

Form 2

Technology Information	
Area	Collect data necessary to investigate groundwater flow (Point 6.2)
Title	LABORATORY ANALYSIS OF WATER QUALITY (AREVA 6-2-1)
Submitted by	AREVA/CEA
<p>1. Overview of Technologies</p> <p><u>Summary Descriptive</u></p> <p>Assistance from AREVA and CEA's laboratory teams to optimize laboratory analysis protocols, based on methodologies in use in AREVA and CEA's laboratories.</p> <p>AREVA has optimization ideas concerning Tritium analysis. 90Sr analysis may also be optimized, depending on detailed information of water to be further discussed.</p> <p><u>Features & Specifications</u></p> <ul style="list-style-type: none"> • Tritium analysis at la Hague laboratories: analysis protocol may be optimized, using la Hague methodology that seems to be faster <ul style="list-style-type: none"> ○ Duration: about 5 hours required for analysis ○ Detection limit: 60 Bq/L ○ Sample size: 20~50 mL ○ Analysis based on liquid scintillation • 90Sr analysis at la Hague laboratories: 90Sr analysis may be slightly optimized, especially the step where 90Sr is separated from other radionuclides. Other steps may be optimized, provided that our experts need to study more detailed information about the effluents. <p><u>Advantages of our Technology</u></p> <ul style="list-style-type: none"> • Faster and more precise analysis protocol in the conditions explained in the RFI <p><u>Owner</u></p> <p>AREVA and CEA laboratories</p>	

2. Notes

Technology readiness level

La Hague laboratories

La Hague laboratories carry out over 70,000 analyses per year

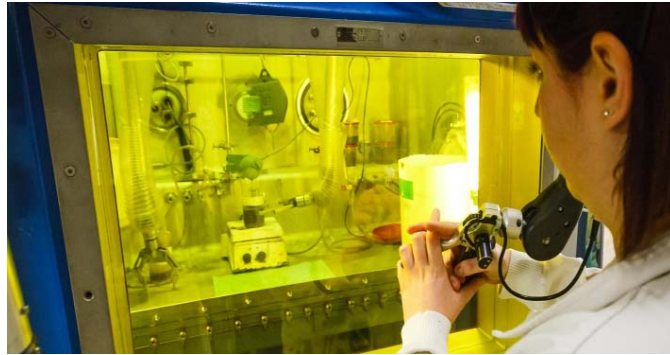
Technical expertise is based around:

- The physico-chemical analyses of elements present as trace elements (tritium, carbon 14, iodine 129, strontium 90, cesium 137, etc)
- Physical analyses carried out by alpha, beta counting and gamma spectrometry on environmental samples.



CEA/AREVA NUCLAB laboratories

- Location: Marcoule, France
- Operated in partnership by CEA and AREVA
- Description: Nuclab is a laboratory specialized in nuclear chemical, radiochemical and physical characterization of contaminated and/or irradiating samples, and in waste treatment. It is licensed to receive most of the materials arising from the nuclear industry.
 - Chemical and radiological inventories at the outset of the project
 - Analytical support throughout the operations
 - Characterization for waste disposal



Challenges

Exchange and study further detailed information about effluents.

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