

WRAP OGWG: O&G EI PHASE 2 STATUS UPDATE

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OUTLINE

Survey

01

Status, Schedule &
Looking Ahead

02

SURVEY OVERVIEW

See the “Survey Data Collection Synthesis” memorandum for a summary of key survey elements

- Survey will be filled-out in two phases
 - Phase 1: Agencies fill-out survey based on internal data sets
 - Phase 2: Operators fill-out survey
- Individual agencies will be responsible for:
 - Filling-out survey with internal data in survey Phase 1
 - Determining (1) to which operators the survey will be sent and (2) survey components for which the operators will provide data
 - Sending survey to operators and performing operator follow-up (Ramboll staff will be available to answer technical questions)
- Ramboll will provide the following materials to agencies as part of the survey effort
 - Basin-level O&G operator lists to facilitate agency decision-making on which operators to request survey data from
 - Survey instrument

SURVEY CONTENT

Source Category	Survey Data Fields
Upstream Exploration	
Drill Rigs¹	representative engine configuration (number, hours per spud, horsepower), engine age distribution, fleet turnover frequency
Fracing Engines	representative engine configuration (number, hours per spud, horsepower), engine age distribution, fleet turnover frequency
Upstream Production	
Condensate Tanks	tank/separator configuration, VOC flashing emission rate, control type and prevalence, capture efficiency and basis, inspection type and frequency
Oil Tanks	VOC flashing emission rate, control type and prevalence, capture efficiency and basis, inspection type and frequency
Wellhead Engines	Number of engines per well by function (compressor, artificial lift, etc.), representative engine configuration (number, hours per spud, horsepower), fleet turnover frequency
Gas Composition	
Produced Gas	Extended gas composition by spud type and/or well type.
Flash Gas Composition	Extended gas composition by spud type and/or well type; sample method
Point Source Data	
Upstream Sources²	Emissions in point source data format for source categories which are currently included in the emission inventory as nonpoint sources. ³

¹ This category may be dropped if rig information can be obtained from existing databases.

² Agencies, not operators would submit point source data.

³ Detailed information on the requested source types and data formats will be described in the survey.

SURVEY SCHEDULE

Activity	Months																					
	Oct			Nov			Dec			Jan			Feb			Mar			Apr			
Survey distribution (with top operator activity data) to state agencies																						
Agencies fill-out survey based on information from their internal databases																						
Surveys distributed to operators to fill remaining data gaps																						
Operators fill-out surveys																						
Ramboll compiles and analyzes survey data																						
Ramboll delivers survey results memorandum																						
WRAP OGWG members provide comments on survey results memorandum																						
Ramboll incorporates survey results into base year inventory																						
Ramboll delivers draft version 2 base year inventory and report																						
WRAP OGWG provides comments on draft base year inventory (version 2) and report																						
Ramboll delivers final base year inventory (version 2) and report																						

- Project Management Team and Ramboll Collaborative Activity
- State agency / operator activity
- Ramboll Activity

- 1** Survey due back to Ramboll
- 2** Individual agencies determine whether (1) survey is distributed to operators in their jurisdiction and (2) survey information to be requested of operators if the survey is distributed.
- 3** Contract schedule indicates delivery of final report on Feb. 1

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STATUS, SCHEDULE & LOOKING AHEAD

- Status
 - Base year inventory and O&G activity complete¹
- Schedule
 - Longer survey schedule as indicated in slide 5
 - Future year inventory schedule will be affected
- Looking Ahead
 - Focus is on survey in the near-term
 - Survey package distribution at the end of October

¹ Pending confirmation on whether additional rig activity is available

END