

**Guidelines for applying to the “Project of Decommissioning and Contaminated Water Management  
(Development of Analysis and Estimation Technology for Characterization of Fuel Debris (Development of Technologies for Enhanced  
Analysis Accuracy, Thermal Behavior Estimation, and Abbreviated Analysis))”**

**Comparison Table**

Rev.	Date	Item	Page	Line	Old version	New version
1	Mar. 29	Subsidized Project Name 8. Application Procedure Form 1 Form 3 Form 4 Form 5	1 16 24 36 38 39	4 21 5 4 2 3	Development of Technologies for Enhanced Analysis Accuracy, Thermal Behavior Estimation, and <u>Simplified</u> Analysis	Development of Technologies for Enhanced Analysis Accuracy, Thermal Behavior Estimation, and <u>Abbreviated</u> Analysis
	Mar. 29	2. Contents of Project	2	29	their chemical stability varies depending on whether they are part of the chemical forms of UO <sub>2</sub> and Zr, U and ZrO <sub>2</sub> , or (U, Zr) O <sub>2</sub> .	their chemical stability varies depending on whether they are part of the chemical forms of UO <sub>2</sub> and Zr, U and ZrO <sub>2</sub> , or (U <sub>0.5</sub> , Zr <sub>0.5</sub> ) O <sub>2</sub> , U <sub>0.5</sub> and Zr <sub>0.5</sub>
	Mar. 29	2. Contents of Project	2	37	the calorific value in the reactor will decrease as the fuel debris <u>removal</u> work progresses in the future.	the calorific value in the reactor will decrease as the fuel debris <u>retrieval</u> work progresses in the future.
	Mar. 29	2. Contents of Project	3	7	the accumulation and treatment of contaminated water and the confinement function of the <u>reactor</u> <u>containment vessel</u> (hereinafter referred to as "PCV"), etc.	the accumulation and treatment of contaminated water and the confinement function of the <u>Primary</u> <u>Containment Vessel</u> (hereinafter referred to as "PCV"), etc.
	Mar. 29	2. Contents of Project	3	8 - 9	<u>Detailed</u> investigations inside the PCV so far <u>have confirmed</u> the presence of deposits that appear to be fuel debris on existing structures such as guide pipes and gratings	<u>In detailed</u> investigations inside the PCV so far the presence of deposits that appear to be fuel debris has been observed on existing structures such as guide pipes and <u>steel</u> gratings.
	Mar. 29	2. Contents of Project	3	11	it is necessary to cut it many times to reduce its size before containing in a storage container adopting <u>form</u> <u>management</u> as one of the measures of criticality prevention.	it is necessary to cut it many times to reduce its size before containing in a storage container adopting <u>shape</u> <u>control</u> as one of the measures of criticality prevention.
	Mar. 29	2. Contents of Project	3	13 - 14	In addition to <u>the large mass of</u> the transport container with sufficient shielding thickness,	In addition, since the transport container with sufficient shielding thickness <u>has the large mass</u> ,
	Mar. 29	2. Contents of Project	3	15	each process requires a lot of labor and time such as curing work for <u>pollution</u> prevention, <u>pollution</u> inspection and decontamination work, etc.	each process requires a lot of labor and time such as curing work for <u>contamination</u> prevention, <u>contamination</u> inspection and decontamination work, etc.
	Mar. 29	2. Contents of Project	3	19	By developing a <u>simple</u> analysis technology that can quickly confirm or evaluate the presence or absence of fuel components adhering to or penetrating into existing structures,	By developing an <u>abbreviated</u> analysis technology that can quickly confirm or evaluate the presence or absence of fuel components adhering to or penetrating into existing structures,
	Mar. 29	2. Contents of Project	4	2	<a href="https://dccc-program.jp/3330">https://dccc-program.jp/3330</a>	<a href="https://en.dccc-program.jp/3065">https://en.dccc-program.jp/3065</a>
	Mar. 29	2. Contents of Project	4	4	<a href="https://dccc-program.jp/category/result">https://dccc-program.jp/category/result</a>	<a href="https://en.dccc-program.jp/category/result">https://en.dccc-program.jp/category/result</a>
	Mar. 29	2. Contents of Project	4	13	Amorphous, not a crystalline structure, would not create a <u>unique</u> peak in the measured <u>waveform</u> .	Amorphous, not a crystalline structure, would not create a <u>characteristic</u> peak in the measured <u>spectrum</u> .

Mar. 29	2. Contents of Project	4	13 - 15	<u>Considering that these obstructive factors make fuel debris analysis more difficult, it shall be analyzed with multiple analytical institutions by producing and using simulated fuel debris containing multiple microstructures.</u>	<u>Based on the fact that fuel debris analysis becomes more difficult due to these obstacles, simulated fuel debris containing multiple microstructures shall be manufactured and analysis in multiple analytical institutions shall be conducted using the simulated fuel debris.</u>
Mar. 29	2. Contents of Project	4	20	In the <u>production</u> of simulated fuel debris,	In the <u>manufacturing</u> of simulated fuel debris,
Mar. 29	2. Contents of Project	4	29	The analysis then <u>conducted</u> shall be focused on the identification of microstructures.	The analysis then shall be focused on the identification of microstructures.
Mar. 29	2. Contents of Project	4	32 - 35	<u>the participating institutions may have different licenses of hot laboratory facilities and it may not be allowed to handle (analyze, observe, and measure) simulated fuel debris containing unirradiated uranium in the equipment where the actual fuel debris would be treated.</u>	<u>because the participating institutions may have different licenses of hot facilities, simulated fuel debris containing unirradiated uranium cannot be handled (analyze, observe, and measure) in the equipment that handles actual fuel debris.</u>
Mar. 29	2. Contents of Project	6	4	investigation and evaluation shall be carried out on temperature distribution with no water injection <u>or</u> intermittent water injection,	investigation and evaluation shall be carried out on temperature distribution with no water injection <u>and/or</u> intermittent water injection,
Mar. 29	2. Contents of Project	6	25	Technology Development for <u>Simple (on-the-spot) Analysis</u>	Technology Development for <u>Abbreviated (in-situ) Analysis</u>
Mar. 29	2. Contents of Project	6	28	Therefore, technology is required that can detect containing uranium or nuclear fuel easily or promptly at the work site ( <u>on the spot</u> ).	Therefore, technology is required that can detect containing uranium or nuclear fuel easily or promptly at the work site ( <u>in-situ</u> ).
Mar. 29	2. Contents of Project	7	1	It shall be investigated analysis and measurement methods that are effective for <u>simple (on-the-spot)</u> analysis and shall be sorted out their strengths and weaknesses.	It shall be investigated analysis and measurement methods that are effective for <u>abbreviated (in-situ)</u> analysis and shall be sorted out their strengths and weaknesses.
Mar. 29	2. Contents of Project	7	3 - 4	Furthermore, regarding the investigated analysis and measurement method for <u>simple (on-the-spot)</u> analysis, it shall be investigated on effective test methods, development items and evaluation items, etc. for <u>on-site</u> application.	Furthermore, regarding the investigated analysis and measurement method for <u>abbreviated (in-situ)</u> analysis, it shall be investigated on effective test methods, development items and evaluation items, etc. for <u>in-situ</u> application.
Mar. 29	2. Contents of Project	7	9	it is necessary to actually conduct measurements using uranium and to verify the effectiveness of <u>a method</u> .	it is necessary to actually conduct measurements using uranium and to verify the effectiveness of <u>the methods</u> .
Mar. 29	2. Contents of Project	7	10	Verification plan shall be formulated for the uranium content, characteristics, <u>production</u> method, measurement location, etc.	Verification plan shall be formulated for the uranium content, characteristics, <u>manufacturing</u> method, measurement location, etc.