Comparison Table “Guidelines for the Subsidy Program “Project of Decommissioning and Contaminated Water Management (Advancement of Retrieval Method and System of Fuel Debris and Internal Structures)”
This table shows the changes from Temporary Translation to Unofficial Translation of the Guidelines for the Subsidy Program “Project of Decommissioning and Contaminated Water Management (Advancement of Retrieval Method and System of Fuel Debris and Internal Structures). Underlined parts are changed.

Unofficial Translation	Temporary Translation
(Unofficial Translation) **Guidelines for applying to the “Project of Decommissioning and Contaminated Water Management (Advancement of Retrieval Method and System of Fuel Debris and Internal Structures)”** Date: March 2, 2017 Management Office for the Project of Decommissioning and Contaminated Water Management The Management Office for the Project of Decommissioning and Contaminated Water Management (hereinafter called “PMO”) solicits entities to implement subsidies for the "Subsidized Project of Decommissioning and Contaminated Water Management (Advancement of Retrieval Method and System of Fuel Debris and Internal Structures)". Details of the project are stipulated in these Guidelines; furthermore, the procedures for implementation of the project are stipulated in the “Grant	(temporary translation) **Guidelines for applying to the “Project of Decommissioning and Contaminated Water Management (Advancement of Retrieval Method/System of Fuel Debris/Internal Structures)”** Date: March 2, 2017 Management Office for the Project of Decommissioning and Contaminated Water Management The Management Office for the Project of Decommissioning and Contaminated Water Management (hereinafter called “PMO”) solicits entities to implement subsidies for the "Subsidy Project of Decommissioning and Contaminated Water Management (Advancement of Retrieval Method/System of Fuel Debris/Internal Structures)". Details of the project are stipulated in these 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”.	Policy for Subsidy for the Project of Decommissioning and Contaminated Water Management”.
1. Purpose of Project “No Change”	1. Purpose of Project
2. Contents of Project For decommissioning Fukushima Daiichi Nuclear Power Station, develop necessary technologies and perform essential test when necessary to solve the issues to ensure the safety, such as the secure confinement function, collection and removal of dust, and monitoring for α nuclides (a collective name for radionuclides that release the α ray). In addition, conduct optimization study for ensuring the safety of retrieval method and system by reflecting the outcomes of technology development The entity whose partial proposal is adopted or whose proposal is partly adopted (hereinafter called the Partial Subsidized Project Operating Entity) will carry out the project based on the analysis and coordination by the Subsidized Project Operating Entity with adopted comprehensive proposal (hereinafter called the Comprehensive Subsidized Project Operating Entity) from the perspectives of the risks involved in the application of the technology and the estimated timing to become it applicable. The Comprehensive Subsidized Project Operating	2. Contents of Project For decommissioning Fukushima Daiichi Nuclear Power Station, develop necessary technologies and perform essential test when necessary to solve the issues to ensure the safety, such as the secure confinement function, collection and removal of dust, and monitoring for α nuclides (a collective name of for radionuclides that release the α ray). In addition, conduct optimization study for ensuring the safety of the methods and systems by reflecting the outcomes of technology development. The entity whose partial proposal is adopted or whose proposal is partly adopted (hereinafter called the Partial Subsidized Project Operating Entity) will carry out the project based on the analysis and coordination by the Subsidized Project Operating Entity with adopted comprehensive proposal (hereinafter called the Comprehensive Subsidized Project Operating Entity) from the perspectives of the risks involved in the application of the technology and the estimated timing to become it applicable. The Comprehensive Subsidized Project Operating

Entity shall be responsible for the implementation of all the below-mentioned items (1) through (4) and shall evaluate and coordinate other Partial Subsidized Project Operating Entities. The Partial Subsidized Project Operating Entity shall be responsible for the implementation of one or any combination of the below-mentioned items (1) through (3).	Entity shall be responsible for the implementation of all the below-mentioned items (1) through (4) and shall evaluate and coordinate other Partial Subsidized Project Operating Entities. The Partial Subsidized Project Operating Entity shall be responsible for the implementation of one or any combination of the below-mentioned items (1) through (3).
(1) Technology development about the confinement function The confinement of dust containing α nuclides generated by debris removal works is an important task to be achieved in order to reduce radiation exposure of public and workers. Although negative pressure control by exhausting is the general method for, considering the damages on buildings, contaminant vessels (hereinafter referred to as PCVs), etc. that are boundaries, another method needs to be developed to ensure the confinement function. Therefore, develop a method for improving airtightness of damaged buildings, PCVs, etc. and develop a differential pressure control method that is effective for confining dust and applicable for damaged buildings, PCVs, etc. in order to keep the inside of each boundary in negative pressure. In addition, construct scenarios and develop technologies to reduce radiation exposure by combining diffusion prevention measures of dust, etc.	(1) Technology development about the confinement function The confinement of dust containing α nuclides generated by debris removal works is an important task to be achieved in order to reduce radiation exposure of public and workers. Although exhausting is the general method for negative pressure control, considering the damages on buildings, contaminant vessels (hereinafter referred to as PCVs), etc. that are boundaries, another method needs to be developed to ensure the confinement function. Therefore, develop a method for improving airtightness of damaged buildings, PCVs, etc. and develop a differential pressure control method that is effective for confining dust and applicable for damaged buildings, PCVs, etc. in order to keep the inside of all boundaries in negative pressure. In addition, construct scenarios and develop technologies to reduce radiation exposure by combining diffusion prevention measures of dust, etc.
(i) Technology development for ensuring the confinement function As the result of previous conceptual studies, a system is being	(i) Technology development for ensuring the confinement function As the result of previous conceptual studies, a system is being

considered to confine dust that contains α nuclides by maintaining the negative pressure of buildings and the inside PCVs so that the pressure status becomes outdoor > buildings > PCV even taking the damages of buildings/PCVs into consideration. Develop below technologies necessary for materializing this system. (a) Element test about differential pressure management that is effective for dust confinement In order to set effective management conditions of differential pressure for confining dust that contains radioactive fluid that contains α nuclides even when the damages of buildings/PCVs and other into consideration. (b) Analysis of negative pressure, flow distribution, etc. in every boundary Considering the set differential pressure management conditions in the item (a) and the damage of the site, check the effectiveness of the differential pressure management conditions and the systems to ensure confining dust, and preventive measures against retention of hydrogen in PCVs and fire and explosion in PCVs by providing inert gases, by analyzing pressure distributions and air distributions in buildings and PCVs. Test and verify using a scale model and other when necessary. (c) Technology development about airtightness improvement	considered to confine dust that contains α nuclides by maintaining the negative pressure of buildings and the inside PCVs so that the pressure status becomes outdoor > buildings > PCV even taking the damages of buildings/PCVs into consideration. Develop below technologies necessary for materializing this system. (a) Element test about differential pressure management that is effective for dust confinement In order to set effective management conditions of differential pressure for confining dust that contains radioactive fluid that contains α nuclides even when the damages of buildings/PCVs and other into consideration. (b) Analysis of negative pressure, flow distribution, etc. in every boundary Considering the set differential pressure management conditions in the item (a) and the damage of the site, check the effectiveness of the differential pressure management conditions and the systems to ensure confining dust, and preventive measures against retention of hydrogen in PCVs and fire and explosion in PCVs by providing inert gases, by analyzing pressure distributions and air distributions in buildings and PCVs. Test and verify using a scale model and other when necessary. (c) Technology development about airtightness improvement

Investigate the measures and conduct element tests as necessary for improving airtightness of the damaged buildings/PCVs.	Study the measures and conduct element tests as necessary for improving airtightness of the damaged buildings/PCVs.
(ii) Technology development about reducing radiation exposure Extract methods and develop technologies for complementing the confinement functions to reduce further exposure to radiation for the public and workers during removal works of fuel debris or any accidents, and construct scenarios and evaluate the amount of radiation exposure bearing the reduction of radiation exposure.	(ii) Technology development about reducing radiation exposure Extract methods and develop technologies for complementing the confinement functions to reduce further exposure to radiation for the public and workers during removal works of fuel debris or any accidents, and construct scenarios and evaluate the amount of radiation exposure bearing the reduction of radiation exposure.
(2) Technology development about collecting and removing dust originated from fuel debris To ensure safety, dust (containing α nuclide) that is transferred into the gas phase and the liquid phase must be collected or removed. Therefore, conduct conceptual study and technology development for effective collection and removal by taking safety and waste reduction into consideration, and investigate necessary property data of dust originated from fuel debris and conditions for evaluation.	(2) Technology development about collecting and removing dust originated from fuel debris To ensure safety, dust (containing α nuclide) that is transferred into the gas phase and the liquid phase must be collected or removed. Therefore, conduct conceptual study and technology development for effective collection and removal by taking safety and waste reduction into consideration, and study necessary property data of dust originated from fuel debris and conditions for evaluation.
(i) Technology development for reducing and removing radioactive fluid in the gas phase system For collection and removal of dust that contains radioactive fluid, which contains α nuclide and transfers into the gas phase, generated by fuel debris removal operations, methods to collect and	(i) Technology development for reducing and removing radioactive fluid in the gas phase system For collection and removal of dust that contains radioactive fluid, which contains α nuclide and transfers into the gas phase, generated by fuel debris removal operations, methods to collect and

remove them by filters, etc. installed in the gas ventilation system for maintaining negative pressure to clean the exhaust gas are being considered. For this cleaning function, investigate methods to collect dust further in upstream of the filters, and perform elementary tests as necessary to develop the technology. For examination, consider prevention of criticality during accumulating debris, removal of water in the removed debris, and storage methods studied in "Development of Technologies for Containing, Transportation and Storage of Fuel Debris".	remove them by filters, etc. installed in the gas ventilation system for maintaining negative pressure to clean the exhaust gas. For this cleaning function, study methods to collect dust further in upstream of the filters, and perform elementary tests as necessary to develop the technology. For examination, consider prevention of criticality during accumulating debris, removal of water in the removed debris, and storage methods studied in "Development of the Collection, Transportation, and Storage Technologies for Fuel Debris".
(ii) Technology development for reducing and removing radioactive fluid in the liquid phase system For collection and removal of dust that contains soluble and non-soluble radioactive fluid, which contains α nuclide and transfers into the liquid phase, generated by fuel debris removal operations, it is being considered to be collected and removed by filters installed in the recirculating cooling water system for cooling debris and other to purify cooling water. For this purification function, investigate removal methods to deal with soluble and non-soluble radioactive fluid that are likely to occur, and perform elementary tests as necessary to develop the technology. For examination, consider prevention of criticality during accumulating debris, removal of water in the removed debris, and storage methods in "Development of	(ii) Technology development for reducing and removing radioactive fluid in the liquid phase system For collection and removal of dust that contains soluble and non-soluble radioactive fluid, which contains α nuclide and transfers into the liquid phase, generated by fuel debris removal operations, it is being considered to be collected and removed by filters installed in the recirculating cooling water system for cooling debris and other to purify cooling water. For this purification function, study removal methods to deal with soluble and non-soluble radioactive fluid that are likely to occur, and perform elementary tests as necessary to develop the technology. For examination, consider prevention of criticality during accumulating debris, removal of water in the removed debris, and storage methods in "Development

Technologies for Containing, Transportation and Storage of Fuel Debris". * The data necessary for this investigation is obtained in related research and development ("Advancement of Fundamental Technologies for Retrieval of Fuel Debris and Internal Structures ", " Development of Technologies for Grasping and Analyzing Properties of Fuel Debris", etc.).	of the Collection, Transportation, and Storage Technologies for Fuel Debris". * The data necessary for this study is obtained in related research and development ("Upgrading Fundamental Technologies for Retrieval of Fuel Debris and Internal Structures", "Development of Technology for Grasping and Analyzing Fuel Debris Properties, etc.).
(3) Investigation of an α nuclide monitoring system associated with removing fuel debris As a result of radiation exposure evaluation, concerns for radiation exposure by α nuclides are indicated as the effect of debris removal operations. For this reason, tasks are extracted related to the necessity of monitoring α nuclides generated in the gas phase and the liquid phase during removing fuel debris. Therefore, conduct a conceptual study for the α nuclides monitoring system and formulate development plan. For the obtained results, reflect to consideration of retrieval method and system. (i) Conceptual study and development plan formulation of detection technology and system for α nuclide in gas phase As a result of the conceptual studies already conducted, for fuel debris removal, a system is being considered to purify gas in such as PCVs, reactor buildings, and additionally installed cells with such	(3) Study of an α nuclide monitoring system associated with removing fuel debris As a result of radiation exposure evaluation, concerns for radiation exposure by α nuclides are indicated as the effect of debris removal operations. For this reason, tasks are extracted related to the necessity of monitoring α nuclides occurred in the gas phase and the liquid phase during removing fuel debris. Therefore, conduct a conceptual study for the α nuclides monitoring system and formulate development plan. For the obtained results, reflect to consideration of construction methods and systems. (i) Conceptual study and development plan formulation of detection technology and system for α nuclide in gas phase As a result of the conceptual studies already conducted, for fuel debris removal, a system is being considered to purify gas in such as PCVs, reactor buildings, and additionally installed cells with such

as filters to discharge the gas to the outdoors. Conduct conceptual study for a monitoring system to continuously monitor the α nuclides in the cleaned exhaust gas. (ii) Conceptual study and development plan formulation of detection technology and system for α nuclide in the liquid phase As a result of the conceptual studies already conducted, for removal of fuel debris, cooling water, used for cooling fuel debris and processing like cutting, is being considered to be purified and circulated by filtering fuel debris existing in the cooling water by such as filters. Conduct conceptual study for a monitoring system to continuously monitor α nuclides in the purified cooling water. (4) Optimization study for ensuring safety of retrieval method and system For retrieval method and system of which the conceptual studies have been conducted, conduct optimization study for ensuring the safety of fuel debris and internal structures retrieval by reflecting the results obtained in the technology development (1) to (3). 3. Operation of research and development ”No Change”	as filters to discharge the gas to the outdoors. Conduct conceptual study for a monitoring system to continuously monitor the α nuclides in the cleaned exhaust gas. (ii) Conceptual study and development plan formulation of detection technology and system for α nuclide in the liquid phase As a result of the conceptual studies already conducted, for removal of fuel debris, cooling water, used for cooling fuel debris and processing like cutting, is being considered to be purified and circulated by filtering fuel debris existing in the cooling water by such as filters. Conduct conceptual study for a monitoring system to continuously monitor α nuclides in the purified cooling water. (4) Optimization study for ensuring safety of methods and systems For methods and systems of which the conceptual studies have been conducted, conduct optimization study for ensuring the safety of fuel debris and internal structures retrieval by reflecting the results obtained in the technology development (1) to (3). 3. Operation of research and development

4. Project Term ● From the day of grant decision to March 31, 2019 In “Outline of Subsidized Project (Form 2)”, please describe both “Implementation Plan” and “Plan of the income and expenditure” for each period; The period from the day of grant decision to March 31, 2018 and the period from April 1, 2018 to March 31, 2019since the contents of the grant decision would be coordinated considering the National Budget, etc..	4. Project Term ● From the day of grant decision to March 31, 2019 In Outline of Subsidy Project (Form 2), Please list the implementation plan and plan of income and expenditure. (The period from the day of grant decision to March 31, 2018, the period from April 1, 2018 to March 31, 2019).
5. Implementing Scheme ”No Change”	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. (1)～(6) “No Change” (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	6. Application Requirements The private companies, etc. satisfying all of requirements (1) to (8) shown below are qualified to apply for the subsidies. (1)～(6) (7) The "standards for exporters, etc. to meet" provided for in Article 55-10 (1) of the Foreign Exchange and Foreign Trade Act provide an establishment of internal compliance program(ICP) under a self control system.

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) ~(9) ” No Change” 7. Requirement Conditions for Grant Decision ” No Change”	[Reference] Exporter Compliance Standards Regulations to be observed by parties commercially engaged in export or technology transfer (exporters). Exporters which do not handle security-sensitive "special important goods, etc." have a duty to 1) nominate a party responsible for checking freight, etc., and 2) comply with the law. Exporters which do handle security-sensitive "special important goods, etc." have a duty to 1) identify an agent as the responsible party, 2) set out an export control system, 3) set out a procedure for non-regulated freight, 4) set out a procedure for confirming the usage and consumer, and confirming these in accordance with that procedure, and 5) confirming that non-regulated freight remains so at the time of shipping. (8) ~(9) 7. Requirement Conditions for Grant Decision

8. Application Procedure (1) “No Change” (2) Information Session Friday, March 10, 2017 9:00 - 9:30 AM Venue: Main Conference Room C at Mitsubishi Research Institute, Inc. Map:http://www.mri.co.jp/english/profile/locations/map_headoffice.html If you would like to attend the session, please inform the contact point written in “13. Contact” by 12:00 AM on Thursday, March 9 via email. 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 12:00 AM on Thursday, March 9 via email. (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 (Advancement of Retrieval Method and System of Fuel Debris and Internal Structures)’. ・Application form (Form 1)	8. Application Procedure (1) (2) Information Session Friday, March 10, 2017 9:00 - 9:30 AM Venue: Main Conference Room C at Mitsubishi Research Institute, Inc. Map:http://www.mri.co.jp/english/profile/locations/map_headoffice.html If you would like to attend the session, please inform the contact point written in “13. Contact” by 12:00 AM on Thursday, March 9 via email. 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 10:00 AM on Friday, January 27 via email. (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 (Advancement of Retrieval Method/System of Fuel Debris/Internal Structures)’. ・Application form (Form 1)

・Outline of Subsidized Project (Form 2) "No Change" [2]～[5] "No Change" (4) "No Change"	・Outline of Subsidy Project (Form 2) [2]～[5] "No Change" (4) "No Change"
9.～13. "No Change"	9.～13.
(Form 1) Management Office for the Project of Decommissioning and Contaminated Water Management Application for the subsidies for the "Advancement of Retrieval Method and System of Fuel Debris and Internal Structures"	(Form 1) Management Office for the Project of Decommissioning and Contaminated Water Management Application for the subsidies for the "Advancement of Retrieval Method/System of Fuel Debris/Internal Structures"
(Exhibit)	(Exhibit)
1. Name of the Subsidized Project	1. Name of the subsidy 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.*	2. Objective and contents of the subsidy 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	3. Scheduled commencement and completion dates of the subsidy project

(Scheduled commencement date): (Scheduled completion date):	(Scheduled commencement date): (Scheduled completion date):
4. ~6. “No Change”	4. ~6.
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 Form 2, “Brief explanation of subsidized project”.	7. Allocation amount of the costs for the subsidy 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. The income and expenditure budget 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 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. The income and expenditure budget of the Subsidized Project” of the Form 2, “Brief explanation of subsidized project”.
9. “No Change”	9.
Note 1:～Note 3: “No Change” Remark: “No Change”	Note 1:～Note 3: Remark:
(Form 2)	(Form 2)

Outline of Subsidized Project	Outline of Subsidy Project
(Form 3) Certificate of Conformance to Qualification Requirements for the Project of Advancement of Retrieval Method and System of Fuel Debris and Internal Structures	(Form 3) Certificate of Conformance to Qualification Requirements for the Project of Advancement of Retrieval Method/System of Fuel Debris/Internal Structures
（Form 4） Input/Output information on Project of Advancement of Retrieval Method and System of Fuel Debris and Internal Structures *Please refer to the reference document 1 as an example.	（Form 4） Input/Output information on Project of Advancement of Retrieval Method/System of Fuel Debris/Internal Structures *Please refer to the reference document 1 as an example.
(Form 5) Response to Security Export Controls on Project of Advancement of Retrieval Method and System of Fuel Debris and Internal Structures	(Form 5) Response to Security Export Controls on Project of Advancement of Retrieval Method/System of Fuel Debris/Internal Structures

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

(Reference Document 1)～(Reference document 3)
“No Change”

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) Date of completion of handling:
Not handled	 State future plans
Not required	State reasons

(Reference Document 1)～(Reference document 3)