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CRUDE IN THE SPOTLIGHT

**COQA Meeting
Salt Lake City
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Crude Issues Receiving Greater Scrutiny



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- ▶ Canadian Oil Sands issue
 - European Union Fuels Quality Directive
- ▶ State LCFS issues
 - California
 - Other regions
 - Northeast
 - Midwest
- ▶ EPA placing greater emphasis on regulatory matters
 - Greenhouse Gas (GHG) Mandatory Reporting Rule
 - Refinery Information Collection Request (ICR)

GHG Mandatory Reporting Rule



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- Finalized October 29, 2009
- Captures 90% of the U.S. GHG emission profile
- Requires reporting both stationary source emissions and petroleum products
- All sources over 25,000 tons must report
 - Refineries and petrochemical facilities
- Initial reporting for 2010 data was 3/31/11
 - EPA has extended deadline to 9/30/11
 - EPA will finalize key CBI provisions in August 2011
 - Industry and others raised concerns

Affected Refinery Emission Sources



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Stationary combustion	Equipment leaks
Flares	Storage tanks
Catalytic cracking	Delayed coking
Traditional fluid coking	Uncontrolled blowdown systems
Catalytic reforming	Hydrogen plants (non-merchant)
Onsite and offsite sulfur recovery	Asphalt blowing (controlled)
Loading operations	Asphalt blowing (uncontrolled)
Electrical Generation (cogeneration)	Other process vents

GHG Data Reporting Requirements Include Crude Slates



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- ▶ d) Measurement of API gravity and sulfur content of crude oil
 - (1) Samples of each batch of crude oil shall be taken according to an appropriate standard method published by a consensus-based standards organization.
 - (2) Samples shall be handled according to an appropriate standard method published by a consensus-based standards organization.
 - (3) API gravity shall be measured using an appropriate standard method published by a consensus-based standards organization.
 - (4) Sulfur content shall be measured using an appropriate standard method published by a consensus-based standards organization.
 - (5) All measurements shall be temperature-adjusted and pressure-adjusted to the conditions assumed for determining the quantities of crude oil reported under this subpart.

§98.396 Data reporting requirements



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- ▶ (20) All of the following information for all crude oil feedstocks used at the refinery:
 - (i) Batch volume in barrels.
 - (ii) API gravity of the batch at the point of entry at the refinery.
 - (iii) Sulfur content of the batch at the point of entry at the refinery.
 - (iv) Country of origin of the batch, if known.

NPRA Comments on Reporting Crude Slates (June 2009)



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- ▶ “NPRA recommends that EPA should not require the reporting of facility-specific crude batch data. Specifically, section “98.396 Data Reporting Requirements” should be modified to drop (a)(9). Instead the EPA should require refiners on a facility and company-wide basis to report to the EPA the same level of information on crude imports and processing that is currently reported to the EIA.”



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NPRA Comments (cont.)

- ▶ “...companies already report to the EIA the monthly total of crude imports at the company level. This data includes the import port, volume, API gravity, sulfur content, and country of origin. In addition, companies already report to the EIA, at the facility level, the monthly average API gravity, and sulfur of crude processed.”
- ▶ Individual facility crude data is not needed to calculate a baseline of the CI (carbon intensity) of crudes run in the United States or the world.



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Origins of the ICR

- ▶ Section 114 of the Clean Air Act requires owners or operators of emissions source to provide information necessary to determine compliance with federal standards
- ▶ Through Section 114, EPA gathers data for rulemakings through Information Collection Requests (ICR)
- ▶ Original intent was to include 9 refining companies
 - EPA then expanded to all refineries in the US

Origins of the ICR (cont.)



- ▶ Data will be used for several rules to be completed as part of settlement
 - Refinery Risk and Technology Review rule (Air Toxics)
 - Went final 1/09 but never published in FR
 - Refinery GHG NSPS Rule
 - Refinery MACT (CC+ UU)
 - Uniform Standard Rules
 - Flares
 - Equipment Leaks
 - Heat Exchangers
 - Wastewater Treatment
 - Control Devices
 - Storage Tanks

ICR Origins (Cont.)



- ▶ Timing is Interesting
 - Settlement requires rules to be proposed by 12/10/11
 - Testing portions of ICR completed by 8/31/11
 - Leaves little time for actual risk modeling or adequate QA/QC of data



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ICR Structure

- ▶ Refinery ICR includes 4 components
 - Component 1-Industry Questionnaire (5/31/11)
 - Component 2-Emissions Inventory (Due 6/30/11)
 - Component 3-Distillation Feed Sampling (Due 8/31/11)
 - Component 4-Emissions Source Testing (Due 8/31/11)

- NPRA/API asked for extensions of Components 1 & 2 and were denied

- Crude testing is included in Component 3



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ICR Component 3

- ▶ Requesting variability data for the feed to the distillation column
- ▶ Composition analyses requested include: mercury, chlorine, sulfur, antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, nickel, and selenium
- ▶ 3 samples collected and analyzed 30 days apart
 - Either crude oil is sampled or
 - Samples from the line feeding distillation column
- ▶ Atmospheric crude distillation units with desalters
 - Sample either before or after the desalter



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ICR Component 3 (Cont.)

▶ Analytes include:

- Higher Heating Value (Btu/lb)
- Density/API Gravity (lb/ft³ and API gravity)
- Mercury Concentration (ppm)
- Chlorine Concentration (ppm)
- Sulfur Concentration (ppm)
- Total Selected Metals Concentration (ppm)

ICR Component 3 (Cont.)



- ▶ Additional requirements:
 - Documentation that distillation feed samples were obtained in accordance with the above sampling protocol;
 - Documentation of the proper chain of custody for each distillation feed sample;
 - Description of the QA/QC procedures followed in preparing each distillation feed sample for analysis and performing the required analysis; and
 - The results of the analyses performed on each distillation feed sample.
- ▶ Records must be kept for three years



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ICR Component 3 (Cont.)

- ▶ Must note if crude oil or intermediate slate that makes up the feed to the distillation column during the time of sample is significantly different than crude oil or intermediate slate used during 2010.

ICR Concerns



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- ▶ NPRA has several concerns with the ICR
 - Compressed schedule
 - Burdensome and costly
 - Agency already has most of the information
 - Information may never be used in rules

- ▶ NPRA/API filed challenge to ICR both with EPA and D.C. Circuit



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What's Next?

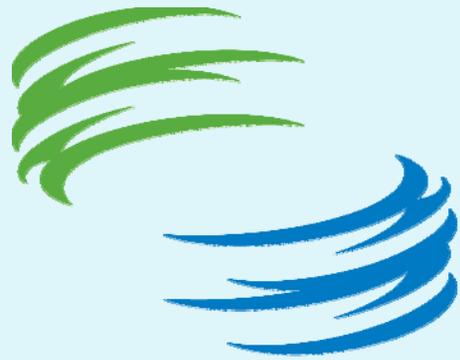
- ▶ Potential delay of Utility GHG NSPS Rule
 - Impact on Refinery GHG NSPS rule and other rules due out in December is unclear
- ▶ NPRA continuing discussions on ICR timing with EPA
- ▶ No discussions yet regarding legal challenge
- ▶ Members working to meet June and August deadlines



Conclusions

- ▶ Refinery crudes are getting a lot of attention
 - More than just Canadian oil sands

- ▶ State and federal regulators are requiring much more information on refinery crude slates
 - Expect scrutiny to continue in the future



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