

Hatfield-4106: Air quality monitoring on an airshed and site specific basis

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Challenge

Challenge ID:	HCP-4106	Originator:	Onshore: Hatfield
Title:	Air quality monitoring on an airshed and site specific basis.		
Theme:	ON 4.1: Environmental monitoring - Baseline historic mapping of environment and ecosystems		
Consortium Lead:	C-CORE	Interviewed Company:	C-CORE
Geography:	ON.REG.03 - Canada		
Challenge Description			
What is not possible / not adequately addressed at present?			
Monitoring of GHG, particulate matter, and air quality within airsheds to determine regional airshed characteristics and site specific contributions/impacts on the regional airshed (CO ₂ , plumes, NO _x , SO _x).			
What effect does this challenge have on operations?			
Regulatory requirement as part of compliance monitoring. Baseline information is required for environmental impact assessment. Limited spatial extent of air quality information due to logistics constraints and deployment of monitoring stations.			
Thematic information requirements:	Air quality and emissions		
What do you currently do to address this challenge?			
How is this challenge conventionally addressed?			
In-situ monitoring systems and airshed modelling.			
What kind of solutions do you envisage could address this challenge?			
Higher resolution hyperspectral sensors and atmospheric column models. Integration of in-situ and satellite derived information to provide improved monitoring (spatial coverage and accuracy).			
What is your view on the capability of technology to meet this need?			
Are you currently using EO tech? If not, why not?			
Current EO resolutions are in the order of 40km and validated models over areas such as the Canadian Oil Sands have not been developed.			
Challenge Classification			
Impact on Lifecycle (0=none, 4=high):		Climate / Topography / Urgency:	
Pre-license:	2	Climate class:	Mild Mid-Latitude
Exploration:	2	Topographic class:	Not specific
Development:	2	Seasonal variations:	Any season
Production:	4	Impact area:	Environmental
Decommissioning:	0	Technology urgency:	1 - Mid-Term (5-10 years)
Challenge Information Requirements			
Update frequency:	Daily		
Data currently used:	In-situ monitoring and surveys.		
Spatial resolution:	Basin		
Thematic accuracy:	Not specific		
Required formats:	Not Specific		

Timeliness (Vintage):	Within six months
Geographic extents:	Regional
Existing standards:	None

Relevant products

Content by label

There is no content with the specified labels