

(Unofficial Translation)

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))”

Date: March 24, 2021

Management Office for the Project of Decommissioning
and Contaminated Water Management

The Management Office for the Project of Decommissioning and Contaminated Water Management (hereinafter referred to as “PMO”) solicits entities to implement subsidies for the “Subsidized 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))”. Details of the project are stipulated in this Guidelines; furthermore, the procedures for implementation of the project are stipulated in the “Grant Policy for Subsidy for the Project of Decommissioning and Contaminated Water Management”.

1. Purpose of Project

This project aims to support development of technologies contributing to decommissioning and contaminated water management of the Fukushima Daiichi Nuclear Power Station (hereinafter referred to as “Fukushima Daiichi NPS”) of the Tokyo Electric Power Company Holdings, Incorporated (hereinafter referred to as “TEPCO”) based upon the “Mid-and-Long-Term Roadmap” towards the Decommissioning of Fukushima Daiichi Nuclear Power Station of Tokyo Electric Power Company Holdings, Incorporated” (hereinafter referred to as “Mid-and-Long-Term Roadmap”) and “The Decommissioning Research and Development Plan for FY 2021” (The 86th meeting of Secretariat of the Team for Decommissioning and Contaminated Water Countermeasures / PMO), so that the decommissioning and contaminated water management of Fukushima Daiichi NPS can be implemented smoothly, and that may lead to the improvement of Japan’s science and technology standards.

Please note that this project is implemented under the engineering and project administration activities performed by TEPCO in Fukushima Daiichi NPS, and the results obtained from this project will be utilized for the engineering activities conducted by TEPCO.

2. Contents of Project

In order to obtain useful information on each process (fuel debris retrieval, containment/transportation/storage, waste management, etc.) of decommissioning the Fukushima Daiichi NPS, it is important to develop technology to analyze and estimate the properties of fuel debris. However, many difficulties are anticipated in analyzing and estimating the properties of fuel debris, which has many unexplained factors in the chemical composition and formation process, etc. If technologies are developed for a method to reduce obstacles to analysis, a method to evaluate the balance between heat from fuel debris and cooling and a method to easily detect specific items in fuel debris, reduced uncertainty, advanced safety assessments, and faster retrieval operations in fuel debris retrieval process could be achieved by each respective technology.

The accident at the Fukushima Daiichi NPS is the world's first core melting accident in Boiling Water Reactor (hereinafter referred to as "BWR"). In addition to fuel assemblies and control rods, the core support plate, core shroud and other internal structures are installed within Reactor Pressure Vessel (hereinafter referred to as "RPV") of BWR. Multiple fuel assemblies with different burning times are loaded, and the amount of uranium and fission products in the fuel assemblies varies from fuel assembly to fuel assembly. Uranium is sealed inside the fuel cladding tube as pellets of uranium dioxide (UO_2), but zirconium (Zr) used as the fuel cladding tube reacts with high-temperature water vapor to become zirconium oxide (ZrO_2). Zirconium oxide has high mechanical and chemical stability and has high affinity for UO_2 used as a fuel, and when the core melts, it produces U-Zr-O compounds. Structures and properties of U-Zr-O compounds broadly change from cubic crystals close to UO_2 to tetragonal or orthorhombic crystals close to ZrO_2 , depending on the content of U and Zr contained therein. Furthermore, fuel debris contains many elements such as boron carbide used as neutron absorber, iron, chromium and nickel contained in stainless steel and silicon and calcium contained in concrete. The mechanical properties and chemical stability of fuel debris change by many of these elements taking various forms such as dissolving and precipitating in the fuel debris, or encapsulated or dispersed in the matrix as impurities. Even if the chemical composition of fuel debris is known by chemical analysis, there is not enough information available to estimate all properties they may show. For example, even if chemical analysis reveals that the atomic ratio in the U-Zr-O system is U : Zr : O = 1 : 1 : 2, their chemical stability varies depending on whether they are part of the chemical forms of UO_2 and Zr, U and ZrO_2 , or $(\text{U}_{0.5}, \text{Zr}_{0.5})\text{O}_2$, $\text{U}_{0.5}$ and $\text{Zr}_{0.5}$. Thus, in order to evaluate the processability of fuel debris during retrieval and the chemical stability during storage, it is important to identify the chemical form and microstructure that make up the fuel debris and estimate its properties. In addition, analyzing the microstructure of fuel debris could lead to the estimation of the temperature history at the time of the accident, the estimation of the accident progress process and the estimation of the distribution state of fuel debris, which are effective for decommissioning the accident reactor.

As of February 2021, tests have been conducted at Units 1 to 3 to stop water injection into the reactor. Since decay heat is generated from Fission Products (hereinafter referred to as "FP") contained in fuel debris, the calorific value in the reactor will decrease as the fuel debris retrieval work progresses in the future. As the amount of heat generated decreases, it becomes possible to perform

various types of cooling such as reduction in the amount of water injection, intermittent injection water and air cooling. On the other hand, there are uncertainties such as the fact that the internal investigation of the RPV has not been carried out. In order to avoid an unexpected situation due to a decrease in the amount of water injection, it is important to investigate and evaluate in advance an optimal cooling method suitable for the distribution of fuel debris and FP, the progress of fuel debris retrieval work, the accumulation and treatment of contaminated water and the confinement function of the Primary Containment Vessel (hereinafter referred to as "PCV"), etc.

In detailed 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 steel gratings. When retrieving fuel debris, it is necessary to cut it many times to reduce its size before containing in a storage container adopting shape control as one of the measures of criticality prevention. Currently, fuel debris samples must be transported to hot laboratory facilities with shielding and confinement functions in order to analyze these deposits for any inclusion of uranium. In addition since the transport container with sufficient shielding thickness has the large mass, each process requires a lot of labor and time such as curing work for contamination prevention, contamination inspection and decontamination work, etc. On the other hand, these deposits may be molten substances such as signal cable coverings. If it is easily found that unidentified deposits do not contain uranium or that the uranium concentration is extremely low, the size of the storage container can be increased, and the number of cuttings can be reduced. By developing an abbreviated analysis technology that can quickly confirm or evaluate the presence or absence of fuel components adhering to or penetrating into existing structures, it could shorten each process that leads to analysis in a hot laboratory facility and also be effective for saving labor in and shortening the decommissioning process.

Therefore, the technology development shown in (1), (2) and (3) below shall be conducted.

The outcomes of (1), (2) and (3) shall be provided via PMO to the Subsidized Project Operating Entity who has conducted the separate project "Development of Analysis and Estimation Technology for Characterization of Fuel Debris" (FY2021/FY2022).

Partial proposals are allowed for any of (1), (2) and (3).

* When preparing a proposal for this project, the results of the project "Development of Analysis and Estimation Technology for Characterization of Fuel Debris" (FY2019/FY2020) shall be considered. After grant decision, this project shall be proceeded confirming the contents of the FY2020 results of the preceding projects "Development of Analysis and Estimation Technology for Characterization of Fuel Debris"(FY2019/FY2020) and "Development of Analysis and Estimation Technology for Characterization of Fuel Debris (Development of Technologies for Enhanced Analytic accuracy and Thermal Behavior Estimation of Fuel Debris)"(FY2020) when those results are made public. Please refer to the website below.

<Link to the project results HP for "Development of Analysis and Estimation Technology for

Characterization of Fuel Debris”(FY2019/FY2020)>

<https://en.dccc-program.jp/3065>

< Link to the subsidized project results HP>

<https://en.dccc-program.jp/category/result>

(1) Technology Development to Improve Analytic Accuracy

In the analysis of chemical forms and microstructures, it is important to make multiple observations and analyzes, including observation of metallographic structure by optical microscope, X-ray diffraction, element mapping during scanning electron microscope observation and structural analysis by transmission electron microscope observation, and based on the results of such observation and analysis, to make a comprehensive judgment. In the identification of the chemical form based on the crystal lattice data, the interstitial distance changes due to solid solution of other elements in the matrix phase. Amorphous, not a crystalline structure, would not create a characteristic peak in the measured spectrum. 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. After that, the analytical institutions get together to share the analysis results, etc. Through this activity, it shall be clarified the differences and the causes, in the analysis and evaluation results by those analytical institutions and shall be developed methods for identifying microstructures with higher accuracy and for estimating their characteristics.

- In the manufacturing of simulated fuel debris, a method shall be adopted that can generate multiple microstructures without uneven distribution of specific microstructures. The simulated fuel debris shall contain uranium, which is fuel component, and zirconium, which is cladding component. It shall be investigated the addition of boron carbide, which is neutron absorber component and stainless steel and concrete, which are structural material components when formulating an analysis and evaluation plan.
- In the future, to verify the process to be followed when fuel debris taken out at the Fukushima Daiichi NPS is brought in, it shall be investigated the details of the analytical process by analyzing fuel debris containing uranium in hot equipment where the actual fuel debris would be treated. The analysis then shall be focused on the identification of microstructures. The detailed conditions related to tissue observation, measuring instruments, devices and pretreatment process shall be investigated when formulating an analysis and evaluation plan. However, 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. In that case, it shall be investigated (i) a method for analyzing simulated fuel debris containing uranium and (ii) a method for verifying the test run process before the introduction of radioactive materials into the hot cell, when formulating an analysis and evaluation plan.

(2) Technology Development to Estimate Fuel Debris Thermal Behavior

Technology development shall be implemented for more precisely estimating the thermal behavior of fuel debris in the PCV of the Fukushima Daiichi NPS. In order to verify the developed technology and confirm its validity, it shall be calculated and evaluated the heat generation behavior and cooling state that simulate the inside of the PCV of Fukushima Daiichi NPS Unit 2. This is because the internal situation of the PCV of Unit 2 has been grasped so far mostly among the Units by detailed investigations inside the PCV and it is easy to compare the calculation result with the actual situation. The internal structure of the PCV of Unit 2 shall be constructed three-dimensionally. Furthermore, calculation and evaluation could be conducted based on the following conditions.

- The distribution of FP, which is the main source of calorific value of fuel debris, shall be made consistent with the three-dimensional dose distribution (*1) in the PCV, of the Japan Atomic Energy Agency (hereinafter referred to as "JAEA"). The calorific value of fuel debris shall be made consistent with the decay heat of the inventory in JAEA-Data/Code 2012-018: "Fuel Composition Evaluation of Fukushima Daiichi Nuclear Power Station" (*2).
- The fuel debris distribution after estimated in another project "Upgrading Level of Grasping State inside Reactor" (*3) shall be made consistent with the data from the project "Estimation Map of Debris Distribution and the Status of RPV and PCV in Unit 2" of TEPCO. However, in anticipation of renewal of detailed evaluation of distribution amounts, a configuration shall be applied that could be consistent with the renewed data.
- Since the natural convection of gas and liquid is thought to be generated inside the PCV due to heat generation, heat dissipation by natural convection shall be applied to the evaluation system.
- The size and structure of RPV and PCV shall be made consistent with TEPCO's evaluation report titled "The Core Condition of Fukushima Daiichi Nuclear Power Station Units 1 to 3" (*4)" and a reference material in public solicitation documents concerning an alternative method for retrieving fuel debris (*5) from the International Research Institute for Nuclear Decommissioning.
- In the 3D PCV structure of Unit 2, there shall be set two water injection systems of the FDW and the CS, one nitrogen filling system from the upper part of RPV and one exhaust system via the gas management system.
- For unorganized data such as the correlation between the porosity of a substance and the thermophysical properties, measurements shall be performed by changing the porosity of the substance and the data shall be collected. Based on the measured data, the correlation between the porosity and the thermophysical properties shall be obtained and applied to the evaluation.
- For confirming validity of the case applying each of the above conditions, the temperature data and the water injection data (*6) from Unit 2, which has been recorded continuously for about 10 years after the accident shall be collated and the past temperature history shall be reproduced. Although to improve calculation accuracy, the calculation time is assumed to be longer, it shall be investigated and improved for shortening calculation time without sacrificing the calculation

accuracy. Once a past temperature history is reproduced, investigation and evaluation shall be carried out on temperature distribution with no water injection and/or intermittent water injection, a heat generation-cooling balance in an air-cooled state and time required for stable cooling when water is re-injected after the air-cooled state, etc.

- *1: Okumura et al. "Technical development related to plant dose distribution and underwater debris search for decommissioning of Fukushima Daiichi Nuclear Power Station: (8) Prediction of 3D dose distribution in containment vessel", Atomic Energy Society of Japan, 2018 Autumn Convention, 3A01.
- *2: Nishihara et al., JAEA-Data/Code 2012-018 "Fuel Composition Evaluation of Fukushima Daiichi Nuclear Power Station", Japan Atomic Energy Agency
<https://jopss.jaea.go.jp/search/servlet/search?5036485>
- *3: FY2017 results of the project "Upgrading Level of Grasping State inside Reactor" (FY2016/FY2017)
<https://dccc-program.jp/866>
- *4: TEPCO, " Core Status of Fukushima Daiichi Nuclear Power Station Units 1-3", November 30, 2011
http://www.tepco.co.jp/nu/fukushima-np/images/handouts_111130_09-j.pdf
- *5: International Research Institute for Nuclear Decommissioning, "Fukushima Daiichi Nuclear Power Station Basic Data (Structure and Dimensions of Reactor Building, PCV and RPV)"
http://irid.or.jp/debris/Reference_J.pdf
- *6: Plant-related Parameters on the TEPCO HP
https://www.tepco.co.jp/decommission/data/plant_data/

(3) Technology Development for Abbreviated (in-situ) Analysis

Shape control of the storage container is one of the criticality preventions measures. Therefore, technology is required that can detect containing uranium or nuclear fuel easily or promptly at the work site (in-situ). The development of a new analysis method requires a long period of time and a large amount of resources. Therefore, focusing on analytical technologies for which some basis and fundamental technology has been established, technology development shall be implemented for applying them to the Fukushima Daiichi NPS.

- Determining the presence or absence of uranium in an object by qualitative analysis must be a top priority. If possible, it is desirable to enable to quantify the uranium content. Simultaneously, it is necessary to consider the conditions such as no complex pretreatment required, prevention of expansion of contamination and radiation exposure by measurement, avoidance of large amounts of waste generation during measurement. It shall be investigated analysis and measurement methods that are effective for abbreviated (in-situ) analysis and shall be sorted out their strengths and weaknesses. Furthermore, regarding the investigated analysis and measurement method for

abbreviated (in-situ) analysis, it shall be investigated on effective test methods, development items and evaluation items, etc. for in-situ application. If too many analysis and measurement methods could be candidates, it shall be narrowed down to three or four methods to be judged as highly feasible during the investigation. These investigations shall be conducted with reference to the opinions of experts or third-party organizations.

- With the top priority set on determining the presence or absence of uranium, it is necessary to actually conduct measurements using uranium and to verify the effectiveness of the methods. Verification plan shall be formulated for the uranium content, characteristics, manufacturing method, measurement location, etc. of the samples used for measurement. Since uranium is used, the verification shall be performed in radiation controlled area (hereinafter referred to as "Controlled Area"). Depending on the measurement method, investigation shall be made to determine the necessity for a change to the license for using Controlled Area, and that change shall be included as necessary in the plan. If any development items, evaluation items, etc. do not require a change to the license for using Controlled Area, the verification shall be performed in advance.

In (1) and (3) above, there are many detailed items to be investigated for implementation. Therefore, when the plan is formulated, it shall be scrutinized by the relevant parties (Ministry of Economy, Trade and Industry and TEPCO) and the Nuclear Damage Compensation and Decommissioning Facilitation Corporation through PMO, before proceeding to the next step. The project shall be proceeded taking into consideration the latest site information and the results of detailed internal investigations, etc. Regarding the fuel debris trial retrieval device and the fuel debris to be retrieved for the first time, the project shall be proceeded through the sufficient coordination and cooperation with the relevant parties and the coordination with the separate project "Development of Technologies for Fuel Debris Retrieval Gradually Expanded Its Scale".

3. Operation of research and development

(1) Gathering domestic and overseas wisdom

Projects must be conducted by utilizing domestic and overseas wisdom. In particular, they must consider mobilizing necessary technologies and knowledge both from Japan and overseas broadly. In case of development of machines and equipment, establishment of common basis of the machines and equipment (utilization of widely used goods and goods which have already been developed, etc.) must be taken into account as much as possible in order to promote reasonable development. Furthermore, in the development of evaluation method, it is important to be validated and reviewed objectively by third parties such as academic societies, etc. Hence, such validation and review must distinctively be placed in the development plan or be set as a milestone.

In implementing the project by introducing domestic and foreign technologies and knowledge,

if necessary, the external organization shall be chosen through a public bid such as a general competitive bidding in a timely manner; and in order to ensure transparency and fulfill accountability, the information on the public bid must be published on the website and the link to the information must appear the PMO's webpage, with the intention to disseminate it widely.

(2) Establishing Decommissioning Industrial Cluster to Fukushima and Innovation Coast Framework Realization

It shall be considered to work with companies, which run business in Hamadori area and other region*, in an aim to promote local companies engaged in decommissioning related industry and establish decommissioning industrial cluster to Fukushima.

It shall be also considered to use decommissioning related facilities (e.g. Naraha Center for Remote Control Technology Development (mock-up testing facility)), which play a role in Fukushima Innovation Coast Framework.

*Area

Iwaki city, Soma city, Tamura city, Minami Soma city, Kawamata town, Hirono town, Naraha town, Tomioka town, Kawauchi village, Okuma town, Futaba town, Namie town, Katsurao village, Shinchi town, Iitate village

(3) Human resource development for medium and long-term

Efforts need to be made to strengthen the relationship with universities, research organizations, etc. through implementing joint research, etc. from the viewpoint of human resource development in the middle and long-term.

(4) Clarification of tests conditions and specifications for development

Consideration of requirement level necessary for implementing decommissioning activities must be done before commencement of elements tests and equipment design; furthermore, evaluation of to what extent existing technologies can be utilized must be done as quantitatively as possible. Based upon these, information on the target of the degree of the tests and equipment development compared to the requirement level must be shared with concerned parties, and the test conditions and design specifications must be established.

(5) Definition of criterion for judgment of degree of objective achievement

Comprehensible criteria which can be a measure for the judgment of objective achievement of the project must be defined using numerical values, etc. (Refer to Table 1); and they must be validated whether or not the objective will have been achieved at the completion of the project.

Table 1 Definition of Technology Readiness Level (TRL)

Level	Definition corresponding to this project	Phase
7	At the stage of completion of practical utilization	Practical use
6	At the stage of being demonstrated in the field	Field demonstration
5	At the stage of production of prototype with the scale of practical use, and demonstration in a simulated environment such as in a factory, etc.	Demonstration of simulation
4	At the stage of implementation of function tests at the level of trial production as a process of development and engineering	Research for practical use
3	At the stage of proceeding with development or engineering using application or combination of existing experiences. Or at the stage of proceeding with development or engineering based upon elementary data in the area with lack of existing experiences.	Application research
2	At the stage of proceeding with development or engineering in the area nearly without applicable existing experiences, and with setting up the specifications.	Application research
1	At the stage of clarifying elementary contents regarding development or engineering.	Elementary research

(6) Cooperation with decommissioning activities and associated research and development projects

Clarify how the results obtained could contribute to the decommissioning activities and associated research and development projects, and positive cooperation and collaboration with the associated research & development projects shall be conducted. For this purpose, it is necessary to share harmonized input /output information among the associated research and development projects. In order to realize this information sharing, coordination among the entities involved must be done using Form 4 at the commencement of the project and other suitable timings; and it must also be regularly shared with and confirmed by PMO and other concerned entities. Furthermore, the information on implementation of the project (such as progress situation, acquired data, challenges, etc.) must be shared with and offered to PMO and the concerned entities in a timely and appropriate manner. Also, Non-Disclosure Agreement must be concluded among the Subsidized Project Operating Entities, the associated research & development project entities and PMO, if necessary. PMO will conduct the necessary coordination.

(7) Research management

The project must be proceeded with bearing in mind that the achievement goals of the project (such as the contents of outputs, target schedule, etc.) were established so as to achieve high-rank goals of this project.

Furthermore, it is necessary to create a flexible implementation organization that can reflect the following matters to the project, because understanding about the situation of the inside of PCV and necessary R&D to retrieve fuel debris is still limited, and a great deal of uncertainties remain in respect of the preconditions for research development.

[1] Discussions about the Mid-and-Long-Term Roadmap, discussions at meetings of the Secretariat of the Team for Decommissioning and Contaminated Water Countermeasures, and instructions and advices given by the Agency for Natural Resources and Energy, and so forth.

[2] Discussions concerning the “Technical Strategic Plan for Decommissioning of the Fukushima Daiichi Nuclear Power Station of Tokyo Electric Power Company Holdings, Inc.”, discussions at meetings held by and instructions and advice given by Nuclear Damage Compensation and Decommissioning Facilitation Corporation, and so forth.

[3] Progress management, instructions and advices given by PMO in which Nuclear Damage Compensation and Decommissioning Facilitation Corporation have joined.

In particular, in order to achieve the project outcome targets, it is important to promptly understand and reflect the current status of Fukushima Daiichi NPS, the progress of TEPCO’s engineering, internal investigation, R&D, on-site working environment improvement such as dose reduction, lowering water level, space availability, etc. It is also important to check whether the prerequisites of the project are satisfied not only at the early stage of the project but also at any time to during the project from the viewpoint of on-site applicability, and to take measures promptly if any issues are found.

Therefore, under the project management of TEPCO, it is required to establish organization to conduct R&D. When grant application, application shall be made jointly with TEPCO. However, TEPCO does not claim for any expenses for this project. When working at Fukushima Daiichi NPS, etc. for on-site investigation and demonstration test and so on, sufficient coordination shall be made beforehand with TEPCO, management system shall be constructed with understanding the compliance issues and precautions, etc., and appropriate security measures shall be taken.

(8) Progress report

The entity is required to report implementation plan, progress situation, project results, etc. to PMO on request. Especially, the implementation situation must be reported at the end of every month by using the implementation schedule as described in Reference Document 2, etc., and at the time when PMO request, and after completion of the project, results report must be established and submitted.

Please be noticed that PMO is entitled to share the submitted information with the concerned organizations on the basis of “5. Implementing Scheme” with due considerations to the non-disclosure information stipulated by Act on Access to Information Held by Administrative Organs (Act No. 42 of May 14, 1999).

(9) Enhancement of outreach

Comprehensible explanation to the public regarding the project contents and results is indispensable. The entity is also required to actively cooperate with the government and the concerned organizations for dissemination of information. In addition, any results of the project,

which could be made public, should be disclosed as soon as possible after its completion.

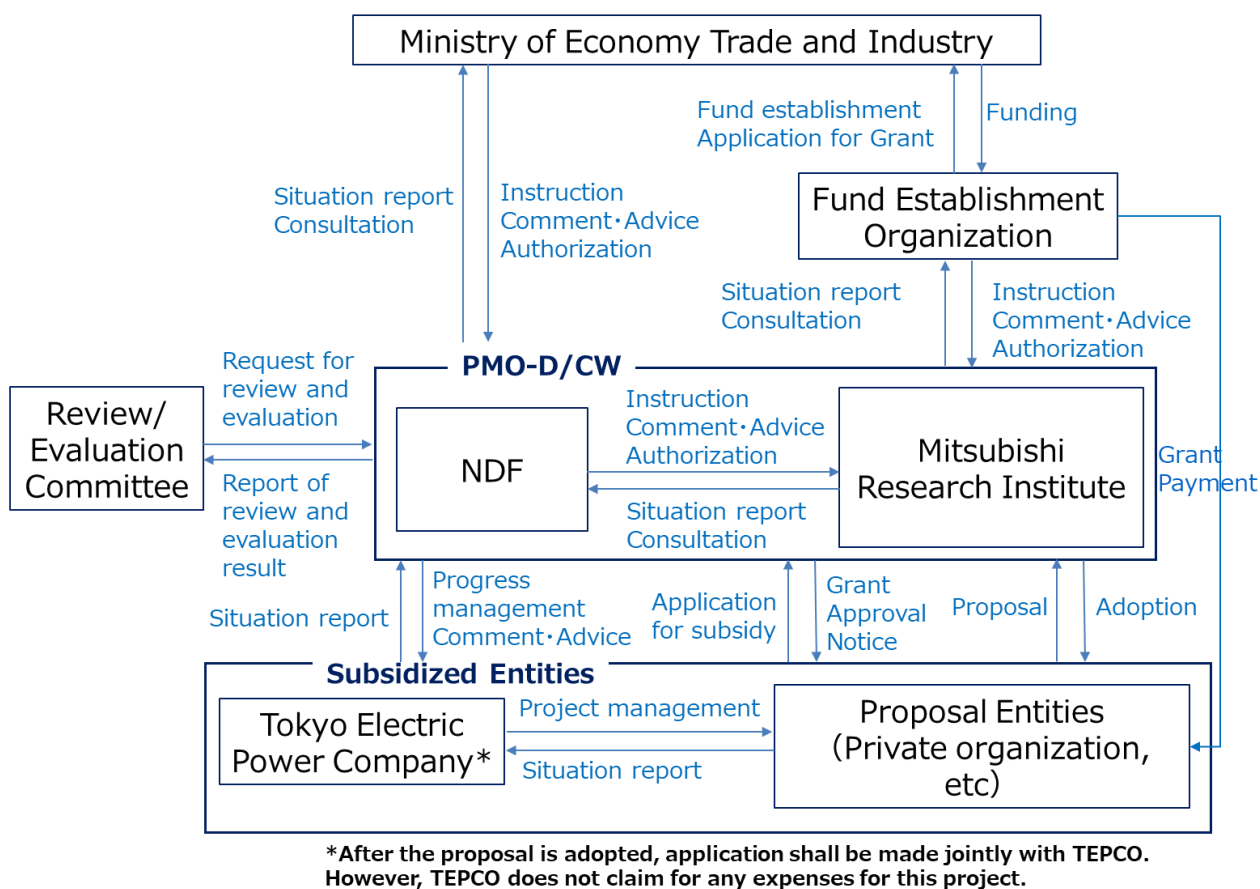
(10) Preparation of other options

Alternative options must be prepared for the case that the project cannot be proceeded with as planned during the project term. If the alternative options are prepared or revised, the information must be notified to PMO.

4. Project Term

- From the effective day (of the grant) to March 31, 2023

5. Implementing Scheme



6. Application Requirements

The private companies, etc. satisfying all of requirements (1) to (9) shown below are qualified to apply for the subsidies. Applications from consortia are also acceptable. In that case, a managing legal entity must be appointed out of each consortium and submit the project proposal. (Please note that no managing legal entity may commission the entire work to another legal entity.)

- (1) Possessing the organization for properly conducting the relevant subsidized project.
- (2) Having the capacity, knowledge and experience required for conducting the relevant subsidized project.
- (3) Having the management foundation required for smoothly conducting the relevant subsidized project and sufficient ability to control the funds and other resources.
- (4) Being able to follow the appropriate accounting procedures in accordance with the “Grant Policy for Subsidy for the Project of Decommissioning and Contaminated Water Management” and the “Subsidized Project Administration Manual (*)”. With regard to overseas entities, as a general rule, being able to prepare the evidenced documents in Japanese or English, and present them in Japanese territory on demand from the PMO.

(*)<https://en.dccc-program.jp/files/20210301man.pdf>

- (5) Not foreseen to be subject to Articles 70 and 71 of the Cabinet Order concerning the Budget, Auditing and Accounting.
- (6) Not fulfilling any of the conditions stipulated in the "Guidelines for the suspension of subsidies controlled by the Ministry of Economy, Trade and Industry and the suspension of designation relating to the contracts". (January 29, 2003, No 1) First column, the second items in Attachment
- (7) The applicant must have a compliance system under a self-regulated structure which meets the "Standards for Exporters, etc. to Meet" provided for in Article 55-10 (1) of the Foreign Exchange and Foreign Trade Act. We will confirm this system using (Form 3) "Response to Security Export Controls" when selecting applicants, so please use this form to fill in the required items and submit the required documents.

[Reference] Standards for Exporters, etc. to Meet

Regulations to be observed by parties engaged in export or provision of technology in the course of trade (exporters).

Exporters that do not handle security-sensitive "specified important goods, etc." have a duty to 1) nominate a person responsible for checking goods, etc., and 2) provide guidance to managers and export workers on compliance. Exporters that do handle security-sensitive "specified important goods, etc." have a duty to 1) identify a representative as the responsible person, 2) set out an export control system, 3) set out a procedure for checking regulated/non-regulated goods, 4) set out a procedure for confirming the usage and consumer, and confirm these in accordance with that procedure, and 5) confirm that the goods to be shipped coincide with the confirmed non-regulated goods at the time of shipping.

- (8) Admitting that the results obtained through this project can be utilized by TEPCO, etc. to leverage them for Decommissioning and Contaminated Water Countermeasures if they request to do so under the condition that each party is in agreement. Not preventing the utilization by behaviors such as not allowing to use the technology intentionally, asking for unreasonable compensation, etc. in spite of receiving the request.
- (9) In order to make sure of the above-mentioned item, preventing a situation where the results from this project are not be able to be utilized for Decommissioning and Contaminated Water Management Countermeasures at the Fukushima Daiichi NPS by ceding the above-mentioned condition in (8) to the successor if the applicant transfers the result to a third party and loses their own right to utilize it accordingly. In the case of a conflict which makes the applicant unable to make sure of the items in (8), the concerned parties must solve it by their own responsibility.

7. Requirement Conditions for Grant Decision

- (1) Number of proposals to be adopted : One proposal
- (2) Subsidy rate and maximum amount of subsidy
The subsidy is fixed in JPY.

Maximum amount (Comprehensive proposal): 550,000,000 JPY

Maximum amount (Partial proposal):

(1) 200,000,000 JPY, (2) 100,000,000 JPY, (3) 250,000,000 JPY

Subsidies are paid in JPY. The contents of the project, amount of the subsidy, etc. will ultimately be settled only after coordination with PMO.

(3) Time of Payment

In principle, the subsidies are paid after the project is completed.

*Please note that cases where the payment (i.e. the payment by estimate) before the completion of the project is permitted are limited.

(4) Confirmation of the amount of payment

The amount to be paid is decided based on the Project Result Report which is submitted by the operating entities after the project is complete as well as the results of the survey at the verification site and/or the office.

The amount to be paid will be the total of the expenses to be covered by the subsidies, which do not exceed the granted subsidy amount. For this reason, the account ledgers, receipts and other documents are necessary for supporting all the expenses. All the expenses will be strictly inspected and evaluated. Thus, the expenses not meeting the conditions mentioned above may be rejected.

(5) Grasp the implementation organization at the time of submitting the Project Result Report

Since the Ministry find necessary to confirm the implementation organization of the project, when submitting the Project Result Report after the project is completed, as expenses are covered by the subsidy in the case of outsourcing or commissioning contract, the Subsidized Entity must attach the implementation organization document (*) describing the name of the contractors (only for transactions of 1 million yen or more including tax), their relationship with the Subsidized Entity, their address, the contract amount and the contract content.

(*) This document is to be confirmed at the inspection.

"travel expenses", "meeting expenses", "gratuities", "equipment expenses (including rent and hire fees)", "assistant personnel costs (including temporary staffing)" are not eligible.

In the case of subcontracting or recommissioning from the contractors (in the case of subcontracting etc., limited to transactions of 1 million yen or more including tax), please describe their information in the implementation organization document same as above (There is no need to describe the contract amount for sub-subcontracting or re-recommissioning).

[Implementation Organization Document Description Template]

In principle, the implementation organization should be presented in the Organization Table as shown below and include the implementation organization chart. There is no prescribed form if the implementation organization, the name of the contractors, their relationship with the Subsidized Entity, their address, the contract amount, and the contract content are clearly

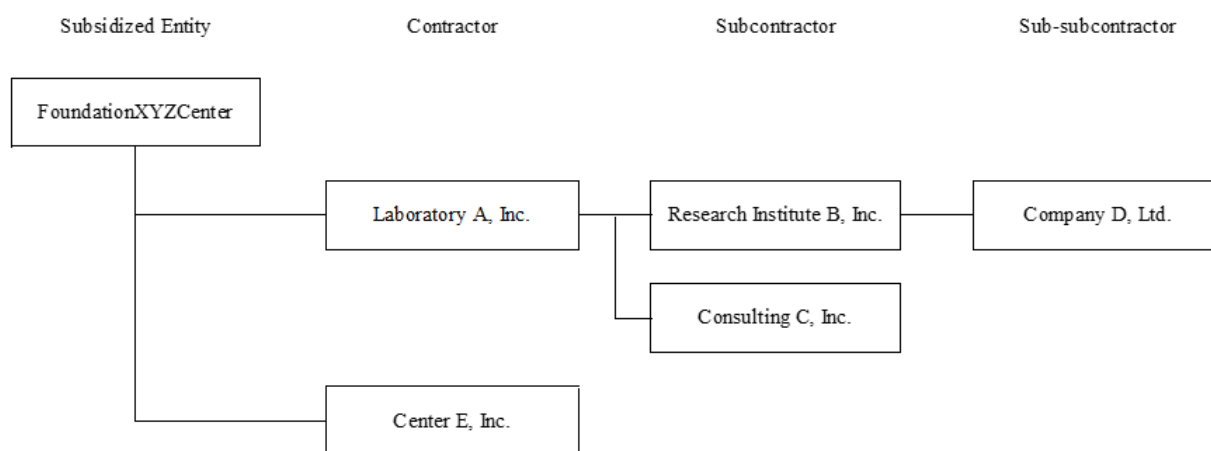
stated on the document.

Implementation Organization Table (limited to contract of work/service agreement of 1 million yen or more including tax)

Name of Outsourcing/Commissioning Company	Relationship with Subsized Entity	Address	Contract amount (with tax)	Contract content
Laboratory A, Inc.	Contractor	XXX-ku, TokyoXXX	*Using Arabic numerals, show amounts in yen value	*Fill in as detail as possible
Research Institute B, Inc.	Subcontractor (Subcontractor of Laboratory A, Inc.)	Refer to the sample above	Refer to the sample above	Refer to the sample above
Consulting C, Inc.	Subcontractor (Subcontractor of Laboratory A, Inc.)	Refer to the sample above	Refer to the sample above	Refer to the sample above
Company D, Ltd.	Sub-subcontractor (Subcontractor of Research Institute B, Inc.)	Refer to the sample above	No need to fill in (*)	Refer to the sample above
Center E, Inc.	Contractor	XXX-ku, TokyoXXX	*Using Arabic numerals, show amounts in yen value	*Fill in as detail as possible

(*) Company D, Ltd. is a sub sub subcontractor from the standpoint of the Subsized Company so there is no need to write the contract amount.

Implementation Organization Chart (limited to contract of work/service agreement of 1 million yen or more including tax)



8. Application Procedure

(1) Application Period

Commencement: Wednesday, March 24, 2021

Deadline: By 10:00 AM local time on Thursday, April 22, 2021

We will not accept any proposals after this deadline.

(2) Information Session

Date and Time: 14:30 – 15:00 on Friday, April 2, 2021

Venue: Web Conference

If you would like to attend the session, please inform the contact point written in “13. Contact” by 12:00 AM local time on Wednesday, March 31, 2021 via email. After that, we are going to inform you of how to access web conference. The session will be held in Japanese. If you need a translator, please make arrangements on your own (You are responsible for the expense). If you need an information session in English, please consult with PMO by the above deadline via email. Please note that there is possibility to limit the number of participants.

When making contact, please title your e-mail “Register for attendance to the information session for ‘Project of Decommissioning and Contaminated Water Management’” and include the “corporate or organization name,” “name of the attendee,” “department,” “phone number,” “e-mail address,” and “subsidized project name to apply” in the main text.

To applicants from the EEA member states:

Private information will be used only in the working related to explanation meetings and will not be distributed to any other organizations. When you have provided us with such information, we assume that we have received it with your clear understanding that you submit it in agreement to the above-said condition.

(3) Application form and other documents to be submitted

[1] Please submit the following documents as one file. Please title your file “Application for the subsidy program ‘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))’”.

- Application form (Form 1)
- Outline of Subsidized Project (Form 2)
- Certificate of Conformance (Form 3)
- Input/ Output information (Form 4)
- Response to Security Export Controls (Form 5)
- Personal Data Processing Consent Form (Form 6)
- Other documents
 - Outline of Corporation or Organization (such as a brochure, etc.)
 - The financial results, and statement of revenues and expenses (of the last year)
 - The articles of association or the act of endowment
 - Other supporting documents

* You must submit 1 copy of the application documents using A4 paper. You can describe them in Japanese or English. If you bring the application documents with you or submit them by mail, one CD-ROM must be submitted along with the hard copies. In case that you bring them in person, please inform us of the date beforehand. Furthermore,

submission to attach 1 copy via email to the email address for application is permitted. As a general rule, the file format must be, MS-Word, MS-PowerPoint or MS-Excel. If you have unavoidable reasons not to be able to use these formats, please contact us.

* If your proposal is adopted, there is a possibility that Input/ Output information will be released to other entities.

[2] All the application documents submitted will not be used for any purposes other than the evaluation in the course of the selection process. Please note that the application documents submitted will not be returned. We take the utmost care to preserve confidentiality. However, if your proposal is adopted, the information except the non-disclosure information (i.e. the personal information, the information detrimental to the legitimate interests of legal entities) may be disclosed under the “Act on Access to Information held by Administrative Organs” (Act No. 42 enacted on May 14, 1999).

To applicants from the EEA member states:

Private information included in application documents will be used only in the evaluation. Therefore, PMO will not distribute such private information to any other organizations besides METI, Fund establishment organization, NDF, and Review/Evaluation committee. When you apply for the subsidy program, you must clearly understand the above-said condition and submit Form 6.

[3] The costs spent for issuing the application documents and other documents will not be included in the expenses. Also, the costs spent for issuing those documents will not be compensated for regardless of whether the proposal is adopted or not.

[4] The matters described in your proposal are considered to be the fundamental policies which should be observed during the project. Consequently, please be sure to describe only the matters which are feasible within the budget. Also, please note that even if your proposal is adopted, it may be rejected later on if you make a significant change to it at your discretion.

[5] Appropriateness of the cost breakdown must be shown using supplemental explanation documents.

(4) Place of submission

The application documents must be delivered to the following address via hand-carry, mail or email, etc. In case that you bring them in person, please inform us of the date beforehand.

Toranomon Toyo Bldg. 8th Floor
4-2, Toranomom 1-chome, Minato-ku,
Tokyo 105-0001, JAPAN
Contact: Mr. Kondo, Mr. Kawai

Email address for submission: hr-apply@mri.co.jp

* Please DO NOT send the application documents via fax. Incomplete documents will be rejected and not subject to evaluation. Therefore, please carefully read and follow the procedures for application to correctly fill out the documents.

* Any application documents submitted after the closing date will not be accepted. If you send the documents by postal mail, they may not be delivered by the designated time on the closing date. Consequently, you are advised to mail them sufficiently ahead of the closing date.

9. Evaluation and Adoption

(1) Method of Evaluation

Applications will firstly be evaluated through paper screening, so that the applicants for the presentation to the review committee can be selected. The review committee plan to be held on someday from late April to mid-May in 2021. Depending on the capacity of the venue, the number of the participants to the presentation may be restricted. Furthermore, hearings and on-site investigation may be conducted as required; and submission of additional documents may be requested.

(2) Evaluation Criteria

Applications are to be comprehensively evaluated based upon the following criteria.

[1] Objective, contents, implementation method, and applicability to countermeasures for decommissioning (Including adaptability to the work site)

Whether or not the Project purpose corresponds to the project purpose described in the “Guidelines for applying” is to be evaluated.

Judgment is made as to whether the contents of the project conform to the project objective and are provided specifically taking into account the applicability to countermeasures for decommissioning (including adaptability to the work site).

Whether the implementation method of the project is consistent with the purpose and details of the project is to be evaluated.

[2] Project Implementation Schedule

Whether or not the project implementation plan (timeline) is appropriate to the purpose and details of the project, etc. is to be evaluated.

[3] Project Implementation Organization

Judgement is made as to whether the entity has the project implementation structure, expertise as an organization, expertise of those who are to be engaged in the project, the track records of similar projects, and the contribution(s) to local industrial development such as working with companies which run business in the Hamadori and other regions*. We focus on whether a project implementation organization including the project leader is clearly identified, and whether it has the implementation ability and the coordination system to consider/judge

the applicability to countermeasures for decommissioning (Including adaptability to the work site).

*Area:

Iwaki city, Soma city, Tamura city, Minami Soma city, Kawamata town, Hirono town, Naraha town, Tomioka town, Kawauchi village, Okuma town, Futaba town, Namie town, Katsurao village, Shinchi town, litate village

[4] Project Cost

Whether or not project costs are appropriately allocated to the project purpose and contents, etc. is to be evaluated.

[5] Financial Basis and Management System for Implementation of Project

Whether or not the applicant organization has a financial basis and a management system enabling them to implement the project is to be evaluated.

(3) Decision and Announcement of Results

PMO will release the adopted entities on our website, etc. The adopted entities will be notified of the result.

10. Grant Decision

The project shall be initiated after the adopted entity submits a grant application for the subsidy to PMO and PMO has sent a notice of grant decision in return.

It should be noted that there may be changes in the details, composition and scale of the project as well as its budget between the decision of adoption and grant, as a result of consultation with the PMO. Also, please be aware that the grant decision may not be notified if the adopting requirements are not met.

Although subsidized project operating entities may be provided with information required to implement the project after the decision of grant, they may be requested to observe the confidentiality depending on the nature of the information.

Information on the decision of grant of the subsidy (adopted date, the entity adopted (granted), effective date of the grant, corporation number in Japan, value of grant, etc.) will be shown on the Corporation Information* in principle.

* The Corporation Information operated by Ministry of Economy, Trade and Industry is a system, with the start of the 'My Number' system considered, to link a corporation number in Japan to corporation information such as those regarding subsidy and prize-giving. Anybody can execute batch retrieval/browsing in the system. With this system, expansion of new businesses, reduced costs in information acquisition, and more efficient businesses are expected in business enterprises and public offices.

Web address: <https://info.gbiz.go.jp> (Japanese text only)

11. Allocation of Expenses

(1) Classification of Expenses Covered by Subsidy

The expenses covered by the subsidy shall be those directly required for the implementation of the project and those required for compiling the project results. The specific items are listed below.

Items of Expense	Description
(1) Labor Costs	Expenses for personnel required to implement the subsidized project.
(2) Operating Costs	Expenses for raw materials, consumables, design/fabrication/processing, facility/equipment, goods purchase, research, outsourcing, travel, remunerations, rent/depreciation and other necessities.

(2) Expenses not to be Included in Expenses Covered by Subsidy

- Office supply equipment (furniture such as desks, chairs and bookshelves, office machinery and so forth) with which the applicants should already be provided when considering the nature of the project.
- Expenses for handling accidents and disasters that occurred during the project. (However, cancellation fees incurred by reasons not attributable to subsidized project operating entities may be directly included as an expense. Please consult the person in charge on this matter.)
- Expenses unrelated to the project

(3) Exclusion of Consumption Tax from Expenses Covered by Subsidy

If general and local consumption taxes (hereinafter referred to as "consumption tax") are included in the subsidy amount, the applicants shall be requested to submit a report after the settlement of tax amount, according to the granting guidelines.

This is so specified as to demand, at the time of filing an income tax return, that subsidized project operating entities should report and return the amount to which the subsidy has been applied, out of the amount of deduction for taxable purchase, so that the amount for which the subsidy has been allocated out of the amount of deduction for taxable purchase shall not be detained.

However, because the report mentioned above is based on an income tax return that will be filed after the settlement of the subsidy, occasional delinquency in reporting due to lapse of memory has been found. Also, in order to avoid the complicated office procedures that need to be followed by subsidized project operating entities, the consumption tax shall be handled as follows.

When determining the amount of subsidy applied for in the grant application, the consumption tax must be excluded from the expenses covered by the subsidy before

calculating the subsidy amount and submitting the application.

However, to avoid hindrance to the implementation of the subsidized project, such subsidized project operating entities as those listed below shall be permitted to include the consumption tax in the expenses covered by the subsidy when calculating the amount of subsidy.

- [1] Subsidized project operating entities who are not classified as taxpayers under the Consumption Tax Act
- [2] Subsidized project operating entities who are tax-exempt business entities
- [3] Subsidized project operating entities who are business providers subject to simplified tax
- [4] National or local governments (limited to cases when project is conducted with a special account), or subsidized project operating entities who are corporations listed in the attached Table 3.
- [5] Subsidized project operating entities who are using the general account of a national or local government
- [6] Subsidized project operating entities who are taxable business providers that choose a refund of consumption tax, following confirmation of consumption tax and purchase tax deductions, for instance due to a low amount of taxable sales

12. Miscellaneous

- (1) Any expenses incurred (including expenses for order placement) before the effective date of the grant shall not be covered by the subsidy program.
- (2) In the event that the subsidized project operating entity desires to make a purchase or other contract related to material procurement or involving an occurrence of cost, it shall invite open competitive bidding, as a general rule, from the viewpoint of cost effectiveness. If the subsidized project operating entity desires to transfer part of the subsidized project to a third party or conduct the project in partnership with a third party, it shall in advance make a contract on the implementation and report this to PMO.
- (3) Once informed that the decision on grant of the subsidy is made, the subsidized project operating entity shall not change the subsidy budget distribution or the details of the subsidized project nor interrupt or terminate the project without prior approval from PMO.
- (4) The subsidized project operating entity shall promptly report the progress of the subsidized project and so on whenever required to do so by PMO.
- (5) After the subsidized project is completed (or the project termination is approved), the subsidized project operating entity shall submit a project result report to the management office.
- (6) The subsidized project operating entity shall keep accounts on any expenditures for the subsidized project with dedicated account books accompanied by all written evidences in a way that is clearly differentiated from the other accounting to ensure that all incomes and expenditures are meticulously accounted for. The entity shall maintain the account books at least five years after the fiscal year in which the date of completion (or the date of approval for

termination) is included so that they can be accessible whenever requested by METI, fund establishment organization and PMO.

- (7) With respect to the assets acquired or the utility of which has increased through the subsidized project (hereinafter referred to as "the Acquired Assets, etc."), the subsidized project operating entity shall manage them with due care of a prudent manager even after the completion of the subsidized project, and strive to effectively make use of them in accordance with the purpose of the grant of the subsidy. All applicable Acquired Assets, etc. shall be properly controlled using an Acquired Asset Ledger during the asset disposal restriction period, which will be separately set forth.
- (8) If the subsidized project operating entity needs to dispose of (i.e., use, transfer, loan or offer as collateral assets contrary to the purpose of the grant of the subsidy) any Acquired Asset having a unit price equal to or higher than 500 thousand yen (tax excluded) during the asset disposal restriction period separately set forth, they must obtain prior approval. In this case, the entity shall pay part of or the entire subsidy amount as a general rule. (The maximum payment does not exceed the subsidy amount for the appropriate asset to be disposed of).
- (9) After the completion of the subsidized project, the Board of Audit may visit the premises of the subsidized project operating entity for inspection.

13. Contact

Toranomon Toyo Bldg. 8th Floor
4-2, Toranomom 1-chome, Minato-ku,
Tokyo 105-0001, JAPAN
Contact: Mr. Kondo, Mr. Kawai
E-mail: hairo-info@ml.mri.co.jp

* Contact us through e-mail. We regret that no inquiries will be accepted via telephone.

(Form 1)

No.	
*Leave blank.	

Management Office for the Project of Decommissioning and Contaminated Water
Management

Application for the subsidies for the “Project of Development of Analysis and Estimation Technology for Characterization of Fuel Debris (Development of Technologies for Enhanced Analysis Accuracy, Thermal Behavior Estimation, and Abbreviated Analysis)”

Applicant	Corporation number (*)	
	Company/Organization Name	
	Representative (Full Name and Title)	
	Address	
Contact	Contact Person (Full Name)	
	Section/Department	
	Title	
	Telephone (Extension, if any)	
	E-mail	

* If a corporation number in Japan has been given, fill in the 13-digit number.

If you are an individual and foreign company, etc., not having it, leave the field as it is.

(Exhibit)

1. Name of the Subsidized Project

2. Objective and contents of the Subsidized Project

**Describe your own understanding of the background of the project, the purpose of the project and its contents briefly.*

3. Scheduled commencement and completion dates of the Subsidized Project

(Scheduled commencement date):

(Scheduled completion date):

4. Entire costs needed for the project JPY

5. Costs subject to subsidy JPY

6. Subsidy amount to be applied for JPY

7. Allocation amount of the costs for the Subsidized Project, costs eligible for the subsidy and subsidy amount to be applied for

The contents are the same as (2) Expenditures, I. Summary table of “2. Plan of the income and expenditure of the Subsidized Project” of the Form 2, “Brief explanation of subsidized project”.

8. Bases for Calculation for the above amount

The contents are the same as (2) Expenditures, II. Distribution of Costs of “2. Plan of the income and expenditure of the Subsidized Project” of the Form 2, “Brief explanation of subsidized project”.

9. If a group is formed to conduct the Project, the names of the group and the member companies

Note 1: The “costs required for the Subsidized Project” refers to the cost required for performance of the relevant project. As a general rule, the amount must be provided after deducting the amount of the national and local consumption taxes.

Note 2: As for the amount of the “Subsidized Costs”, as a general rule, the amount of the “costs required for the Subsidized Project” eligible for the Subsidy must be provided after deducting the amount of the national and local consumption taxes.

Note 3: The “amount of the Subsidy applied for” refers to the amount of the “Subsidized Costs” for which grant of the Subsidy is requested, and the amount limit is the amount of the “Subsidized Costs” multiplied by the Subsidized Ratio (any amount less than JPY1 shall be rounded down).

Remark: The size of the paper used shall be the Japan Industrial Standards A4 Format.

(Form 2)

Address

Name (Name of Corporation and Title/Name of Representative Person)

Outline of Subsidized Project

1. The implementation plan for the Subsidized Project (based on the period in above "4. Project Term")

(1) Contents and implementation method of the project

- * Provide the following information by project content item.*
- * Specific implementation contents and method, based on clarification of issues for each objective of research and development*
- * Specific implementation content and method for each item of the project content*
- * Specific proposal to improve outcome of the project*
- * Project location (Address and name of the location)*

(2) The implementation timeline

- * Describe the implementation schedule of the project by month for each implementation contents.*
- * Describe the implementation procedure in detail. If the stages of the research and development are different (such as design, development, tests, etc.) in each item, describe the difference clearly.*
- * If the persons in charge of the research and development (manufactures and subcontractors) are different in each item, describe the organization they belong to clearly so that we can distinctly understand who will actually implement the item.*
- * Set the actual targets for achievement of the project purpose as milestones and describe them for each item.*
- * In setting the milestones, they must be related to the points where delay of the project is foreseen.*
- * In order to prevent delay, alternative options must be described for items with high risk.*
- * Describe major output and input information so that correlation with other projects, comprehensive proposals, partial proposals, etc. can be grasped.*
- * As a plan of the interim report, describe the outputs which will have been able to be achieved at the time of the report and further plan.*
- * In reporting your progress, show your plan and actual progress in a comprehensible manner. Furthermore, describe the up-to-date situation and further work plan, etc. as a reference.*

(3) The project implementation organization

** Provide the implementation organization chart and the number and role of people who are engaged in the project for each item of the project contents (Attachment 1)*

** After clarifying the responsible person for entire project implementation, the project leader (exclusively employed for the project) and sub-leaders responsible for each project item, provide their profile, area of expertise and track record of engagement in similar projects..*

** Describe outsourcing or commissioning, if planned.*

** Describe the name, outline, year, ordering party, etc. of similar projects. If the project was done as your own company's project, state it accordingly.*

** Clearly state the experiences of each participating party if you form a consortium.*

2. Plan of the income and expenditure of the Subsidized Project (based on the period in above “4. Project Term”)

(1) Income (Unit: JPY)

Item	Amount
Own fund	
*Bond issuance or borrowing	
Other	
Subsidy	
Total	

*Attach the documents to show the funding plan relating to the relevant bond issuance or borrowing.

(2) Expenditures

I. Summary table

(Unit: JPY)

Classification of costs	Costs required for the Subsidized Project	Subsidized Costs	Classification of the cost burden	
			The amount of cost borne by the Subsidized Project Operating Entity	The amount of the Subsidy applied for
Labor Cost				
Operating cost				
Total				

II. Distribution of Costs (provide the details by project item)

**Describe in this sheet or other separate sheets the name of the goods, unit price, man-hour, etc. as basis for the calculation.*

**If you form a consortium, clearly describe the breakdown of each company or organization.*

(Unit: JPY)

Type (Example)	The cost required for the Subsidized Project	Subsidized costs	Amount of the Subsidy applied for	Remarks
【Labor Cost】				
• • •				
Sub total				
【Operating Cost 】				
Raw material				
Goods purchase				
Outsourcing				
• • •				
Sub total				
Total				

(Note 1) The “cost required for the Subsidized Project” refers to the cost required to perform the relevant project. As a general rule, provide the amount after deducting the amount of the national and local consumption taxes.

(Note 2) As a general rule, provide the “cost required for the Subsidized Project”, which is eligible for the Subsidy after deducting the amount of national and local consumption taxes in the “Subsidized Costs”.

(Note 3) The “amount of the Subsidy applied for” refers to the amount of the “Subsidized Costs” for which grant of the Subsidy is requested, and the amount limit is the amount of the “Subsidized Costs” multiplied by the Subsidized Ratio (any amount less than JPY1 shall be rounded down).

Remark: The size of the paper used shall be the Japan Industrial Standards A4 Format.

3. Financial basis and management system

** Describe the outline of your organization; moreover, describe the grounds on which your organization has necessary management basis for smooth implementation of the project as Annex 2.*

** Describe the grounds on which your organization is capable of managing funds, etc. (such as organization and storage of evidence documents for expenditures). Furthermore, describe the scheme of the management of the funds (responsible persons and their roles).*

** If you form a consortium, all of the above-mentioned items must be described regarding every organization.*

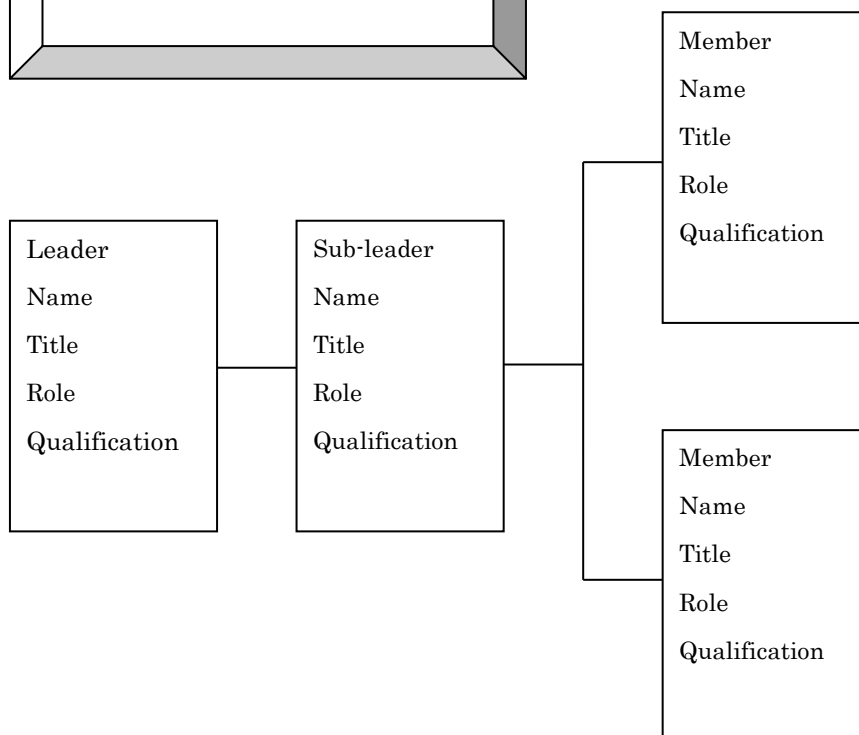
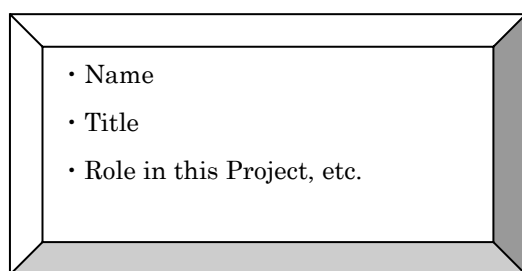
Implementation Organization Chart

<p>Content of the descriptions</p>	<ul style="list-style-type: none"> • Develop an organization chart to show the framework for implementation of the Project • The names, titles and division of roles of the personnel in charge must be contained in the implementation organization chart • Clarify persons exclusively employed for this project described in this Chart; and describe the career background, expertise, area of specialty at work, qualification associated with the project, and other relevant information must be provided about the key personnel.
------------------------------------	--

Operational Implementation Organization

*A concrete description should be provided by showing an implementation organization chart containing the following information for each project item.

*Specify the name of the contact person in case of a joint application



(Annex 2) Outline of your organization

Note: If you form a team and apply, you must fill in this sheet for every participant.

*Fill in the data of the latest accounting year in non-consolidated base.

Company name					
Title/name of the representative person					
Contact information	Tel:		Fax:		
	E-mail:				
Head office's address					
Date of establishment	Date:	Account closing month		Small- or medium-sized company	○ or ×
Capital	JPY in thousands	Number of Employees		(indicate by a circle if the company is a small- or medium-sized company)	
Description of business					
Major shareholders (equity ownership)	○○○ (company limited) (60%)				
	▽□○ (company limited) (30%)				
	□○○ (company limited) (1%)				

(The title and name of the person responsible for above information:

Head of the XX Department, XX XX(Name))

Please provide the information about all officers in the list below:

Full name in Katakana Full name in Chinese characters	Date of Birth			Sex	Company Name	Title
	Japanese era name Year	Month	Day			
(Example) Taro Keizai Taro Keizai	S 35	01	01	M	Keizai Sangyo Co., Ltd.	President & Representative Director

- (Note 1) Add the columns as appropriate if the provided columns are not sufficient to provide full information.
- (Note 2) Use one-byte characters and put a space between the first and last names to provide the names in Japanese phonetic symbols (katakana).
- (Note 3) Use two-byte characters and put a space between the first and last names to provide the names in Chinese characters.
- (Note 4) The letters T, S, H or R should be used to indicate the Japanese era names for the date of birth and the year should be indicated by a two-digit number.
- (Note 5) Use M for male and F for female in one-byte characters to indicate the sex.
- (Note 6) For a foreign national, use the alphabet characters to indicate the person's full name in the "Full name in Chinese characters" and the pronunciation of the name in Katakana in the "Full name in Katakana" column.
- (Note 7) For a joint application or a Project C, provide the information about all officers of each and every member (company or otherwise) of the group.

(Remarks) The size of the paper used shall be the Japan Industrial Standards A4 Format.

(Other documents)

- (1) Outline of the company or organization such as a brochure, etc.
- (2) The financial results, and statement of revenues and expenses (for the past one year)
- (3) The articles of association or the act of endowment
- (4) Other supporting documents (as needed)

(Form 3)

**Certificate of Conformance to Qualification Requirements for
the Project of Development of Analysis and Estimation Technology for
Characterization of Fuel Debris (Development of Technologies for Enhanced
Analysis Accuracy, Thermal Behavior Estimation, and Abbreviated Analysis)**

I confirm that the applicant satisfies the qualification requirements for this subsidized project.

No.	Requirements	Verification, etc.
(1)	Possessing the organization for properly conducting the relevant subsidized project.	<State that the applicant satisfies the requirements with reasons in detail ><See Form 2 “1. (3) Project Implementation Organization” when necessary.”>
(2)	Having the capacity, knowledge and experience required for conducting the relevant subsidized project.	<State that the applicant satisfies the requirements with reasons in detail ><See Form 2 “1. (3) Project Implementation Organization” when necessary.”>
(3)	Having the management foundation required for smoothly conducting the relevant subsidized project and sufficient ability to control the funds and other resources.	<State that the applicant satisfies the requirements with reasons in detail ><See Form 2 “(3) Financial basis and management system when necessary.”>
(4)	Being able to implement the project in accordance with all the applicable laws and regulations enacted in Japan, and to follow the appropriate accounting procedures in accordance with “Grant Policy for Subsidy for the Project of Decommissioning and Contaminated Water Management” and “Subsidized Project Administration Manual”. https://en.dccc-program.jp/files/20210301man.pdf	<State that you understand the statement on the left>
(5)	Not foreseen to be subject to Articles 70 and 71 of the Cabinet Order concerning the Budget, Auditing and Accounting.	<State that it does not apply to the applicant>
(6)	Not fulfilling any of the conditions stipulated in the “Guidelines for the suspension of subsidies controlled by the Ministry of Economy, Trade and Industry and the suspension of designation relating to the contracts”. (January 29, 2003, No 1) First column, the second items in Attachment	<State that it does not apply to the applicant>
(7)	Research and development companies which may require approval under the Foreign Exchange Act for any exports and imports should have an establishment of internal compliance program(ICP) under a self-control system about the "standards for exporters, etc. to meet" provided for in Article 55-10 (1) of the Foreign Exchange and Foreign Trade Act.	<Describe meeting this condition in the Form No.5>
(8)	Admitting that the results obtained through this project can be utilized by TEPCO Holdings, Incorporated, etc. to leverage them for Decommissioning and Contaminated Water Countermeasures if they request to do so under the condition that each party is in agreement. Not preventing the utilization by behaviors such as not admitting use of the technology intentionally, asking for unreasonable compensation, etc. in spite of receiving the request.	<State that it is possible>
(9)	In order to make sure of the above-mentioned item, preventing	<State that you understand the

	<p>the situation that the results from this project are not able to be utilized for measures for decommissioning and contaminated water management at the Fukushima Daiichi NPS by ceding the above-mentioned condition in (8) to the successor if the applicant hands over the result to a third party and loses their own right to utilize it accordingly. In the case of a conflict which makes the applicant unable to make sure of the items in (8), the concerned parties must solve it by their own responsibility.</p>	<p>statement on the left></p>
--	--	----------------------------------

<Note for Filling out this Form>

In the verification columns, please write the reasons why you verified that the applicant meets the requirements. When filling it out, write "Attachment" if there are any verification documents attached to this form and if not, write "No attachment."

(Form 4)

Input/Output information on Project of Development of Analysis and Estimation Technology for Characterization of Fuel Debris (Development of Technologies for Enhanced Analysis Accuracy, Thermal Behavior Estimation, and Abbreviated Analysis)

**Please refer to the reference document 1 as an example.*

ID	Requested projects	Offered projects	Contents (outline)	Time when the project is necessary	How to use the information	Remarks
				<i>*Influences of delay (if any)</i>		<i>Such as measures for the case when you cannot ensure the accuracy, cannot keep the timeline, etc.</i>

(Form 5)

Response to Security Export Controls on Project of Development of Analysis and Estimation Technology for Characterization of Fuel Debris (Development of Technologies for Enhanced Analysis Accuracy, Thermal Behavior Estimation, and Abbreviated Analysis)

Response to Security Export Controls	
Circle one of the following three options: handled, not handled or not required.	
Handled	Submit relevant documents (export control regulations for security trade)
Not handled	State the date of submission: Year Month:
	State future plans
Not required	State reasons

(Form6)

Personal Data Processing Consent Form

Purposes

In compliance with the Act on the Protection of Personal Information, Mitsubishi Research Institute, Inc.("MRI") requests your consent to use your personal data to evaluate of proposal.

Data Sharing

MRI may share your personal data with cooperating organizations.

Data Retaining

There are cases in which it is necessary to retain your personal data for the necessary period according to the requirements of Japanese law.

Data Management

MRI will protect your personal data securely, including taking necessary measures to prevent leakage, loss, falsification, etc.

I have understood the above and give my consent to MRI to use my personal data for the above Purposes, and to carry out the above Data Sharing and Data Retaining.	
Your Full name	
Your Signature	
Date	

If you wish to modify your personal data or withdraw this consent after submission, please notify us by email to privacy@mri.co.jp.

Mitsubishi Research Institute, Inc.
10-3, Nagata cho 2-chome, Chiyoda-ku, Tokyo, Japan
+81-3-6705-6004, privacy@mri.co.jp

PMS05_20180718

(Reference Document 1)

Table 1 Example of Organization of Input/Output information

ID	Requested projects	Offered projects	Contents (outline)	Time when the project is necessary	How to use the information	Remarks
1_1	Advancement of Fundamental Technologies for Retrieval of Fuel Debris and Internal Structures	Development of Technologies for Containing, Transportation and Storage of Fuel Debris / Development of fuel debris criticality control technology	Size and specification of container and criticality detection device	April 2017	Examination of possibility of fuel debris sampling technology	
1_2						
1_3						
1_4	⋮	⋮	⋮	⋮	⋮	⋮

(Reference Document 2)

Table 1 Example of implementation schedule with points of attention

Item	Sub item	Fiscal Year 201X						Fiscal Year 201Y						Remarks (Up-to-date situation)							
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		Oct	Nov	Dec	Jan	Feb	Mar	
Validation on XX	(1) Survey of on-site situation and relevant technologies			█	█	▽															○○○○
	(2) Machinery design				█	█	▽														○○○○
	(3)Machinery production							█	█	▽											Describe up-to-date situation and work schedule
	(4) Establishment of tests plan			█	█	▽															○○○○
	(5) Tests implementation												█	█	▽						Result of machinery development
	(6) Evaluation of tests result																				★
	(7) Compilation of results																				█
Validation on XX (when alternatives are needed)	(1) YY																				Describe the available results foreseen at interim report and further plan
...	...																				
Major milestones																					

(Reference document 3)

Regarding Subsidized Cost Items

Regarding the cost items defined in “The Decommissioning and Contaminated Water Management Project Implementation Guidelines”, please refer to the following table.

Cost item	Description	Correspondence with “Subsidized Project Administration Manual”
I. Labor cost	Labor cost for working hours of those engaged in the project.	3. Accounting process on labor cost
II. Operating cost		
Raw material cost	Expenses necessary for purchasing raw material or material necessary for implementing the project ※Here, “raw material” denotes what loses its nature and is used for production or manufacturing of entirely new ones; “material” denotes what does not lose its nature and is a constituent element of produced items or manufactured items only through being put to new application.	7. Accounting procedures regarding supplies expenses
Supplies expense	Cost for the purchase of goods necessary for performing the project but not belonging to raw material cost (however, only those verifiable for the use in the project)	7. Accounting procedures regarding supplies expenses
Design, production and processing costs	The thing which the subsidized entity cannot design, produce or process, or the cost necessary for outsourcing what is appropriate and does not belong to Facility and equipment cost to other entity. (contract for work)	11. Accounting procedures regarding expenses for commission fee/outsourcing cost
Facility and equipment cost	Cost necessary for purchasing, production or installation of facility or equipment necessary for undergoing the project ※The actual contents of the “facility and equipment” shall be “buildings and accompanying facilities”, “structures” and “machinery and equipment” stipulated in “Ministerial Order regarding depreciable life of depreciable assets, etc.” (Fifteenth Order of Ministry of Finance, 1965).	6. Accounting procedures regarding equipment expenses and rental and hire fees 11. Accounting procedures regarding expenses for commission fee/outsourcing cost
Procurement cost	Cost for the thing which is necessary for undertaking the project and does not belong to facility and equipment cost (at the same time, can be usable more than one year)	6. Accounting procedures regarding equipment expenses and rental and hire fees
Survey cost	The cost for outsourcing to another entity what the subsidized entity cannot survey or analyze by itself or is not suitable to be conducted by the subsidized entity itself (contract for work)	11. Accounting procedures regarding expenses for commission fee/outsourcing cost

Outsourcing cost	Cost for outsourcing to other business operator what subsidized company cannot implement on its own or not appropriate to do so and does not belong to design, production and processing costs, facility and equipment cost or survey cost (contract for work)	11. Accounting procedures regarding expenses for commission fee/outsourcing cost
Travel expenses	Cost for domestic business travels and overseas business travels necessary for performing the project.	4. Accounting process for travel expenses
Gratuities	Gratuities necessary for performing the project (gratuities for external experts who attended meetings, seminars, symposiums, etc., gratuities for giving seminars, writing of drafts, cooperation with research, etc.)	5. Accounting process for meeting expense and rewards
Rent and hire	Cost for lease and rental of machinery, equipment and the like necessary for performing the project	6. Accounting procedures regarding equipment expenses and rental and hire fees
Other expenses necessary for undertaking the project	Cost for other expenses necessary for undertaking the project which does not belong to any other items Examples Commission fee: the cost for outsourcing to other entities of the cost for assistant personnel or of the cost for temporary staffing, which cannot be done or what is not appropriate to be done by the subsidized entity	10. Accounting procedures regarding assistant labor costs 10. Accounting procedures regarding other miscellaneous expenses 11. Accounting procedures regarding expenses for commission fee/outsourcing cost, etc.