

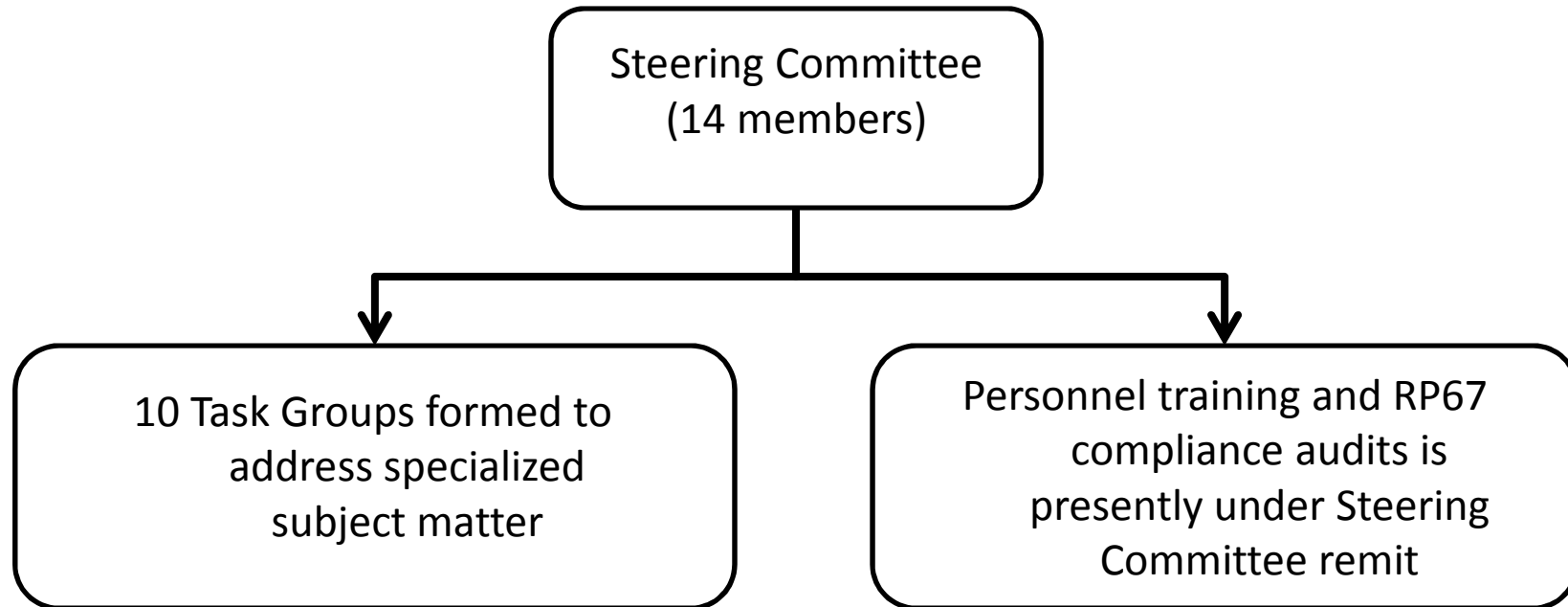
# API RP 67 Review & Revision

Title: *Recommended Practices for Oilfield Explosives Safety*

Scope: *This publication is applicable to explosives used in oil and gas producing operations, and more specifically to the use of explosives inside a wellbore. The purpose of this recommended practice is to prevent the inadvertent detonation of explosives.*

A working group convened in Jan 2011 to establish the methodology for the review and revision process and then begin those activities.

# API RP 67 Review & Revision



# RP 67 Steering Committee Members

- David Ayre BP Co-chair
- James Barker Halliburton/JRC Co-chair
- Phil Crabtree Expro Group
- Steve DeLozier Casedhole Solutions
- Jim Ellis Ecosse
- Bob Ference Schlumberger
- Kent Folse Shell
- Jim Gilliat Baker Hughes
- Hanaey Ibrahim PDO
- Andy Pettitt SPEX
- Dan Pratt Owen Oil Tools Co-chair
- Frank Preiss Dynaenergetics
- John Segura Weatherford
- Alphie Wright Hunting-Titan

# API RP 67 Task Groups

1. Detonators, Delays,  
Surface Firing Panels

2. Interrupts

3. Tractors

4. Temperature Mgmt

5. Firing Heads on  
Bottom of Guns

Submitted

6. Coil Tubing Jobs

7. Security / Regulatory

8. Pipe Recovery

Submitted

9. Pressure Control Equip

Submitted

10. Special Categories of  
Explosive Devices

Task Group 1.0  
Detonators & Delays

Bob Ference

# Task Group 2.0

## Interrupts

TG or SC member

- Group members

- John Jordan      Titan              Chair
- Justin Mason    Halliburton
- Kevin George    Geodynamics
- Ted Andrews    Baker

- Status

- Interrupts for electric detonators moved to TG 1.0
- This group still addresses TCP “standalone” interrupts

# Task Group 3.0

## Tractors

John McGrath

- Group members
  - Brian Schwanitz - Welltec (chair)
  - Andrew Massie – BP
  - John McGrath - Guardian
  - Homero Castillo - Baker Hughes
  - Thilo Scharf - DynaEnergetics
  - Gerald McInally - Aker
- Status
  - Wording has been revised for Section 6.7 to satisfaction of most committee members.
  - There have been various discussions on exactly what constitutes a downhole power source. Everyone is in agreement now.
  - next step – waiting for 1 member to confirm.
- Other
  - Tractor committee requests that the Steering Committee assign a task to define a recognized, independent third party certification.
  - challenges remaining – hopefully none.

# Task Group 4.0

## Temperature Management

David Ayre

- Group members
  - David Ayre BP / Chairman
  - Bob Ference SLB
  - David Huber BHI
  - Hanaey Ibrahim PDO
  - Justin Mason HAL
  - Dave Metcalfe XLPP
  - Achim Pabst or Roland Peters DYNAenergetics
  - Andy Pettitt SPEX
  - Chris Sokolove Hunting



# Task Group 4.0

## Temperature Management cont.

- Status
  - Historical Refresh
  - North Sea issue / Aberdeen chapter UK IExpE discussion 2012
  - UN Test Series 4(b)(ii) 12m drop test – Go / No Go test for packaged materials indicating suitability for transport
    - 1) Boxed Charges (size of charge & cord retention “ears”)
    - 2) Loaded Guns (common HT gun size TBD)
  - Proposal from NMT EMRTC
  - Under auspices of API
  - Submitted API DPOS Standards Resource & Research Request for \$110k for the 8 major charge Mfg’s

## Task Group 4.0

### Temperature Management cont.

- Other
  - API rep support / process and timing of the request
  - Logistical details

Task Group 5.0

Firing Heads on Bottom of Guns

Justin Mason

## Task Group 6.0 Coil Tubing Jobs

TG or SC member

- Group members
  - Roger Frost – BP co-chair
  - TBD – second co-chair
  - Parry Hillis – Baker
  - Justin Mason – HAL
  - Kevin George – Geodynamics
  - Mohammed Medhi – SLB
  - Kent Folse – Shell

## API RP 67 vs Actual CTCP operations:

- Due to high rig in, riser lengths, and crane limitations, Safety Spacers are not being used. General consensus among operators is they will pay to get a larger crane on location if it means longer perforating interval, but will not pay the added crane expense for the spacer.
- Standard perforating assembly has FH on the bottom of the gun (assuming FH is last on, first off), again no spacer between FH & top shot. Configured to get the first shot as close to the toe as possible.
- FH interrupters are not being deployed, due to the cost competitive nature of the work. Service companies are left assuming the cost of the interrupter or not running one at all.
- Serious well site incidents with untrained personnel running CTCP ops
- Threaded pipe TCP operations are not the same as CTCP operations, but there is no distinction in RP67 regarding this. Should there be?

# Task Group 7.0

## Security / Regulatory

Shelley Espinoza

- Group members
  - James Barker, Halliburton/JRC
  - Andy Pettit, SPEX
  - Dan Pratt, Owen Oil Tools
  - Thilo Scharf, DynaEnergetics
  - Steve Zuklic, Baker Hughes
  - Richard Arsenault, Casedhole Solutions
  - Shelley Espinoza, Hunting Titan

# Task Group 7.0

## Security / Regulatory

- Status
  - Outline developed
    - Responsible Party
      - Role
    - Storage
      - Packaged explosives
      - Loaded perforating guns
      - Key control
      - Recordkeeping
    - Transportation
      - Route planning
      - Communication
      - Security controls
      - Security plans/permits (government)
      - Common carrier evaluation

# Task Group 7.0

## Security / Regulatory

- Other
  - Input?
  - Challenges remaining ...
    - Write meaningfully, with a global perspective
    - 🕒



# Task Group 7.0

## Security / Regulatory

- EU Directive 2008/43/EC (amended by 2012/4/EU): *A System for the Identification and Traceability of Explosives*
  - 4/5/2013: Commercial explosives manufactured in or imported into the EU must be marked per the Directive.
    - Manufacturer's name
    - EU Country of Import or Manufacture (2 digits)
    - Manufacturing site code (3 digits) issued by government of EU manufacturer or EU importer
    - Unique code (i.e., serialized)
    - Barcode or matrix code relating to previous 3 bullets
    - Exceptions exist
  - 4/5/2015:
    - Recordkeeping required of above information.
  - Each EU country implements the Directive through their own legislation.

# Task Group 8.0

## Pipe Recovery

JW Segura

- Group members
  - JW Segura – Weatherford chair
  - Barry Chapman – SPEX
  - Kevin Morton – JRC
  - George Brunner – Baker
- Status
  - Identified services not currently listed, recommendation of additional verbiage for spudding, protective sleeves
  - Plasma cutters (thermite) are being approved by the DOT as a “non hazard rated material” – non-explosive.
  - Recommend the title of RP67 edited to **Recommended Practices for Oilfield Explosives and Energetics Safety**
  - Submitted to Steering Committee

# Task Group 9.0

## Surface Pressure Control Equip

M. McCarter

- Group members
  - John Jordan, Micky McCarter, Bob Ference, Ken Filipchuk, John Davidson, Ted Andrews, John McGrath, Jerry Weiser, Kent Folse, Andrew Massie
- Status
  - Two sentences from being complete.
    - Was ...and pressure tested to a value of 1.2 times the maximum expected well head pressure, with no explosive device in the lubricator string.
    - Is ... and pressure tested to a value determined by the operating companies guidelines, not to exceed the working pressure of the string of pressure control equipment. There should not be any explosive device in the lubricator string while pressure testing the lubricator.
  - Questions on Quick Test Subs.
    - Are they needed?
    - If not, do we accept that a joint that has been pressure tested can be opened to insert the gun string, and then made up again without retesting?

Task Group 10.0

Special Categories of Explosive Devices

(propellants, power charges, core gun loads)

Eduardo Camacho

## Task Group 11.0

### Personnel Training and RP67 Compliance Audits

- Under remit of Steering Committee
- To be addressed at a future date (...approaching)
  - Personnel training
    - Existing company processes
    - Industry best practices and process safety alignment
  - Compliance audits
    - Who implements?
    - How is program administered?
    - Announced or unannounced?