

Hatfield-3204: Monitor stability of surface reservoirs such as settling ponds

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Challenge

Challenge ID:	HCP-3204	Originator:	Onshore: Hatfield
Title:	Monitor stability of surface reservoirs such as settling ponds.		
Theme:	ON 3.3: Subsidence monitoring – Infrastructure monitoring		
Consortium Lead:	C-CORE	Interviewed Company:	C-CORE
Geography:	ON.REG.03 - Canada		
Challenge Description			
What is not possible / not adequately addressed at present?			
Regulatory requirements to identify seepage from tailings ponds and surface flow - does it reach ground water systems? Need to assess tailings ponds stability and detect seepage areas with hydrology modeling of surface flows and ground water connectivity.			
What effect does this challenge have on operations?			
Environmental consequences due to tailings ponds berm failures and excess seepage flowing into ground water or river/lake systems.			
Thematic information requirements:	Land cover Surface motion (horizontal and vertical) Water quantity Distribution and status of infrastructure		
What do you currently do to address this challenge?			
How is this challenge conventionally addressed?			
Field surveys are typically carried out on site to make assessments.			
What kind of solutions do you envisage could address this challenge?			
Wet area detections that are anomalous to a site based on current climatic conditions.			
What is your view on the capability of technology to meet this need?			
Are you currently using EO tech? If not, why not?			
Have not been using EO - likely very challengeing. Really need detection of fluid flow into ground water.			
Challenge Classification			
Impact on Lifecycle (0=none, 4=high):		Climate / Topography / Urgency:	
Pre-license:	2	Climate class:	Severe Mid-Latitude
Exploration:	1	Topographic class:	Forest / woodland
Development:	1	Seasonal variations:	Any season
Production:	4	Impact area:	Environmental
Decommissioning:	3	Technology urgency:	2 - Short term (2-5 years)
Challenge Information Requirements			
Update frequency:	Quarterly		
Data currently used:	Medium resolution satellite imagery Ground based survey data		
Spatial resolution:	Basin		
Thematic accuracy:	Not specific		

Required formats:	Not Specific
Timeliness (Vintage):	Within a week
Geographic extents:	Regional
Existing standards:	None

Relevant products

Content by label

There is no content with the specified labels