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

General John G. Coburn
Commander
Army Materiel Command

Vice Admiral James F. Amerault
Deputy Chief of Naval Operations, (Logistics)

General Lester L. Lyles
Commander
Air Force Materiel Command

Major General Paul M. Lee
Commander
Marine Corps Materiel Command

Lt. General Henry T. Glisson
Director
Defense Logistics Agency

JG-PP Principals

Major General David R. Gust
Deputy Chief of Staff for Research, Development and Acquisition
HQ, Army Materiel Command

Rear Admiral Larry C. Baucom
Director, Environmental Protection, Safety and Occupational Health
Chief of Naval Operations (N45)

Major General Paul Biewowicz
Director of Logistics
HQ Air Force Materiel Command

Mr. Ken Trammell
Deputy Commander, Logistics Operations
Marine Corps Logistics Bases

Major Gen. Timothy P. Malishenko
Commander
Defense Contract Management Agency

Ms. Olga Dominquez
Director, Environmental Management
National Aeronautics and Space Administration

Working Group (JASPPA)

Mr. George Terrell
AAPPSO
HQ Army Materiel Command

Mr. Winston deMonsabert
Pollution Prevention Branch
Chief of Naval Operations (N451W)

Ms. Debra Meredith
Chief, Logistics Environmental Office
HQ, Air Force Materiel Command

Mr. John Wolfe
Marine Corps Logistics Bases

Mr. Dave James
Defense Contract Management Agency

Mr. Robert Hill
Kennedy Space Center
National Aeronautics and Space Administration
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

Technology Pull and Technology Push
JG-PP Proven Methodology

Harmonized projects, leveraged resources
## JG-PP Projects

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<th>Project</th>
<th>Locations</th>
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<td>Non chrome conversion coating</td>
<td>Hughes Missile-Tucson</td>
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<td>Non chrome aircraft primer</td>
<td>Boeing-St. Louis</td>
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<td>Low VOC topcoat &amp; primer</td>
<td>Raytheon Texas (incl. Dallas)</td>
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<td>Low VOC - ID marking</td>
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<td>VOC ballast tank coatings</td>
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<td>VOC non skid (Type I &amp; II)</td>
<td>NAVSEA</td>
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<td>VOC paint med. cal. munitions</td>
<td>Three OEMs, Army, USN, OO-ALC</td>
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<tr>
<td>VOC topcoat support equipment</td>
<td>USAF, USN, Army, NASA</td>
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<tr>
<td>Non chromate alum. pretreatment</td>
<td>Four OEMs, USAF, USN, Army, NASA</td>
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<tr>
<td>Non chromate conversion coat</td>
<td>NCMS</td>
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<tr>
<td>Joint Org. Coatings &amp; Surf. Trmt.</td>
<td>N/A</td>
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<td><strong>Metal Finishing (7)</strong></td>
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<td>Chrome free fasteners</td>
<td>P&amp;W West Palm</td>
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<td>Cadmium free electroplating</td>
<td>Boeing-Seattle, Phila., St Louis</td>
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<td>Cr free - landing gear (HVOF)</td>
<td>Four OEMs, NADEPJAX/CP, OC-ALC</td>
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<td>Cr free - prop hubs (HVOF)</td>
<td>HSD, NADEPCP, WR-ALC</td>
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<td>Cr free - actuators (HVOF)</td>
<td>OO-ALC, OC-ALC, all NADEPs</td>
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<tr>
<td>Cr free - helo rotor parts (HVOF)</td>
<td>Three OEMs, NADEP-JAX, CCAD</td>
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<td>Joint Cd Alternatives Team</td>
<td>Four OEMs, USAF, USN, Army, NASA</td>
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<td><strong>Cleaning (2)</strong></td>
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<tr>
<td>Oxygen line cleaning (ODS free)</td>
<td>OC-ALC, NASA, NAVAIR, Northrop-Grumman</td>
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<tr>
<td>Hand wipe prepaint cleaner</td>
<td>TBD</td>
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<td><strong>Coating Removal (1)</strong></td>
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<td>Hand held LASER-de-coat</td>
<td>Selected depots and field units</td>
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<td><strong>Electronics Mfg. (1)</strong></td>
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<td>Lead &amp; VOC free- printed circuits</td>
<td>CCAMTF</td>
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<tr>
<td><strong>Special Projects (1)</strong></td>
<td></td>
</tr>
<tr>
<td>Lead free, dry film lube- jet engines</td>
<td>Five OEMs, PEWG</td>
</tr>
</tbody>
</table>

**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

**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

**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

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

Leveraging JG-PP Successes

- 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

**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

### 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

### 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.jgppp.com