



Mr. Richard A. Meserve
Mr. Andy Hall
Mr. Philippe Jamet

28 April 2022

Dear Advisors,

Re: NRA comments on advisors' advice/comments received for two issues

As NRA asked advisors to comment on two issues: 1) failure in the physical protection of the Kashiwazaki-Kariwa NPP, and 2) NRA activities to supplement the action plan for the discharge of ALPS treated water from the Fukushima Daiichi plant, by e-mail on 21 August 2021, NRA received the responses from advisors: Mr. Meserve, Mr. Hall, and Mr. Jamet. NRA would like to thank advisors for their valuable and informative advice and to return comments of NRA Chairman and Commissioners as attached.

NRA is always grateful for your advice and is looking forward to hearing from you or discuss with you in-person soon.

Regards,

Chairman FUKETA Toyoshi
Commissioner TANAKA Satoru
Commissioner YAMANAKA Shinsuke
Commissioner BAN Nobuhiko
Commissioner ISHIWATARI Akira

#	Area	Subject	External Advisors Advices/Comments	External Advisors	NRA Comments for External Advisors' Advice/Comments
1	PP	How best to balance transparency and security	<p>Although there is no apparent way to address this dilemma completely, the adverse effects of secrecy can be reduced by a policy of being as open as possible on security matters, while withholding details that could reveal a vulnerability. By way of example, when the USNRC encounters a security failing at a plant as a result of an inspection or a force-on-force drill, it typically releases a public announcement to the effect that a security issue was identified, without providing specifics, and provides assurance that the failing was immediately addressed. (*1) There also is an annual public report in which the NRC provides general information on security matters, again without revealing details that might facilitate an attack by an adversary.</p> <p>This approach does not provide full transparency, but sensible members of the public certainly should appreciate why the detailed information that is held back cannot be provided. The limited reports provide assurance that security matters are subject to careful scrutiny, which by itself should be reassuring. Of course, the NRA's commitment to transparency on safety issues should have some spillover benefit when it is required to hold back information on security matters.</p> <p>(*1) Of course, this could require compensatory measures that are immediately implemented until a full correction can be established. The NRC typically asserts that it has not left the site until satisfactory security is in place.</p>	Mr. Meserve	<p><Chairman FUKETA></p> <p>It is recognized that the policy of not disclosing information that affects physical protection (PP) is common to all countries. Furthermore, there seems to be no fundamental difference in the concept of information disclosure between Japan and the United States, such as the disclosure of a fact that a problem has been identified. The decision of whether or not the information to be disclosed has an impact on vulnerabilities are discussed on a case-by-case basis. For this point, it is left to the discretion of the licensees and the regulatory authorities.</p> <p>For the comment "The NRC typically asserts that it has not left the site until satisfactory security is in place", I would like to sincerely thank you for pointing it out. It may have a major impact on regulatory officials for their future security incident response.</p> <p><Commissioner TANAKA></p> <p>As for "sensible members of the public certainly should appreciate why the detailed information that is held back cannot be provided", I fully agree with this comment. It is important that explanation on the security matters shall be performed by the government, for nuclear facilities case by the NRA, to promote understandings and enhancing sensitivity of the public for security matters.</p> <p><Commissioner YAMANAKA></p> <p>As you commented, information disclosure is important. From this view point I recognizes that there are some insufficiencies to disclose information on nuclear security to the public at the NRA, and which are currently under the process of making improvements with due consideration for security.</p> <p><Commissioner ISHIWATARI></p> <p>It is described, "By way of example, when the USNRC encounters a security failing at a plant as a result of an inspection or a force-on-force drill, it typically releases a public announcement to the effect that a security issue was identified, without providing specifics, and provides assurance that the failing was immediately addressed". I think NRA should take steps forward for more public announcements of detected security issues.</p>

					As for “The NRC typically asserts that it has not left the site until satisfactory security is in place”, when the security breach case was identified at Kashiwazaki-Kariwa(KK) NPS, I am afraid that the NRA inspectors probably did not stay at NPP until the adequate security was ensured. I believe that NRA should follow this NRC way of inspectors are not to leave the site until satisfactory security is in place.
2	PP	A challenge arising from the fact that upper management of a utility may lack the capacity to respond to security issues as a result of limited knowledge of security matters and limited security staff, as a result management may not exercise effective oversight	I have the strong view that the management of a utility must take responsibility for compliance with regulatory requirements, including those related to security. It is management’s obligation to put in place a process that assures that security matters are given careful attention and addressed in a timely and thorough manner at the appropriate management level. Management cannot be allowed to hide behind claims that its own staff does not share information or that management does not have the competence to oversee security matters.	Mr.Meserve	<p><Chairman FUKETA></p> <p>I once again recognize the difference in the image of managers between Japan and the United States. I am concerned about whether or not the “lack of duty to check carefully (neither top managers nor supervisors thoroughly checking)” was influenced by the “ideal leader image” in which the managers entrust the execution of their decision to the supervisors and take responsibility only in times of need. I am wondering whether there are differences in perception due to cultural differences, such as “micromanagement is bad for bussiness” and “the details should be left to subordinates.”</p> <p><Commissioner TANAKA></p> <p>I fully agree with your comment on the utility’s management obligation. Understanding this is widely known and successfully done in the US, I believe it is important to supervise as a Commissioner that this has been practically carried out in Japan as well.</p> <p><Commissioner YAMANAKA></p> <p>TEPCO has set the CEO’s responsibility and information disclosure in one of their management system documents on PP at KK NPS, however, it is said that their own set rule has not been kept due to the system deficiencies as well as their organizational factors.</p> <p>A cause of this incident will be clarified in regulatory inspections.</p>
3	PP	How the NRA should cope with this situation, as well as how the NRA’s leadership should interact with its own	The same rules apply as well to the regulator. Upper management should provide the same level of attention to security matters that it would apply to safety matters that have the same level of seriousness. Of course, upper management may not have sophistication in some security matters, but in that case it should assure that subordinate staff are knowledgeable and fully informed and understand the obligation to bring important matters to management’s attention. It appears to me from the timeline on pages 6-7 of the materials you forwarded that the NRA Commission was appropriately engaged with its staff in exploring the KK incidents and in taking action.	Mr. Meserve	<p><Chairman FUKETA></p> <p>I am aware that the special treatment on the grounds of security must be eliminated. Although there are certain restrictions on information disclosure, it is true that security has been overly regarded as a special matter, and the existence of people who desire this special handling (such as those whose accountability to the public is reduced, and that self-called security specialists who may be hidden their incapability by being treated specially) is also true. This special handling of security can be said to be a far-reaching cause of the KK NPS incident. The elimination of such special treatment for security from the NRA is urgently needed.</p>

		staff on security issues	My regulatory experience on security matters was limited until my term as the Chairman of the NRC. I served as a Chairman at the time of the 9/11 attack and was extensively involved on security matters in the subsequent years. This period involved extensive interaction with security staff within the NRC and in other agencies, obviously in a secure setting and mostly outside public view. Although I came to the task without extensive security experience, I found that security issues are usually easier to master than some of the technically intricate safety issues with which I was confronted.		<p>I totally agree with the comment "security issues are usually easier to master than some of the technically intricate safety issues". I think this is the basic information that should be publicly known.</p> <p><Commissioner TANAKA> Staff members who have sufficient knowledge on security, provide explanations to NRA senior management and draw attention are needed. While such staff members are assigned, efforts are needed to make them even more effective to address PP issues. At the same time, it is important to share knowledge, information, and operations among NRA commission members, senior officials, and PP experts.</p> <p><Commissioner YAMANAKA> Some insufficient information sharing cases were identified even in the NRA, due to the systematic problem in the new inspection system between NRA commission members and the Secretariat of the NRA (S/NRA). As the security matters are special in its nature, information sharing might be difficult within the S/NRA themselves. This is where the NRA needs to make improvements.</p> <p><Commissioner BAN> I agree with your comment that security issues are usually easier to master than some of the technically intricate safety issues. At the same time, I have an impression that expertise in nuclear security is not clearly defined. More systematically organized approach may be necessary in this field.</p>
4	PP	Additional information	<p>INSAG has published a report on the intersection of safety and security that discusses some of the matters raised in this response. *2 There is also a paper that may provide helpful background that is now being prepared as a joint effort between INSAG and the IAEA's Advisory Committee on Nuclear Security. Although this paper is not yet publicly available, Masaya Yasui is a member of INSAG and has been consulted with regard to the draft.</p> <p>*2 INSAG, "The Interface Between Safety and Security at Nuclear Power Plants," 2010 (INSAG-24) (https://www.iaea.org/publications/8457/the-interface-between-safety-and-security-at-nuclear-power-plants).</p>	Mr. Meserve	<p><Chairman FUKETA> INSAG-24 and INSAG/AdSec reports should have an impact on the awareness and understanding of NRA commissioners and executives rather than on the materials used to train regulatory officials. I do not like committee members calling themselves "in charge of XX field", but I think it is important to be aware that all commissioners are equally attentive as well as accountable, especially with regard to security.</p> <p><Commissioner TANAKA> I believe it is important to recognize the existence of interface between security and safety, to understand the differences and to find out how to make synergy.</p>

					The NRA will utilize the joint report of INSAG and Adsec for training and other purposes. Also, the NRA intends to proceed with the study by referring to the implementation guidelines that will be prepared by IAEA in the future.
5	ALPS treated water	Stakeholder communication with regard to the handling of ALPS-treated water	I fully endorse the NRA's commitment to complete transparency with regard to its decisions concerning the release of the ALPS-treated water. In the absence of such transparency, there will be suspicions and fear. In this connection, it may be productive to distinguish two different aspects of the process: (1) the adequacy of the plan to protect public health and the environment; and (2) confirmation that the plan is being followed. Because of the distrust that may exist with regard TEPCO and Japanese governmental actions, validation from independent entities should be (and are) part of the plan.	Mr. Meserve	<p><Chairman FUKETA></p> <p>The NRA is trying to pursue transparency as much as possible. Independent review is left to the IAEA. Upon the IAEA review, I believe that the Government of Japan and TEPCO should not take IAEA's words instinctively and should continue to engage in fair and accurate scientific discussions without ever looking at their authority.</p> <p><Commissioner TANAKA></p> <p>Reviews by national independent entities is important. As for the analyses, the JAEA will do it.</p> <p><Commissioner YAMANAKA></p> <p>As for the discharge of ALPS treated water into the sea, the NRA will review the implementation plan proposed by TEPCO on a scientific and technical basis and supervise the implementation process. My concern is that a series of reviews and monitoring activities will be secured for transparency and openness, and will be reviewed by the IAEA as a third party.</p>
6	ALPS treated water	—	Everything I have read would indicate that the plan, if implemented as intended, should provide assurance of protection to the public and the environment. As I understand it, all the radionuclides other than tritium will be reduced by ALPS processing to below Japanese and international regulatory standards. The treated water will be further diluted before release to assure that the tritium content is well below drinking water standards established by the World Health Organization. Then the released water will be further diluted by the sea.	Mr. Meserve	
7	ALPS treated water	Stakeholder communication with regard to the handling of ALPS-treated water	The broad outlines of the plan certainly seem adequately protective to me. *3 I understand from the materials you forwarded that the NRA will soon receive TEPCO's implementation plan, after which it will undertake a review of approximately three months. I assume that the TEPCO plan will include the engineering details, which of course should be subject to careful NRA examination to assure that there are no steps that could compromise the plan's objectives. *4	Mr. Meserve	

			<p>Although it is not explicitly mentioned in the outline of the Action Plan that you forwarded, it will be important to provide the public with the opportunity to review the plan and to submit comments, which of course should be subject to careful review by the NRA. The NRA should prepare and release responses to these questions.</p> <p>*3 The public focus has been on the radionuclide content of the water. I understand that there was a microbial sludge in some of the ALPS- treated water tanks; TEPCO plans should address how it has handled this sludge. I have not read whether there are hazardous chemical constituents in the water and it would sensible to assure that there are no chemical problems as well.</p> <p>*4 For example, I understand that the release will be about 1 km offshore in a fashion that will avoid recirculation with the dilution water. It will be in an area where there are no fishing rights in place. Such details need careful scrutiny.</p>		
8	ALPS treated water	Stakeholder communication with regard to the handling of ALPS-treated water	<p>There may be questions about the integrity of Japanese decision making. Although these concerns may be unwarranted, the decision to seek careful review of the plan by the IAEA and INRA should build confidence. The scheduling of a meeting with regulators from China and South Korea is also a noteworthy step to try to reduce international tensions associated with the release. Of course, the NRA should respond to any issues that arise out of these reviews.</p>	Mr. Meserve	<p><Chairman FUKETA></p> <p>Reviews have been merged into the IAEA review missions as INRA member countries also participate in the IAEA reviews.</p>
9	ALPS treated water	Stakeholder communication with regard to the handling of ALPS-treated water	<p>In this connection, the NRA or perhaps some other appropriate governmental entity could provide a publicly understandable explanation, in layman’s terms, of the radiological impacts from the discharge. The claim that radionuclide content will be less than the “sum of the ratio of the legally required concentration” is the correct regulatory direction, but may not be understood by the public and may even be concerning. Moreover, perhaps the risks could be put in some commonly understood framework. For example, a careful scientific calculation might reveal that if a person swam 24 hours/day over the discharge point, ate a full diet of fish caught at the exclusion boundary, and even drank 2L/day of local seawater, the resulting incremental annual dose from the release would be less than regulatory limits for public exposure and would be equivalent to residing in a granite building for xx hours per month, living at an elevation of yy meters, and less than a chest X-ray.*5</p> <p>*5 I obviously have not sought to perform an appropriate calculation. The suggestion is that a comparison of the dose from the release with other common radiological exposures may be informative and reassuring to the public.</p>	Mr. Meserve	<p><Chairman FUKETA></p> <p>It is hard to see how public looks at the NRA, but I think it is good to create and publish something like brochures for the general public.</p> <p><Commissioner TANAKA></p> <p>I expect that expressions that are easy to understand for the general public are important.</p> <p><Commissioner BAN></p> <p>The underlying cause of criticism and concern on the discharge of ALPS treated water appears to be not the risk of radiation exposure, but the distrust in the government and TEPCO.</p> <p>Under such circumstances, simplistic comparisons might give an impression that the NRA intends to trivialize the issue” and might provoke a sense of aversion. There is no doubt of the need for clear and comprehensible explanations, but I believe that</p>

					<p>the NRA should place more emphasis on transparency and openness in the review, inspection and radiation monitoring.</p> <p><Commissioner ISHIWATARI></p> <p>As for the safety of ALPS treated water, you suggest explaining as “residing in a granite building for xx hours per month, living at an elevation of yy meters, and less than a chest X-ray”. This way of explanation might arise unexpected discussions, so I think that it should be carefully indicated after thorough consideration.</p>
10	ALPS treated water	Stakeholder communication with regard to the handling of ALPS-treated water	<p>The implementation of the plan should also be subject to careful scrutiny in order to satisfy public concerns. That would certainly involve careful sampling of the water before release, as well as the sampling of seawater and of sealife after release. *6 The sampling should be guided by a comprehensive sampling plan that is subject to review and comment by stakeholders. Although the materials you forwarded indicate only sampling during the trial period, I assume that you intend comprehensive sampling during the entire release period. *7 In order to avoid any concerns with the integrity of the sampling, in addition of the required process and environmental sampling by TEPCO, a competent independent entity that is free of any conflicts should conduct confirmatory sampling. Then possibly the NRA or the Ministry of the Environment should perform integrated verification sampling. International monitoring by the IAEA, perhaps even including representatives of South Korea and China, will add further confidence in the implementation. All of the sampling information should be publicly released.</p> <p>*6 Bioaccumulation of radionuclides could occur in sealife and comprehensive sampling of it should be continued.</p> <p>*7 The program of sampling of seawater and fish should be undertaken before implementation of the Action Plan so as to provide a baseline of the background for comparison with results after the release has commenced.</p>	Mr. Meserve	<p><Commissioner BAN></p> <p>Monitoring is crucial to demonstrate that the discharge brings no substantial change in environmental radioactivity.</p> <p>As you pointed out, the NRA, as a member of the government, is committed to ensure systematic monitoring with transparency and reliability.</p> <p><Commissioner TANAKA></p> <p>Sampling of marine organisms is considered necessary. It is important to explain what kind of fish tends to accumulate tritium and whether there are any differences depending on the fish. Baseline measurements are also important, and at that time, it is considered necessary to explain the origin of tritium as a background (in nature, results of atomic bomb experiments, etc.) and its concentration.</p>
11	ALPS treated water	—	<p>The fishermen may fear adverse economic impacts even if the program ensures that the consumption of their catch will result in no adverse health effects. I have been pleased to read that the Government recognizes the possible adverse economic consequences for the fishermen and is prepared to buy marine products if the implementation of the program hurts sales. This seems to me to be an equitable and perhaps politically necessary step if the program is to proceed.</p>	Mr. Meserve	

12	ALPS treated water	—	I recognize that the release of the water is politically sensitive and that opposition by some is probably inevitable. But the water cannot remain in the tanks at the site forever and the deterioration of the tanks over time presents a safety concern. It certainly is wise to plan and undertake the safe release of the water, subject to careful control and monitoring. Your objective should not be to satisfy all possible critics, but instead to take reasonable steps to ensure that the program does not threaten public health or the environment. Your aim should be to satisfy a reasonable skeptic that the program is sensible and protective.	Mr. Meserve	
13	ALPS treated water	—	As a general position, I strongly support NRA's commitment for transparency. This position is fully consistent with the status of an independent regulator having the responsibility to control the protection of the public and the environment.	Mr. Jamet	
14	ALPS treated water	Stakeholder communication with regard to the handling of ALPS-treated water	One way to proceed is to follow a top-down approach and explain to the stakeholders the regulatory approach used to assess the acceptability of a certain level of nuclide in the water. This is for example what is done in page 5 of the presentation sent to the advisors (3. Requirement of Effective Dose at boundary of FDNPS). The concepts of effective dose and weighted sum of relative concentrations of different nuclides are used. They are obviously very useful to make assessments and regulatory decisions. However, they cannot always be easily understood by the general public. Therefore, a more practical presentation of assessment or measurement results might also be necessary. For example, if a fisherman is concerned about the contamination of his catches, it might be more relevant to indicate to him the quantity of fishes to be eaten every day before any significant risk of health effect. A similar approach could be followed for a swimmer with the time he should stay in the water.	Mr. Jamet	<p><Chairman FUKETA> It is hard to see how public looks at the NRA, but I think it is good to create and publish something like brochures for the general public.</p> <p><Commissioner TANAKA> The NRA will try to explain nuclides other than tritium.</p> <p><Commissioner BAN> I have no objection to the necessity of the plain explanation. However, fishery industry's major concern might not be the effects of radiation exposure, but harmful rumors about fishery products.</p>
15	ALPS treated water	Stakeholder communication with regard to the handling of ALPS-treated water	More generally, it is important that NRA informs stakeholders on its assessment methods and results. But it also seems equally effective (if not more) to listen carefully to the questions of stakeholders, focus on their concerns and provides them with answers which are easily understandable and directly relevant to their issues.	Mr. Jamet	<p><Chairman FUKETA> It may be necessary to discuss not only providing the committee materials and the NRA website, but also the preparation and publication of booklets for the general public.</p> <p><Commissioner TANAKA> The NRA will try to explain nuclides other than tritium.</p>
16	ALPS treated water	Stakeholder communication with regard to the handling of ALPS-treated water	Informing stakeholders and answering their questions is of course important but might not be sufficient. There is now a tendency that stakeholders want more and more to be part of the assessments, and of the control of the application of the decisions. In the case of ALPS treated water discharge, such involvement might take place at different stages of the project: assessment of the implementation	Mr. Jamet	<p><Chairman FUKETA> The Commission on Supervision and Evaluation of the Specified Nuclear Facilities plays the role mentioned in the comment "Specific working groups can be organized allowing stakeholders to follow the project and express their comments and suggestions". It seems to be a practically feasible limit as to the composition of members as well as the frequency of holding meetings.</p>

			<p>plan submitted by TEPCO, monitoring of the construction and commissioning tests, participation to the monitoring of the environment.</p> <p>Such involvement of stakeholders is not always easy to organize. However, some possibilities have already been explored in several countries and can be considered, if not already available in Japan:</p> <ul style="list-style-type: none"> - Public consultation of documents sent by TEPCO or drafted by NRA can be performed, with response of NRA to the comments and suggestions; - Specific working groups can be organized allowing stakeholders to follow the project and express their comments and suggestions; - Representatives of stakeholders can be invited to observe inspections or specific field visits of stakeholders can be organized outside of formal inspections; - Possibility can be given to stakeholders to use independent experts to perform assessments of technical documents; - Possibility can be given to stakeholders to participate to environmental monitoring; - Possibility can be given to stakeholders to use competent (and certified) laboratories to perform independent environment measurements. <p>Such activities certainly imply significant involvement and resources from NRA in order to follow-up the positions of stakeholders and answer their questions and suggestions. It is also clear that not all stakeholders will accept to participate. Some might also use these opportunities to fight the discharge of ALPS treated water discharge. However, it seems to be a promising approach to establish a constructive interaction with stakeholders and to focus discussions on the most significant radiological subjects.</p>		
17	ALPS treated water	Stakeholder communication with regard to the handling of ALPS-treated water	<p>The discharge of ALPS treated waters is obviously a very sensitive subject in Japan and has led to many discussions. I understand that NRA has expressed open views about this solution quite early in the debate. In this context, it seems important that in its future public interactions and interventions, NRA carefully preserves its image of an independent regulator. NRA should clearly recall that now that the decision of discharge has been announced at the level of the Ministerial Council, its own responsibility is to assess the design of the facility, control its construction and operation and monitor its environmental impact, but not at all to promote the project.</p>	Mr. Jamet	<p><Chairman FUKETA></p> <p>The NRA understands that it has consistently expressed its position to support the implementation of treated water discharge into the sea and its position to encourage the early commencement of treated water discharge. It is an inevitable road for TEPCO Fukushima Daiichi NPS decommissioning, and its implementation is in accordance with the NRA mission of "to protect people and the environment from the harmful effects of radiation".</p> <p><Commissioner TANAKA></p> <p>"Map of Measures for Mid-Term Risk Reduction" denotes the ALPS treated water discharge into the sea is one of the important issues to facilitate decommissioning work of Fukushima Daiichi NPS. It does not mean the NRA promotes the discharge, but considers the discharge is one of the practically feasible option since long ago.</p>

					<p><Commissioner ISHIWATARI></p> <p>You commented that the NRA should clearly recall their responsibility to assess the design of the facility, control its construction and operation and monitor its environment impact, but not at all to promote the project. I believe the NRA should sincerely accept this advice.</p>
18	ALPS treated water	Stakeholder communication with regard to the handling of ALPS-treated water	<p>NRA already has a strong transparency and communication policy. Its activities and decisions are publicly available (except in case of restrictions due to security). This includes, for example, publication of documents and access of the public to Commission meetings. NRA might consider that existing organization and practices are adequate and sufficient in the context of the public concerns raised by the discharge of ALPS treated water.</p> <p>NRA might also think that enhancing its proactivity and increasing interactions with stakeholders might be relevant in the specific context of ALPS treated water discharge. A global approach could then be developed, including:</p> <ul style="list-style-type: none"> - Identification of most important stakeholders and their representatives (neighboring populations, fishermen, merchants, local and national representatives, ...); - Review of the existing communication channels and organization of new ones if needed (publications, public meetings, interventions in medias, participations to debates, ...); - Organization of dedicated working groups with stakeholders if considered adequate; - Preparation of participation to inspection or site visits of stakeholders, if not already existing; - Preliminary contacts with medias for future interviews or articles. <p>The international reviews by IAEA and INRA are very good initiatives which hopefully will contribute to public trust in NRA's assessments and regulatory decisions. The discussions with regulators from China and South Korea are also very good initiatives. I hope they will allow fruitful discussions focused on relevant radiation and environment protection issues.</p> <p>Some already mentioned suggestions could also be extended to foreign stakeholders, especially in the field of environment monitoring.</p>	Mr. Jamet	<p><Chairman FUKETA></p> <p>Until now, there have been no efforts other than the NRA Commission Meeting and the Commission on Supervision and Evaluation of the Specified Nuclear Facilities. Media handling is required to be studied.</p> <p><Commissioner TANAKA></p> <p>French government explains neighboring countries the discharge of tritium from La Hague reprocessing plant as their valuable experience.</p>
19	PP	—	<p>In France, safety and security are regulated separately. However, the two regulators have a common TSO (IRSN). My area of competence is safety and, although I spent about 15 years at IRSN, I was never deeply involved in security. My knowledge in</p>	Mr. Jamet	<p><Chairman FUKETA></p> <p>It is the other way around in Japan. As a regulatory agency, the NRA deals with both sides of safety and security. In JAEA, only the safety and disaster prevention sector is the regulatory TSO and the security sector is not.</p>

			<p>this field is therefore limited and I will only make one comment about responsibility and management.</p>		<p><Commissioner TANAKA> The NRA provides trainings on security such as its concept for those who involve in tasks other than security.</p>
20	PP	<p>A challenge arising from the fact that upper management of a utility may lack the capacity to respond to security issues as a result of limited knowledge of security matters and limited security staff, as a result management may not exercise effective oversight</p>	<p>Ensuring security is one of the fundamental responsibilities of the operator. Security should therefore be part of the management system of a plant and imply all the necessary management levels including the upper management itself. It is difficult to imagine that the upper management discharges adequately its responsibilities if it is not informed about the security situation in the plant. It is possible that, at a specific time, some deficiency occurs in the oversight, but it is also the responsibility of the upper management to correct it.</p> <p>Therefore, the limited number of security experts in Kashiwasaki-Kariwa does not seem to be an acceptable justification for the lack of oversight by the upper management. After identification of this deficiency, it is precisely the responsibility of the upper management to make the necessary organizational or management system modifications.</p>	Mr. Jamet	<p><Chairman FUKETA> I certainly agree with what you pointed out. Though there is some degree of difference, it is recognized that there was a similar problem in the NRA.</p> <p><Commissioner TANAKA> I fully agree with your comment. The NRA should conduct inspection and other activities while keeping this comment in mind.</p> <p><Commissioner YAMANAKA> Considering the result of inspections in the past, this case is assumed to be caused by TEPCO's organizational factors, especially strong hierarchical culture and vertically divided management structure. Moreover, it seems that TEPCO owes the responsibility of the case to some specific employees.</p>
21	PP	<p>A challenge arising from the fact that upper management of a utility may lack the capacity to respond to security issues as a result of limited knowledge of</p>	<p>It should also be noted that even if the number of security experts is limited, the actual security of the plant depends upon a much larger number of people. Of course, sensitive information should be restricted to the persons who need to know. However, the awareness of security importance has to be developed in a much larger group using useful but not restricted information. This is for example necessary to ensure the contribution of staff to the identification and correction of deficiencies or to promote security culture. I cannot see how this could be achieved without a strong leadership from the upper management. This in turns implies that the upper management is well informed about the situation in the plant, in order to demonstrate leadership and deliver credible messages.</p>	Mr. Jamet	<p><Chairman FUKETA> I also believe that it should be taken as an advice to the NRA, especially the commission.</p> <p><Commissioner TANAKA> Top management, with the staff member's supports of concerned department, should recognize what is important and what they should do.</p> <p><Commissioner YAMANAKA> Although the NRA should wait for the detail results of inspections were revealed before making final decision, it seems that this case arose not from the state of degradation, but from the corporate culture, namely lower than the level one in</p>

		security matters and limited security staff, as a result management may not exercise effective oversight			<p>Shein's definition. TEPCO should conduct self-evaluation on the foundations that prevent TEPCO from fostering corporate culture, and I think humble leaders are required for that purpose.</p> <p><Commissioner ISHIWATARI></p> <p>I agree with your comment "This is for example necessary to ensure the contribution of staff to the identification and correction of deficiencies or to promote security culture. I cannot see how this could be achieved without a strong leadership from the upper management."</p>
22	ALPS treated water	Stakeholder communication with regard to the handling of ALPS-treated water	The people closest to the site would be expected to be one of the groups most concerned about the impact of the discharges on their health and livelihoods. In my experience, the regulatory body benefit by engaging with them directly through public meetings. These can allow the regulator to explain the scientific and technical bases of its decisions and the actions that it will take to provide assurance that the resultant impact on the environment is as small as forecast. These also enable the regulator to better understand local concerns and respond to them. Engagement with people from a range of different backgrounds requires particular communication skills, however, which some regulators may not have naturally, and I have found it helpful to seek advice from others with greater expertise in this area. It may be helpful to engage an expert facilitator from an organization recognized to be independent of the regulatory body to act as an "honest broker" and lead such meetings, to avoid any perception that the regulator is controlling the agenda and seeking to manage peoples' concerns. Even if the regulators' position cannot be reconciled with the positions taken by all other participants in the meetings, it is to be hoped that a majority would recognize that the regulator has acted in good faith.	Mr. Hall	<p><Chairman FUKETA></p> <p>I think the current situation is that people whose position is opposed to the nuclear power use is in a position against the discharge of treated water and that we cannot find an approach that does not end the dialogue with the media as fruitless.</p> <p><Commissioner TANAKA></p> <p>It will become necessary to provide explanations to the local resident such as prefectural level. In that case, the point is to understand correctly what the people would like to know and explain it in plain words.</p> <p><Commissioner BAN></p> <p>In any situation, communicating with stakeholders is becoming more and more important. To make it more substantial than public meetings for one-sided explanation, an independent facilitator who is perceived as neutral and fair by majority of the public is indispensable. Unfortunately, it is difficult to find such an individual or group in Japan.</p> <p><Commissioner ISHIWATARI></p> <p>You commented, "It may be helpful to engage an expert facilitator from an organization recognized to be independent of the regulatory body to act as an "honest broker" and lead such meetings". However, it is actually difficult to find such a person.</p>
23	ALPS treated water	Stakeholder communication with regard to the handling of ALPS-treated water	People who consume foodstuffs and purchase other products from the area around the site may be another group concerned about the impact of the treated water discharges, and their concerns may livelihoods of the people working in the vicinity of the site. This suggests that it would also be beneficial to communicate with them to inform them of the regulatory processes followed and standards being applied and to provide reassurance. The regulator might find it useful to establish working	Mr. Hall	<p><Commissioner TANAKA></p> <p>It may be effective to explain to the local people with scientific background such as school teachers.</p>

			relationships with some sympathetic journalists and people in the media who might help it explain itself to local people.		
24	ALPS treated water	Stakeholder communication with regard to the handling of ALPS-treated water	There are a variety of ways that regulators engage with their international peers, participation in international conventions, meetings and missions being frequent examples. A regulator may build confidence in its decisions in communities in other countries by being open and sharing information with those countries' regulators, as then those other countries' regulators may independently confirm the regulatory decisions meet appropriate international standards. The UK has done this through bilateral information exchanges with a number of other countries, based on formal information exchange agreements that maintain security and protect commercial confidentiality. It has also agreed long and short-term secondments of inspectors to and from nuclear regulators in other countries, so that each can get a better understanding of how the other regulates. This has been particularly beneficial in helping both parties to recognise and adopt best practices. The information exchange and secondment arrangements between the UK and France are an outstanding example of this, having been in place for around 30 years.	Mr. Hall	<p><Chairman FUKETA> TRM is exactly that. I have an idea of holding the TRM meeting with public observers.</p> <p><Commissioner TANAKA> Information exchange or secondment arrangements of inspectors to neighboring countries that UK has done must be effective. However, as for Japan, China and Korea, it would be difficult to conduct secondment of inspectors, therefore, a regular information exchange meeting called Top Regulator's Meeting among three countries has been conducted since 2008.</p>
25	PP	Additional information	I would expect a nuclear licensee to have a management system for site security with some similar features to its management system for site safety. This would identify security threats, and the physical and administrative systems put in place to mitigate them and to reduce the associated security risks to acceptable or tolerable levels.	Mr. Hall	<p><Chairman FUKETA> The indicated comment is understood as one of the items in the additional inspection.</p> <p><Commissioner TANAKA> It is important to handle the establishment of security management, recognizing the importance which differs from that of safety.</p>
26	PP	Additional information	As part of this management system, I should expect there to be a procedure for identifying, investigating and reporting events and incidents in which these systems are found to have been degraded, in order to learn lessons, minimise recurrences and reduce risks in the future. This procedure should classify the events and incidents according to their security significance and identify the internal (to the licensee) and external (to the regulator) reporting requirements and the timescales on which they should be reported. I would expect the reporting criteria and timescales to be determined either by the licensee, with the regulator's agreement, or by the regulator and imposed upon the licensee. The reporting timescales should reflect the urgency with which remedial actions need to be taken, and might, for example, require reporting to the regulator as soon as confirmed and within 24 hours at the latest for the more serious incidents. I would further expect any failure of a licensee to either correctly classify an event or incident in accordance with the	Mr. Hall	

			criteria or to report within the set timescales to result in an investigation and the imposition of sanctions, in proportion to the severity of the breach of the procedure.		
27	PP	Additional information	The period between March 2020 when some physical protection equipment at the KK NPS became defective and the 27 January 2021 when TEPCO reported this to the NRA Secretariat is in my opinion excessive. I would have expected a licensee to report such a security incident and the alternative measures that it was putting in place to mitigate the security risks to the regulator within days, and both the licensee and regulator to instigate investigations to determine the root cause and any breaches of regulations.	Mr. Hall	
28	PP	Additional information 追加情報	With respect to the unauthorised access to the Main Control Room incident, this was reported to the NRA immediately as I would have expected. The presentation does not say what actions were taken with respect to the individuals involved but were such an incident to occur in the UK, I would expect the person who gained entry using a colleague's pass to immediately have his own rescinded by the licensee and further sanctions to be considered following an investigation. I imagine that further physical protection measures would also be considered such as requiring personnel to enter PINs in conjunction with presenting their passes, if this was not already required.	Mr. Hall	<Commissioner BAN> As you pointed out, strict observance of existing rules will not be sufficient. Additional measures in terms of facilities and equipment should be taken.
29	PP	How best to balance transparency and security	The apparent conflict between a policy of openness and transparency and maintaining security is one that many regulators have to face. Maintaining security is paramount and openness cannot be allowed to undermine this. However, it is possible to enable a degree of openness without compromising security by recognising that security events and incidents may be outlined in general terms in public reports provided that details of vulnerabilities and protective measures are not disclosed. For example, one might note that an NPS has a variety of systems for the prevention and detection of unauthorised entry without elaborating on what they are or their capabilities. One might even note, for example, that this includes some specific devices such as CCTV (which an intelligent layperson might anticipate), but security would not be compromised provided that details such as numbers, locations and capabilities were not disclosed. Furthermore, in my view maintaining security should not inhibit the regulator from disclosing in general terms that security events or incidents have occurred, although of course only after the security vulnerabilities have been eliminated and without providing any information that could assist a hostile party. A demonstration by a regulator that it understands the security risks facing a nuclear site and the measures necessary to minimise	Mr. Hall	<Chairman FUKETA> It is recognized that the policy of not disclosing information that affects PP is common to all countries. Furthermore, there seems to be no fundamental difference in the concept of information disclosure between Japan and the United Kingdom, such as the disclosure of the fact that the problem has been identified. Although there is a possibility that a decision of whether the information disclosed has an impact on the vulnerability may differ in each case, but this is only be at the discretion of the operator and the regulatory authorities. <Commissioner TANAKA> The NRA should study and verify what kind of information would be disclosed and how it is carried out to give the public the confidence for security and to make them reliable to the licensee for their security management.

			these should reassure the public and help build its confidence in the licensee's control of these risks.		
30	PP	A challenge arising from the fact that upper management of a utility may lack the capacity to respond to security issues as a result of limited knowledge of security matters and limited security staff, as a result management may not exercise effective oversight	Security information should only be disclosed to persons with the appropriate security clearances and on a need to know basis. The regulatory body responsible for nuclear security clearly needs to know about security threats, protection measures, events and incidents at a corporate level and must be provided with this information in a timely manner by the licensee. Only staff with direct security regulation responsibilities need access to this information and these will be limited in number. The management chain for security regulation should, however, extend to the most senior levels in the regulatory body. This is to ensure that senior managers have full oversight of the security issues being managed by their staff in order to ensure that the regulatory decisions for which they are ultimately responsible are being taken in accordance with due process and appropriate standards are being maintained. Consequently, security information must be shared throughout the management chain of the staff responsible for security regulation up to the most senior levels. This requires all regulatory staff in this management chain to be vetted and cleared to have access to security information to appropriate levels.	Mr. Hall	<Commissioner TANAKA> The NRA will examine the points to be further improved in the NRA reporting system comprising upper management, staffs and advisory experts.
31	PP	A challenge arising from the fact that upper management of a utility may lack the capacity to respond to security issues as a result of limited knowledge of security	A useful tool for managing a range of risks to the regulatory body is the 'Risk Register'. This may include the risk of top regulators' oversight of the regulatory process being limited by restricted information flow due to security concerns. This register identifies and classifies all the risks to efficient and effective regulation together with the measures necessary to control them and individual responsibilities for taking actions forward. The risk register should be developed and maintained by a senior manager and reassessed on a periodic basis to ensure that the control measures remain effective and to identify any new emerging risks. Reporting of a risk register and the results of its periodic reassessment to top regulators would help to keep them informed on how regulatory risks are being managed.	Mr. Hall	<Chairman FUKETA> Though the listed methods are effective and useful, it is important to reform the awareness and recognition of top management of the NRA first of all. <Commissioner YAMANAKA> Assuming that the "risk register" method is utilized in the risk management, I would like to be informed more in detail. In the new inspection system, the NRA designates significance classification for each nuclear security event. If an unidentified event is found, it will be classified according to the specific regulatory guide. <Commissioner BAN>

		matters and limited security staff, as a result management may not exercise effective oversight			<p>Apart from whether to take the form of “risk register”, it will be important for the Commission to regularly examine the adequacy of the regulatory requirements for nuclear security.</p> <p><Commissioner ISHIWATARI></p> <p>As you recommended in the last paragraph to introduce the “risk register” for nuclear security.</p> <p>It is rather difficult to understand what it is precisely, but it is understood that it is a kind of worksheet to list up risk items for nuclear security and fill up with the result of checks one by one.</p> <p>If more information is provided in detail, i.e., implementation examples, we should study what could be adopted for Japanese entities.</p>
32	ALPS treated water	—	Overall comments from External Advisors	—	<p><Commissioner YAMANAKA></p> <p>As for the ALPS treated water discharge into the sea, the NRA recognizes the importance of risk communication for all including ourselves.</p> <p>In the meeting with the local people, it is important to explain the review and supervising activities and the related regulatory standards clearly.</p> <p>The NRA is not in the position to promote the discharge so that the NRA’s explanation will be different from that of promoting side.</p> <p>As pointed out the importance of information dissemination to the international community, the NRA should endeavor to obtain understandings of neighboring countries and take necessary considerations into the review by the international organizations such as the IAEA.</p> <p><Commissioner ISHIWATARI ></p> <p>All three external advisors who provides advices and comments this time, recommend the NRA to exchange views on ALPS treated water discharge into the sea with Chinese and Korean regulatory bodies. I think it would be a good idea to consider holding the meeting, with other countries not limited to Chinese and Korean representatives and the IAEA.</p>

33	PP	—	Overall comments from External Advisors	—	<p><Commissioner TANAKA> Security measures in the United States, the United Kingdom, and France are often different from those in Japan. I believe that effective measures fit for Japan are necessary.</p> <p><Commissioner YAMANAKA> KK nuclear security issue seems to have both facilities and equipment factors as well as organizational and human factors. I think that the decision on whether or not both factors are unique to TEPCO should wait for the results of inspections. Improvements in the factors of facilities and equipment can be made immediately and are considered to be more effective than organizational and human factors. By multiplexing, diversifying, and improving environmental performance in physical barriers and protective equipment, it seems to be possible to directly carry out improvement of nuclear security. I would like to propose a method to clarify the functions required, to confirm them during the review, and to verify the adequacy through inspections. On the contrary, it is anticipated that it will take a considerable amount of time for improvements in the management system to demonstrate its effectiveness. In this regard, I intend to examine improvement measures while looking at the results of the inspections.</p>
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