

# INGAA EH&S Committee Meeting

## MACT/NSPS Task Group Update

September 26, 2012



# Topics

- ▶ RICE NESHAP Settlement and Proposed Rule
- ▶ RICE NESHAP & NSPS – EPA “Q&A” document
- ▶ Subpart OOOO / Subpart HHH amendments
  - OOOO: includes tanks, excludes other T&S sources
  - HHH: INGAA letter requested Stay and Reconsideration
- ▶ Turbine NSPS Proposed Rule
- ▶ Other Updates
  - Boiler NESHAP
  - “Uniform standards” status

# RICE NESHAP – 2010 Revision and INGAA Challenge

- ▶ Rule deadline for gas-fired ICE extended to 8/10
  - Final Rule Published 08/20/10; Effective 10/19/10
    - Focus – Existing RICE (major source  $\leq$ 500 hp and area source)
    - Three years for newly affected, existing engines to comply
      - Compliance deadline October 19, 2013
  - NESHAP now includes all engines except existing major source lean burns (LBs)  $>$ 500 hp
    - EPA plans to address major source LBs during 8-yr review
      - “Due” in 2012 – Late and no imminent EPA plans
  - Final 2010 rule included changes in response to INGAA comments and post-comment negotiations
- ▶ INGAA and others challenged the 2010 Final Rule

# RICE NESHAP Challenge

- ▶ INGAA submitted petition for reconsideration in October 2010. Issues identified include:
  - No opportunity to comment on new CPMS specs
  - Basis for EPA standards – process for determining the MACT floor and assessing variability
  - No opportunity to comment on new 4SLB data & analysis
  - Co-benefits and cost criteria for above the floor analysis (e.g., area source 4SRBs >500 hp require NSCR catalyst, formaldehyde testing, and temperature monitoring)
- ▶ In January 2011, EPA agreed to reconsider several issues
  - Settlement discussions culminated with FR notice of proposed settlement on June 21, 2012 and June 2012 Proposed Rule
  - Proposed Rule that implements settlement published on June 7, 2012
    - INGAA submitted comments (mostly positive) on August 9, 2012

# NESHAP Settlement and Revisions

Negotiations on three primary issues:

- (1) New CPMS specs: No opportunity for comment
    - Successfully addressed in March 2011 Direct Final Rule
  - (2) Simplify testing and monitoring for area source engines that require catalysts
  - (3) Consider work practices rather than catalytic control for area source engines >500 hp in “remote” locations
- ▶ Items 2 and 3 addressed in Settlement Agreement and June 2012 Proposed Rule
- Final Rule signature required by December 14, 2012
  - INGAA Petition to be dismissed if Final Rule implements Settlement

# RICE NESHAP – Rule Revisions that Address Settlement Agreement

For area source engines, the Clean Air Act allows EPA to consider work practices rather than emission standards

Subpart ZZZZ ALTERNATIVES for area source 4–stroke RICE >500 hp that currently require catalytic control, testing, and T–CPMS:

- ▶ “Maintenance” work practice (same as smaller area source engines) rather than catalytic control for “remote” area source engines
- ▶ Catalyst “equipment standard” if not remote; Monitoring includes:
  - Option to use *high temperature shutdown* rather than Temperature–CPMS
  - Periodic CO portable testing to validate catalyst activity (as “equipment standard” rather than emission standard) – No RB formaldehyde testing
    - If prescribed actions are followed when catalyst activity is inadequate (i.e., failed test), then the unit is not out of compliance
    - 4SLB: 47 ppm CO (at 15% O<sub>2</sub>) or 93% CO reduction
    - 4SRB: 75% CO reduction or 30% THC reduction (THC requested by EMA)
    - If test does not meet these criteria, shutdown, troubleshoot, re–test

# RICE NESHAP Evolution: 2004–2012

2012 Proposal – Final Rule signature by Dec 14

## MAJOR SOURCES

## AREA SOURCES

	EXISTING	NEW	EXISTING	NEW
$\leq 500$ HP	2010 rules	2008 rule	2010 rules	2008 rule
$> 500$ HP	2004 rule	2004 rule	2010 rules	2008 rule
	2010 rule (non-emergency CI)		2012 proposed (4-stroke LB and RB) <sup>1</sup>	

<sup>1</sup> 2012 rule addresses two additional settlements: 30% THC reduction as alternative to rich burn H<sub>2</sub>CO tests; Demand response for emergency units

# Area Source Standard Evolution

Proposed Rule → Final Rule → Proposed 2012 Amendments

Engine Type	2009 Proposed Rule		2010 Final Rule		Proposed 2012 Amendments	
	50 to 249 hp	≥ 250 hp	≤ 500 hp	> 500 hp	≤ 500 hp	> 500 hp
2SLB	Management Practice	8 ppmv CO or 90% CO reduction	Management Practice	Management Practice	Management Practice	Management Practice
4SLB	Management Practice	9 ppmv CO or 90% CO reduction	Management Practice	47 ppmv CO or 93% CO reduction	Management Practice	REMOTE ICE: Man. Practice
						47 ppm CO or 93% redxn <sup>1</sup>
4SRB	200 ppbv H <sub>2</sub> CO or 90% H <sub>2</sub> CO reduction	Management Practice	2.7 ppmv H <sub>2</sub> CO or 76% H <sub>2</sub> CO reduction	Management Practice	REMOTE ICE: Man. Practice	
					75% CO reduction <sup>1, 2</sup>	
Small RICE	< 50 hp		< 100 hp		< 100 hp	
All Types	Management Practice		Management Practice		Management Practice	

<sup>1</sup> Proposed amendments - “Equipment Standard” rather than emission limit. Install a catalyst and conduct CO portable tests to evaluate catalyst activity. For failed test following the initial test, troubleshoot and retest.

<sup>2</sup> 30% THC reduction is also allowed as an alternative (for all RB H<sub>2</sub>CO stds).



# RICE Rules Implementation Q&A

- ▶ EPA issued RICE NESHAP Q&A memo in Sept 2005
  - Additional questions remain or arose from amendments
- ▶ On July 17, 2012, EPA issued a memo to replace the Sept 2005 Implementation Q&A Memo
  - Addresses RICE NESHAP and NSPS (Subparts JJJJ & IIII)
  - Contains original questions and some additional items
  - Some answers from 2005 memo have been updated
- ▶ EPA Q&A Memo was reviewed in a draft summary memo provided to INGAA sub-group on August 28
  - Identifies problematic answers and “acceptable” answers
  - Lists additional items that should be added to EPA’s memo
  - INGAA decided to address “remote engine” interpretation through this Q&A memo rather than settlement rule comments

# RICE Rules Implementation Q&A

- ▶ Primary concerns with EPA Memo responses include:
  - Response regarding T-CPMS data roll-up requires 4-hour averaging to bridge unit shutdown and re-start (this approach is not consistent with implementation to date)
  - Reconstruction analysis and operational limitations on hp capacity should include the compressor for integral recipis
  - Catalyst re-test responses rely on burdensome case-specific review
  - Any emergency RICE ops >100 hours triggers non-emergency status
  - Other longstanding items in INGAA Aug 9 Comments (e.g.,  $\Delta P$  tests)
- ▶ List of additional items includes:
  - Address on-site buildings for “remote” definition (should not be counted)
  - Clarify that SSM Plans no longer are required
  - Alternative practices for units that do not operate for the entire year
- ▶ INGAA plans to comment on the EPA Memo and call or meet with EPA to discuss Memo content and items that should be added

# Subpart HHH and Subpart OOOO

- ▶ Under a February 2010 Consent Decree, T&S NESHAP (HHH) is part of a coordinated EPA effort to address oil and gas sector NSPS and NESHAP standards
  - Proposed Rule signature deadline was delayed twice in 2011 and published in FR on August 23, 2011
- ▶ EPA proposed revisions to Part 63, Subpart HHH
  - Major sources require “standard”, so the main objective is to add an emission standard for *small* dehydrators that were excluded in ‘99
- ▶ EPA proposed New NSPS, Part 60, Subpart OOOO
  - Addresses Oil and Gas Operations and included T&S VOCs, with standards for pneumatic devices and compressor seals
- ▶ Following an extension to the deadline, INGAA comments submitted on November 22, 2011
  - Final Rule signature deadline extended to April 17, 2012
  - Rules published in FR on August 16, 2012; effective October 15

# Subpart OOOO

- ▶ INGAA met with EPA staff (Bruce Moore, et.al.), Air Assistant Administrator (Gina McCarthy), and OMB/CEQ
- ▶ Meetings highlighted primary issues and objectives were achieved in the Final Rule (i.e., T&S excluded except for tanks):
  - Regulation is not warranted for trivial VOC reductions (64 TPY *total* for all T&S sources vs. 535,000 TPY for all sectors / sources)
  - Since VOCs are removed upstream of T&S, the logical regulatory dividing line should be upstream of natural gas transmission
    - i.e., T&S and Distribution handle the same gas; Distribution is excluded
  - Subpart OOOO should not imply that Natural Gas is a pollutant
  - VOC rule should include a VOC threshold – 10 wt% is consistent with existing NSPS and gas processing criteria in the proposed rule [Not addressed]
  - ~~◦ If T&S is retained in Subpart OOOO, should be limited to within the fence line, and reporting and recordkeeping should be simplified [Not Applicable]~~
- ▶ Final Rule includes T&S tanks but no other T&S sources
  - Concern – Preamble & fact sheet imply these are interim decisions that may be revisited
  - Tank applicability criteria (VOC calc) are missing – May require revision

# Subpart HHH

- ▶ Primary INGAA issue was *retaining* 1999 rule option that allows dehydrator compliance by reducing benzene emissions to <1 TPY
  - Proposed Rule would have deleted this option and instituted new requirements for units already complying with Subpart HHH
- ▶ **EPA retained the <1 TPY benzene option in the Final Rule**
- ▶ **HOWEVER**, errors and confusing text were introduced in HHH when the provisions were added back into the Final Rule
  - Definition of large and small dehydrator are not clear / overlap
  - Section that allows <1 TPY benzene option is not properly cited
  - New requirements (monitoring, testing, reporting, etc.) likely apply, but specifics are uncertain due to lack of rule clarity
    - For units already complying with 1999 rule, would apply on October 15
  - EPA has verbally acknowledged that issues need to be addressed
- ▶ INGAA submitted Stay request and petition for reconsideration on September 14
  - Follow-up call with EPA on September 21

# Subpart HHH: Status and EPA Call

- ▶ Call with EPA on September 21 provided clarification of EPA intent regarding dehy with benzene <1 TPY
  - EPA acknowledged issues with Subpart HHH text
  - For units already conforming, the dehy is either: (1) exempt (if controls in place prior to unit's effective date) or (2) controlled and subject to HHH
  - Vast majority of conforming units are in the "exempt" category and these would be considered "**existing, small dehy**" under the Subpart HHH amendments
  - Other units are large dehy meeting the 1 TPY control option
- ▶ **NEW REQUIREMENTS** would apply to the small dehy that were previously exempt, with 3 years to comply
  - e.g., meet small dehy emission standard; new monitoring, reporting, and recordkeeping requirements

# Subpart HHH: Next Steps

- ▶ EPA believes it can address INGAA issues through an implementation guidance letter before October 15
  - Revisions to Subpart HHH text would occur at a later date
- ▶ INGAA indicated it would review the issues and provide a written response within 7 to 10 days
  - Conforming units are losing exempt status but have three years to comply with new requirements
  - Objective of rule amendments was to add standards for units not already covered, so EPA may be unwilling to offer more
- ▶ New requirements would include...
  - Site-specific BTEX limit based on “uncontrolled” MACT floor that considers natural gas BTEX content per §63.1275(b)(1)(iii)
  - Control device performance testing and possibly “no detectable emissions” testing for the closed vent system
  - Reporting and recordkeeping

# Subpart HHH: Next Steps

- ▶ Interim solution appears to be EPA guidance letter that addresses October 15, 2012 deadline
  - Clarify that the previously exempt units have three years to comply
- ▶ Rule scrutiny, discussion with EPA, and potential clarifications may still be required to address intertwined compliance criteria in 63.1282 for small versus large dehydrators
  - Subgroup to work through rule criteria may be needed to develop a list of questions and issues for discussion with EPA
    - Schedule a WebEx?
- ▶ Discuss INGAA position and planned response to EPA



# Turbine NSPS Proposed Revision

- ▶ Turbine NSPS “technical correction” was planned
  - Primarily in response to 2006 UARG petition for reconsideration
    - No major implications expected for simple cycle compressor drivers
- ▶ EPA published Proposed Rule on August 29, 2012
  - EPA claims no substantive changes and no added costs
    - Thus, no analysis to support proposed revisions
  - BUT, Subpart KKKK is completely re-written (not amended) and includes significant and unexpected revisions
  - Includes new definitions that re-define the affected unit for reconstruction analysis (i.e., compressor/combustor/turbine)
    - “Smaller box” = lower cost for denominator in reconstruction calc
  - Includes new provision (two options) for offsite overhaul that triggers Subpart KKKK applicability upon the FIRST combustor exchange or THIRD component exchange
    - Applies when owner / operator / manufacturer cannot identify which components (i.e., meaning parts) have been replaced
  - INGAA 9/14 letter requested extension to comment deadline

# Other Topics – Boiler NESHAP

- ▶ Final Rule Published March 21, 2011
  - INGAA submitted comments in August 2010
  - *Area source*: Does NOT apply to gas-fired units
  - *Major source*: Stayed by EPA in May 2011 (for reconsideration)
    - Court vacated the Stay in Jan 2012 – So Rule applies
  - “New” if construction commenced after June 4, 2010
- ▶ Major Source Re-proposal published on Dec. 23, 2011
  - Work Practices retained for *Major Source* gas-fired units
    - Tune-up frequency for <5 MMBtu/hr decreased to every 5 years
    - Biennial (<10 MMBtu/hr) or annual ( $\geq$ 10 MMBtu/hr) tune-up
    - Burner/flame/AFR control inspection and adjustment with CO test
  - One time energy audit required
  - 3-year compliance deadline for existing units (post-Final Rule)
- ▶ No Stay, so EPA issued “No Action Assurances” in 2012 that provide enforcement discretion for initial notices & tune-ups

See: <http://www.epa.gov/ttn/atw/boiler/boilerpg.html>

# Other Topics – Proposed “Uniform Standard”

- ▶ In March 2012, EPA proposed a “Uniform Standard” for Storage Vessels, Transfer Operations, Equipment Leaks, and Closed Vent Systems and Control Devices
- ▶ Objective is to improve consistency across multiple rules while streamlining reporting and recordkeeping
  - Future NSPS and NESHAPs would reference the Uniform Standard
- ▶ Proposed Rule lists refining & chemical production industries, but support documentation includes oil & gas sector
- ▶ On June 18, EPA extended the comment deadline to Sept 24 in response to API and ACC requests
- ▶ Proposed rule includes provisions for LDAR, CPMS for controlled vents, optical imaging method reference (to be added as Part 60 Appendix K), etc.
- ▶ Task Group will monitor comments and EPA responses

# 2013 Initiatives

- ▶ RICE NESHAP – Final Rule review and implementation
  - 2013 Implementation Workshop; track EPA “8-year” review
- ▶ Subpart OOOO
  - Implementation / technical corrections to “tanks” sections
  - Track EPA actions to address implied “interim” status for T&S
- ▶ Subpart HHH – Follow-up on reconsideration issues and new requirements for previously exempt units
- ▶ Turbine NSPS – Final amendments review/follow-thru
- ▶ Track status of Formaldehyde IRIS review
- ▶ Address “unexpected” NSPS or NESHAP rulemakings that arise – assess impacts and need for Comments
- ▶ Track related EPA actions – Boiler NESHAP, Uniform Standards, etc.