics Agency</td>
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### JG-PP Principals

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<tr>
<td>Major General David R. Gust</td>
<td>Deputy Chief of Staff for Research, Development and Acquisition HQ, Army Materiel Command</td>
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<tr>
<td>Rear Admiral Larry C. Baucom</td>
<td>Director, Environmental Protection, Safety and Occupational Health Chief of Naval Operations (N45)</td>
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<tr>
<td>Major General Paul Bielowicz</td>
<td>Director of Logistics HQ Air Force Materiel Command</td>
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<tr>
<td>Mr. Ken Trammell</td>
<td>Deputy Commander, Logistics Operations Marine Corps Logistics Bases</td>
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<tr>
<td>Ms. Olga Dominquez</td>
<td>Director, Environmental Management National Aeronautics and Space Administration</td>
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### Working Group (JASPPA)

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<tr>
<th>Member</th>
<th>Title and Affiliation</th>
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<tr>
<td>Mr. George Terrell</td>
<td>AAPPSO HQ Army Materiel Command</td>
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<td>Mr. Winston deMonsabert</td>
<td>Pollution Prevention Branch Chief of Naval Operations (N451W)</td>
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<tr>
<td>Ms. Deborah Meredith</td>
<td>Chief, Logistics Environmental Office HQ Air Force Materiel Command</td>
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<tr>
<td>Mr. John Wolfe</td>
<td>Marine Corps Logistics Bases</td>
</tr>
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<td>Mr. Dave James</td>
<td>Defense Contract Management Agency</td>
</tr>
<tr>
<td>Mr. Robert Hill</td>
<td>Kennedy Space Center National Aeronautics and Space Administration</td>
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What can JG-PP do for you

Proven Methodology

Coordinate/facilitate project management

Advocate funding

Reduce individual participant’s costs

Reduce alternative technical risk

Assist in qualified alternative implementation

Right People, Right Place, Right Time For Decisive Action
Joint NASA/DOD P2 Needs Integration
Common Problems, Joint Solutions, Shared Efforts

Depots
Program Offices
Field Activities

Service Needs
Common Needs

Centers
Contractors
NASA

Enterprises
NASA
AP2 Needs

Services
DCMC/Industry

Technology Pull and Technology Push
JG-PP Proven Methodology

Harmonized projects, leveraged resources
# JG-PP Projects

## Coating Systems (11)
- **Non chrome conversion coating**: Hughes Missile-Tucson
- **Non chromate aircraft primer**: Boeing-St. Louis
- **Low VOC topcoat & primer**: Raytheon Texas (incl. Dallas)
- **Low VOC - ID marking**: LM-Orlando, WR-ALC, NADEPCP
- **VOC ballast tank coatings**: NAVSEA
- **VOC non skid (Type I & II)**: NAVSEA
- **VOC paint med. cal. munitions**: Three OEMs, Army, USN, OO-ALC
- **VOC topcoat support equipment**: USAF, USN, Army, NASA
- **Non chromate alum. pretreatment**: Four OEMs, USAF, USN, Army, NASA
- **Non chromate conversion coat**: NCMS
- **Joint Org. Coatings & Surf. Trmt.**: N/A

## Metal Finishing (7)
- **Chrome free fasteners**: P&W West Palm
- **Cadmium free electroplating**: Boeing-Seattle, Phila., St Louis
- **Cr free - landing gear (HVOF)**: Four OEMs, NADEPJAX/CP, OC-ALC
- **Cr free - prop hubs (HVOF)**: HSD, NADEPCP, WR-ALC
- **Cr free - actuators (HVOF)**: OOC-ALC, OC-ALC, all NADEPs
- **Cr free - helo rotor parts (HVOF)**: Three OEMs, NADEP-JAX, CCAD
- **Joint Cd Alternatives Team**: Four OEMs, USAF, USN, Army, NASA

## Cleaning (2)
- **Oxygen line cleaning (ODS free)**: OC-ALC, NASA, NAVAIR, Northrop-Grumman
- **Hand wipe prepaint cleaner**: TBD

## Coating Removal (1)
- **Hand held LASER-de-coat**: Selected depots and field units

## Electronics Mfg. (1)
- **Lead & VOC free- printed circuits**: CCAMTF

## Special Projects (1)
- **Lead free, dry film lube- jet engines**: Five OEMs, PEWG

**Total Projects: 23**
**JG-PP Completed Project**

**Milestones:**
- Project began Aug 95
- First block change in DoD Apr 96
- Second block change completed Jul 97

**Deliverables:**
- Potential Alternative Report
- Joint Test Protocol
- Joint Test Report
- Qualified Alternatives

**Benefit/Impact:**
- Initial reduction 40 to 88%
- Cost avoidance - $9M in reduced contract change
- Reduce VOC emissions 100%
- Cost avoidance >$5M/Yr manufacturing
- Material cost savings of $1.20/square foot
- Eliminates masking/de masking operations.
- Labor savings for parts 3 hours
- 10 weapon systems - all services

**Description:**
- Eliminate VOCs in topcoats and primers
  - Toluene, Xylene, Methyl Ethyl Ketone

- Provides a non-VOC, non-hazardous alternate material for applications using MIL-C-46168, Urethane, Camouflage, Infrared and CARC qualified

**Costs:** $700K  ROI <.3 year
Raytheon Corporate-wide SPI

Leveraging JG-PP Successes

• Former Raytheon Systems Co. (RSC) Customer Council MOU signed in Feb 00
  – Established corporate-wide Joint Test Protocol (JTP) for validating low VOC replacement topcoats & primers
  – Builds on legacy SPIs, especially legacy Texas Instruments (TI) JTP developed by JG-PP
    • Substantial VOC reduction
    • $680K DCAA audited 5 year avoidance at TI legacy plant
    • “Spin-off” SPI at Raytheon Electronic Systems, Bedford, MA provided additional $87K 5 year avoidance

• Potential for implementation at over 60 plants
• Implementation in formative stage
  – SPI mandates that each program has to be briefed on JTP and agree to its use in validating substitution candidates
  – Currently being implemented on 40 contracts at two locations: Dallas (legacy TI) and Tucson (partial implementation)
  – Tucson Cost savings/avoidances
    • Contractor estimated 5 year direct cost savings is $37K on following programs: AIM9X, AMRAAM, MAVERICK, STD MSL
Boeing Aircraft And Missiles Non-Hexavalent Chromate Primers

Description:
- Eliminate Cr\(^{+6}\) and reduce VOCs in primer used on aircraft outer mold line for F-15, C-17, F-18, T-45, Harpoon/SLAM, AV-8B
- Lockheed Martin conducting same tests on F-16, collaborative with Boeing

Benefit/Impact:
- Reduce chrome releases by 60% for this process
- 72% AFMC primer reduction of Cr\(^{+6}\) (7,000 lbs)
- Cost Avoidance >$250K/Yr manufacturing
- Affects 7 weapon systems - all services
- DoD depot cost avoidance $31.3M/20 yrs

Milestones:
- Lab testing complete Dec 1997
- Flight testing Feb 1998 - Jan 2002
  - F-15, F-18, AV-8A, T-45, Harpoon
  - Added C-17, C-130, two more F-15s
- F-16 testing primers, coordinating

Migration:
- NASA Columbia Space Shuttle
- Flipper doors (every other one)
- C-130
What has JG-PP achieved

Pioneered workable joint partnering
  - Created pragmatic, stakeholder driven 6 step method

Acquisition reform in action
  - First technical block change at Raytheon-TI
  - Results establishing performance specs

Created partnerships on 23 active projects
  - Affecting over 150 systems
  - 17 original equipment manufacturer locations/10 depots
  - Coordination with over 800 technical and business stakeholders

Created cost/benefit analyses process
  - Meets DCAA requirements, when required
Where is JG-PP going next

International Partners

• Leverage environmental technology and resources when found
  • “Engagement is warranted” Mr. Gary Vest, PADUSD(ES), JG-PP Principals’ Mtg Dec 99

• JG-PP open to International P2 partners
  • U.S. Law 10 USC 2530a(e) and SECDEF MEMO
    • Cooperative RDT&E of defense systems
    • DoD procurement of foreign technology and logistics support

• Success partnering with Canadians on High Velocity Oxygen Fuel Project through Navy
JG-PP Keys to Success

Proactive Involvement

Partnership
Technical confidence
Communication
Risk Reduction
Reduced costs

JG-PP Web Page

http://www.jgpp.com