

AREA 6 – CANBERRA SOLUTION 2
MEASURING TECHNIQUES FOR TRITIUM AND STRONTIUM ANALYSIS

FORM 2

(to be reported to Committee on Countermeasures for Contaminated Water Treatment and to be disclosed to public)

Technology Information													
Area	<p>6 Understanding the groundwater flow</p> <p>6.1 Simple measuring techniques besides the boring system</p> <p>6.2 Analyzing radioactivity material density (tritium and strontium) within a couple of hours</p>												
Title	Measuring Techniques for tritium and strontium analysis												
Submitted by	CANBERRA												
<p>Overview of Technologies (features, specification, functions, owners, etc.)</p> <p><u>Overview:</u></p> <p>We propose the adoption of standard instrumentation and common methods to greatly reduce the time from sample receipt to result.</p> <p>Elapsed Time for results:</p> <table border="1"> <thead> <tr> <th>Sample</th> <th>Current method</th> <th>Proposed method.</th> </tr> </thead> <tbody> <tr> <td>Total Beta</td> <td>1.5 hours</td> <td>20 minutes</td> </tr> <tr> <td>Tritium</td> <td>27 hours</td> <td>40 minutes</td> </tr> <tr> <td>Sr90</td> <td>4-24 days</td> <td>1 day</td> </tr> </tbody> </table> <p>Note: More detailed description are available in Private appendix (Not to be disclosed to Public)</p>		Sample	Current method	Proposed method.	Total Beta	1.5 hours	20 minutes	Tritium	27 hours	40 minutes	Sr90	4-24 days	1 day
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<p>2. Notes (Please provide following information if possible.)</p> <p>Notes (Please provide following information if possible.)</p> <p>Technology readiness level (including cases of application, not limited to nuclear industry, time line for application)</p> <p>The instruments are standard commercially available instruments.</p> <p>The methods are standard methods, or commonly used methods.</p> <p>Challenges</p> <p>Whatever regulatory hurdles there might exist in Japan for something new like this.</p> <p>We propose to work with either commercial or university laboratories to test and submit adequate validation of these methods.</p>													