Content of our announcement / notification at the initial stage of accident and the content of announcement of official residence / government < time series >

We apologize once again that there is a matter of the disclosure of information immediately after the Fukushima accidentWe reflect deeply on the disclosure of information immediately after the accident and we will continue to take steps to obtain the trust from local residents and society.

(Remarks)

- > This is a list that we recounting of announcement and report at accident at the Fukushima Daiichi Nuclear Power Plant that found as at today
- Black character in the table means TEPCO's action (including those associated with official residence, NISA (hereafter NISA), blue character means NISA, green character means official residence, character of pink shows that regarding the instruction of the government.
- Code listed evaluation items are divided into three groups by TEPCO nuclear reform special task force—shows: a) expected to be disclosed with false Recognition, b)Lack of positive attitude to publish promptly c) official announcement that delayed because coordination with external took time..

Da	ate / time	Evaluation *	Main external explanation matter (including those with the press unexecuted though informed to administrative body) / event	Remarks
3/11	16:54	b	Press "Article 10 of Nuclear Emergency Act" • 1F1 - 3. It was judged that a specific event (all AC power loss) based on regulations of clause 1, Article 10 of Act on Special Measures Concerning Nuclear Emergency Preparedness ("Nuclear Emergency Act" hereafter) occurred at 15:42, and notified to the government office etc. Press material	It takes about 54 minutes from a notification to a press announcement.
	17:40	а	Press "Article 15 of Nuclear Emergency Act" [False notification] • Since water filling volume for the emergency core cooling system of 1F1 and 1F2 could not be checked, it was judged that a specific event of Article 15 of Nuclear Emergency Act occurred at 16:36, and notified to the government office etc. Afterwards the specific event was cancelled once because the monitoring water level was recovered. However, this was activated again at 17:07. Press material	the notification said that water filling situation was not known but the press announced that water filling volume cannot be checked.
***************************************	19:35	а	Press "1F time report (19:00 report)" [False notification] Cooling with IC on 1F1 and water filling with RCIC on 1F2 and 3. Press material	First report of the 1F's situation. It says " the cooling of Unit 1-3 are in success", but on the other hand, there is a disagreement with the section 15 reports(Status of water injection is Unknown) of both Unit No. 1 and 2. A 15-article report and those with a disagreement
	At about 19:50		the official residence interview "Issue of declaration of emergency situation" • "A nuclear power safety task force was held, recognizing that an event corresponding to item 2, clause 1, Article 15 of Nuclear Emergency Act occurred at 16:36 and it was necessary to take emergency measures to prevent nuclear disaster expansion. Then a declaration of nuclear emergency situation was issued according to the regulations of the Article. At present, the influence of radioactive substance to the outside of the facility is not confirmed. Hence at present, it is not necessary for residents and stayers in the object district to take a special action at once."	
=	21:02 /21:15	а	 Notification sentence "Situation of unit No. 2 operation and preparation for evacuation start request" / "Notification of unit No. 2 accident progress forecast" [Not announced] There is a possibility that the water level of the nuclear reactor reaches TAF since the state of water filling by RCIC to the reactor cannot be checked. Hence the preparation of request has been made to the municipality for the evacuation of local residents. The estimated reaching of TAF is about 21:40. The estimated time of core damage start is about 22:20. RPV damage is estimated to be at about 23:50. Unit No. 1 is being evaluated. Notification sentence 	 Compared with Fukushima Prefecture having issued the evacuation directive at 20:50, the notification of TEPCO was late. The contents of the Notification sentence differ from the contents of the press at 19:00 and 21:00.
, manual	21:55	b	Press "1F time report (21:00)" [Partially false notification] • Although cooling was done in 1F2 RCIC, operation state was unknown. Water level check could not be made. Call for evacuation was made to residents. (Within 3 km range in radius). Press material	 it was not announced from when operation state became unknown it was not announced "unit No. 2 accident progress forecast"
***	At about 22:00		 the official residence interview "Evacuation directive in 3 km range" One of nuclear reactors has become the state that it cannot be cooled as already reported by some source. We would like you to evacuate just to be safe, for the case where this state continues. Interview record 	
	At about 22:18	а	"Unit No. 2 water level checked *" is transmitted in the pressroom. * The formal announcement (press sentence) was made at 0:30. • It can be confirmed that the water level beyond the fuel level is secured. It is necessary to keep watching if sufficient cooling is made. Press report etc.	

	ate / time	Evaluation *	Main external explanation matter (including those with the press unexecuted though informed to administrative body) / event	Remarks
	23:15		 NISA interview "Water level of unit No. 2 is stable." He spoke "According to 22:00 report of Tokyo Electric Power Company, it was checked that the water stayed at 340 cm from the upper part of the fuel rod and water level was stable on unit No. 2 for which nuclear reactor water level was not confirmed." He explained that the water vapor pressure rises if the water in the reactor is lost and there is a danger of radioactivity leaking from the containment vessel to the outside in the worst case, however, the safety can be secured at present. Press report etc. 	
	23:40	b	 Notification sentence "Unit No. 1 turbine building dose rise" [Partially not announced] In the survey at 23 o'clock, it was 1.2 mSv/h at the north side on the first floor and 0.5 mSv/h at the south side on the first floor of the turbine building. The cause is being investigated. Notification sentence 	 No information was press-released though this fact might be an alarm for severe anormity of unit 1 According to press reports , the fact "dose in the turbine building has come higher than usual value" was published at Fukushima
	21:51 - 23:50	b	As for dose rise on unit No. 1 [Partially not reported /not announced] * Turbine building dose rise was confirmed concerning the notification sentence only. 21:51 on 11th: It was reported to the central control room from the member entered in the reactor building to check the body side water level of IC and reactor water level that he gave up site check since the numerical value of pocket dosimeter (APD) with warning went up to 0.8 mSv in a very short time. In the central control room, entering the reactor building was once prohibited and this was reported to the power plant task force. 22:03 on 11th: The power plant task force, on receiving a report that the numerical value of APD had risen from the shift supervisor, dispatched two safety persons to measure the dose of radiation at the site. 23:00 on 11th: The two safety persons going to the site measured the dose before the double door on the first floor of the reactor building and checked 1.2 mSv/h before the north side double door on the first floor of the turbine building. They reported these to the power plant task force. The dose inside the reactor building was estimated to be about 300 mSv/h judging from the dose of radiation measured. Hence the power plant director prohibited entering the reactor building at 23:05 on 11th for securing the personal safety and informed this to the central control room. From the state that the dose of radiation rose whereas information was given that IC functioned and the reactor. The two safety persons who had been measuring doses of radiation at the site placed labels of off-limits on the north side double door at 23:33 on the 11th and on the south side double door at 23:50 and completed off-limits measures. In-house accident investigation board	
3/12	At about 00:00		 the official residence interview "Interim results" The state of water filling by the emergency core cooling system impossible is continuing, however, there is no discharge of radioactive substance at present. We would like residents to act calmly according to the instructions of the municipality, the police, the fire fighting and the Self-Defense Forces who are supporting us while observing the information of the television and the radio. 	
	0:30	-	Press sentence"1F time report (0:00 report)" • The water level of unit No. 2 could be checked using temporary power supply, and the water level was steady. Press material	
	1:35	-	 Press sentence "Unit No. 1, containment vessel pressure abnormal rise" 1F1, Article 15 notification (Containment vessel pressure abnormal rise was judged at 0:49.) The press room replied as below. "We examine the measures to relieve pressure to the outside since the measured numerical value of the pressure in the containment vessel of unit No. 1 exceeded the design. The radioactivity might leak outside in this stage". A question was given "Is there a danger of burst while doing nothing?" After a silence, they explained "We will conduct venting in consultation with the country and the municipality". Press material and press report, etc. 	
	2:47	b	Notification sentence "Unit No. 1 plant situation" [Not announced] • At the time of 2:30, "D/W pressure 840 kPa, reactor water level TAF + 130 cm (A system), TAF + 53 cm (B system)" Notification sentence	 These contents were not announced. About "D/W pressure, NISA announced possibility of increase internal pressure of PCV (from 400kPa to 840kPa) at the time of 4:30. design limit: 400kPa

	Evaluation		Reference - 3
Date / time	*	Main external explanation matter (including those with the press unexecuted though informed to administrative body) / event	Remarks
3:06- 3:48	а	 Joint press conference concerning "Vent execution" (Managing director Komori attended from our company.) We spoke "Pressure has risen on unit No. 1 but has not risen twice yet. This also applies to unit No. 2. Concerning the accuracy of parameter, however, we should keep doubting if the value is true to unit No. 2 on which the blind time of water filling function is longer". For the water filling situation of unit No. 1, we explained "There is a unit like an accumulator tank and we can expect water entry from it. And we are continuing making up water by filling into the accumulator tank". In questions and answers, they asked "It is all right by connecting the power supply. Preparation for power connection is made. Remaining thing is only the arrangement of person. You have been giving these explanations at great length. And you explained that the pressure of unit No. 1 has also risen. All of a sudden, you started explanation to conduct pressure reduction work on unit No. 2. I don't understand the reason for it at all". Then we explained "We are doing best in the preparation for power connection. The plant that became doubtful first whether water supply was secured or not was on unit No. 2". Afterwards, the employee of our company transmitted that unit No. 2 RCIC operation could be confirmed at the interview place (content of notification sentence at 3:33). To this, a statement was made that executing vent might not be necessary. The director of Nuclear and Industrial Safety Agency explained "We apologize for the confusion encountered on units No. 1 and 2. We do not intend to open unit No. 1 first and then No. 2. We will open units entirely without referring to unit numbers". Then the interview ended. Minutes of interview 	For Unit1 It had misunderstanding, that IC is working.
At about 3:12		 the official residence interview "About execution of venting" As announced by Tokyo Electric Power Company and the Minister of Economy, Trade and Industry, we received a report from Tokyo Electric Power Company that they made a judgment that it would be necessary to take a measure of relieving internal pressure to secure the safety since the pressure of the reactor containment vessel might have risen. It is thought that this is an unavoidable measure to secure the safety, though we consulted with the Minister of Economy, Trade and Industry. There is a possibility that the radioactivity material in the reactor containment vessel is discharged to the atmosphere along with this work. However, the amount is estimated to be little by a prior evaluation. Considering the direction of the wind toward the sea, the safety of the residents is sufficiently secured by means of evacuation from the area within 3 km from the power plant and indoor waiting in the area within 10 km. Residents are requested to act calmly. 	
4:15	-	Press release, "1F announcement (04 hour00 minute) • IC was operating but stopped. PCV, pressure was rather high but stable. Water level was low but stable. • 1F2, RCIC operation status was checked. Press document	D/W pressure of unit No.1 showed a peak at 2 am on March 12, and remained at same level or dropped a little. The expression " remain unchanged at a little bit high level" was used to explain such a trend.
4:55	b	 Report, "Dose in the premise of the power plant increased". [Not published] Dose in the central control room of reactor No.1 (around 4:00) 150uSv/h, the important anti-seismic building (4:03) 0.08uSv/h, monitoring post at the main gate (4:23) 0.59uSv/h, monitoring post No. 8 (4:15) 0.23uSv/h An ambulance was requested due to an emergency patient. Report	The only fact, "dose in the premise has come higher than usual value", was published by press announcement (Head office, 5:00 announcement). For increase of dose in the central control room of reactor No.1 was not published.
5:14	b	 Report, "External leakage of radioactive material" [Not published] Since radiation dose in the premise increased and D/W pressure showed trend of decrease, they judged at 5:14 that external leakage of radioactive material was occurring. Reactor No. 1 D/W pressure 0.84MPa→0.77MPa (5:09) Report 	> "Leakage of radioactive material" was not published.
Around 5:10	b	Report, "Radioactive material was detected at around the main gate". [Not published] Radioactive material was detected with charcoal at around the main gate (nuclide is now being checked), 2.5×10-4 becquerel/cm3 Report	" Detection of radioactive materials" was not published.
Around 7:00		 the official residence interview, "Evacuation order for people within the range of 10 km". As the pressure in the containment vessel is increasing, we have taken a measure to reduce pressure in the containment vessel of the reactor No. 1 to ensure safety by the order of Minister of Economy, Trade and Industry. For this, a part of the air containing radioactive material is exhausted to the outside but this is a controlled exhaust. At this point, outflow of radioactive material to the outside has not been reported. Minutes of conference 	

Date / time	Evaluation	Main external explanation matter (including these with the process unexecuted though informed to administrative heads) / exent	Reference - 3
	*	Main external explanation matter (including those with the press unexecuted though informed to administrative body) / event	Remarks
7:59	b	 Report, "Situation at 7:30". [Not published] Radioactive materials were detected with charcoal at around the main gate of the power plant and around the front of the entrance of the important anti-seismic building (in externally published report, nuclide is blackened), Cable placing work was made for regaining power for ventilation operation for the reactor No. 1. 	" Detection of radioactive materials" was not published.
Around 9:00	-	Lecture for reporters, "Situation of the reactor No.1". • Implementation situation of ventilation for the reactor No. 1 and starting of water feeding were informed. Newspaper, etc.	
9:45		 NISA interview Content of report of 23:40: Explained, "considering the information that the pressure in the containment vessel of the reactor No. 1 was state that was exceeding the maximum designing usage pressure since before dawn of 12th and that the radiation dose at around the main gate has rapidly increases since early morning of the same day, if based on the water level data at the time 9:15, a part of the fuel is supposed to be exposed and it is thought to be possible for a part of the cladding begins to melt." And when questioned by a reporter, "Are you saying there is a possibility that a part of the fuel begins to melt?", he only explained "there is no denial of possibility." Government accident investigation committee 	
11: 03 - 11:42	b	 Press conference on electric power supply and demand (attended by Vice President Fujimoto and others), "Questions on fuel melting". At first Vice President Fujimoto said, "The reactor stopped safely but we gave the local society and other people anxiety and inconvenience by leakage of small amount of radioactive materials due to lowered cooling water level of the reactor. In Q and A, when questioned, "In the press conference of the Safety Agency, the person from the Agency said the fuel rods were exposed and because of it, it could not be denied that there was a possibility that a part of the fuel began to be melted. Is it true?", answer was, "At present, water level of the reactor No. 1 is a little lower than the top of the fuels, if the fuels are not covered by water about 50 cm, they are cooled a little but they are considered to be overheated to some extent, and so, we guess it cannot be denied that there is a possibility of a little damage at the top of the fuel rods, but we think, considering from the surrounding radiation level, significant damage has not been occurred yet". Press conference minutes of conference 	It had misunderstanding, the measurement value of the water gauge of Unit 1 was correct.
11: 20	-	Press release, "1F announcement (11:00)" • 1F1 ventilation was operating. Water level became lower and feeding water was being performed in turn. Press document	
Around 14:00		 NISA interview, Judging from the facts that monitoring values grew higher, long time had passed since all AC power was lost, IC was not considered to be working, status of water level remained lower than the top of the fuels for long time and the water level kept being lowered, there was a high probability that core melt took place in the reactor No. 1. As the Director General received the report that it could not but think a problem was occurring to the fuel rods because cesium was detected in the peripheral of the premise in the morning of the same day, he said "(if the fact is so) we cannot but say so". The executives of NISA stepped into further than the conference in the morning and explained, "There is a possibility of core melt. Core melt is considered to be proceeding". Contents of press announcement of NISA at that time were not informed to the official residence in advance but based on the situation that the Chief Cabinet Secretary and other staffs were having difficulty in public relations, the secretary to the Prime Minister requested to notify the official residence of information in advance. Government accident investigation committee 	
After 17:00	-	 In the press room, "First report of hydrogen explosion at the reactor No. 1" (Staffs in public relations and others) At around 15:36, there was a big direct type shake and after that, white smoke was generated at near the building of 1F1. Two employees of the company and two personnel of a cooperative company who were working on restoration were injured and were transported to the hospital. That is all for now as a first report. In-house accident investigation committee 	
17:40	-	Press release, "1F1 white smoke was generated". • Around 15:36, a big sound was heard from near 1F1 and white smoke was generated. Two employees and two personnel of cooperative company were injured and transported to the hospital. In-house accident investigation committee	

Date / time	Evaluation *	Main external explanation matter (including those with the press unexecuted though informed to administrative body) / event	Reference - 3 Remarks
Around 18:00		 the official residence interview, "Explosion at the reactor No. 1". As there was almost no material on the explosion at the building of the reactor No. 1 in the official residence, the government official could not but only explain "It was reported some explosive event occurred". To the question, "Does the government grasp breakage of the reactor?", direct answer was not given and answered "At present, we know it is all right if you are out of the range of 10 km and we are now working on analysis". Government accident investigation committee, minutes of conference 	
19:36 - (21: 21)	а	Press conference on nuclear accidents and electric power supply and demand (attended by Vice President Fujimoto, and Managing Director Komori and others), "Questions about core melting". To the question that Safety Agency was referring to possibility of core melt and if it was true, the answer was, "They say cesium was detected, and we, ourselves are reporting it, cesium is a nuclide that is related to fuel, so, I think we need to take procedures of measures in the premise that the core itself is not in the normal situation". Further to it, the question was asked if he considered it was very probable that it had not reached core melt yet and answer was, "It is difficult to answer, but as a way of thinking, we should think it is a severe situation but the reality may not reach such a bad situation. However, including such possibility, we will think about measures for accidents. And, to the question, "Water level is of figures around fuel rods minus 170 cm that has not been changed from the value of 15:27, isn't the water level wrong, and you said the situation in the reactor was severe but is core melt taking place?", the answer was, "We sometimes watch it with two indication lines, A-line and B-line, and we are watching it including if it is actually so, but we think it is a fact that those are figures of indication of two lines. We cannot tell much about degree of core melt or deformation but we think it is better to take measures taking into consideration that there is possibility of situation that the temperature is higher than normal. To the question that it was said that a government official commented about hydrogen explosion in a press conference and if it was correct, the answer was "We know about the explosion. About from where the energy came, we think there may be possibility. He commented it in a meaning of possibility, I guess". And when asked that the official seemed to have commented that radioactive materials were fewer after explosion than before explosion, how he thought about the official'	When asked about the comment in an official residence interview held simultaneouly, he could not answer about it. Regarding "hydrogen explosion", he said "it is possible" but did not assert it.
20:41 -		the official residence interview, "Explosion of the reactor No. 1, press conference immediately after the press conference of the Prime Minister". I will explain about the explosion today based on the report from Tokyo Electric Power Co.,Inc. Nuclear installation is covered by a steel containment vessel. And the outside of it is further covered by concrete and iron reinforcing bars. The explosion this time collapsed the wall of the building and was not explosion of the containment vessel in it. The reason for the explosion is that steam generated by reduced water in the core goes to the space between the vessel and the outer building and, in the process of it, it turns into hydrogen and the hydrogen is mixed with oxygen to get explosion. As there is no oxygen in the core, explosion will not take place even if there is hydrogen. Actually, we received the report from Tokyo Electric Power Co.,Inc. that it was confirmed that the containment vessel is not broken. Repeatedly, the explosion this time was not in the containment vessel where the reactor is contained and therefore, a lot of radioactive materials don't leak outside. We checked the results of monitoring for radioactive materials by Tokyo Electric Power Co.,Inc. and Fukushima Prefecture and found the concentration of radioactive materials has not increased compared with that of before the explosion. As for reported 1,015 micro sievert at 15:29, this place, after that, showed 860 micro sievert at 15:40 and 70.5 micro sievert at 18:58, it becomes rather lower than before the explosion. For other places, concentration once became high due to ventilation performed at around 14:00 but it became low for every place after the explosion and stays at low level. Based on it, in order to prevent a disaster caused by breakage of the reactor vessel and containment vessel that is concerned for the future, Tokyo Electric Power Co.,Inc. has determined to take a measure to fill the vessel with sea water and the Minister of Economy, Trade and Industry has ordered to do	

Date / time	Evaluation *	Main external explanation matter (including those with the press unexecuted though informed to administrative body) / event	Reference - 3 Remarks
21:30		 NISA interview To the request for explanation about core melt for people to understand easily, answer was, "As we have not grasped the situation of the core precisely, I will try to grasp it as much as possible". "There is high probability that the core is damaged but we don't know precisely what the situation is". Government accident investigation committee 	
Midnight	С	 Order from the official residence to us regarding information disclosure Since the official residence came to know that the photographs of the building of reactor No. 1 taken immediately after explosion of the building in Fukushima Prefecture, the official residence had the secretary to the Chief Cabinet Secretary investigate the reason for the photographs not to be provided to the official residence and requested President Shimizu Masataka to provide the materials promptly on the telephone. The scene that our persons from our Fukushima Office were explaining matters to the persons of Fukushima Prefecture using photographs of the building of the reactor No. 1 taken after explosion was broadcasted in the national news on TV. Using these photographs for public relations was not informed to the head office and the official residence and especially the official residence requested us to explain about all facts on this matter and gave us a caution about above performing without informing the official residence. Specifically, our person who is responding to the official residence was requested to explain about the reason for making public announcement using photographs that the official residence didn't know and when he answered the facts after he checked and learned them, the official residence warned it was a serious matter. Government accident investigation committee 	
3/13 5:30		 NISA interview To the question about possibility of fuel melting in the reactor No. 1, explanation was, "Now that such a substance (cesium) has been detected, it must be kept in mind that possibility cannot be denied". Government accident investigation committee 	
Around 8:00		the official residence interview, "Stop of feeding water function of the reactor No. 3". • To the question if there was any request for companies, answer was, "Firstly, the Safety Agency, Safety Committee and the government will judge adequately and give instructions. Providing information speedy and precisely on the safety of residents and people is the most important thing in this kind of response. So far, for one and a half day from the occurrence of the matter, we, including the Safety Agency, Minister of Economy, Trade and Industry and the Prime Minister, repeatedly request Tokyo Electric Power Co.,Inc. to provide information properly, adequately, speedy and precisely and publish them. At 2:00 am last night, I directly instructed strongly it to President Shimizu. Minutes of conference	
Around 11:00		 the official residence interview, "Water level was lowered in the reactor No. 3". With regard to core melt of the reactor no. 1, the official commented, "At this time, feed water is carried out and I think exposure is buried with water from amount of water". "This (core melt) is very probable and that cannot not be checked because it is in the reactor but we take measures on the premise of it and in the case of this time, we take actions with the supposition that there is a possibility". Minutes of conference 	
Around 14:00	С	Instruction of information disclosure from the official residence to President The Prime Minister Kan who received the report on the detailed reason for disclosure of the photographs taken immediately after the explosion of reactor No. 1 made the same request to President Shimizu visiting the official residence. President Shimizu instructed to the Location Region Manager to get understanding of the official residence on press release drafts and materials to be disclosed in advance when Tokyo Electric Power Co.,Inc. makes press announcements and because of it, some cases of public relations were delayed. (Regarding the problem of disclosing photographs of the building in the reactor No. 1 taken immediately after the explosion) President Shimizu visited the official residence at around 2: 00 pm and got a strong caution. With this as a turning point, President Shimizu instructed related personnel in the company, "From now on, when making public announcement, ask for approval of the official residence first and never forget to get an approval from the official residence".	
17:15		Overnment accident investigation committee In-house accident investigation committee NISA interview • After commenting, "As the situation of the core is not a matter that can be said clearly from the data, I cannot tell if it is melted or not", he said, "At least it can be said that the core is damaged but I cannot tell if the core is melted or not ". Government accident investigation committee	

Date / time	Main external explanation matter (including those with the press unexecuted though informed to administrative body) / event	Remarks
20:20 分~ 23:13	President's interview (attended by Mr. Komori, Managing Director) • In Q&A, it was explained by President that although some variance in radiation level had been observed at site boundary we considered it to be the level that would not immediately affect human health. Answering to the question whether containment vessel remained really safe, Mr. Komori, Managing Director stated "In view of shape of damage, significant cause could be Hydrogen explosion. Though steel structure is exposed, lower part is made of reinforced concrete, where no damage is suffered. Since phenomenon of depressurization was observed when a valve was opened (for steam relief) at containment vessel, we consider that integrity has been maintained." Furthermore answering to question about preparedness for tsunami, President explained "While it should be necessary to make assessment whether or not preparedness has been sufficient taking various viewpoints into consideration, we do not see any problem in appropriateness in the sase that we have ever taken measures for tsunami as much as we could consider. As we found that this tsunami was significantly beyond expectation, it will be our great task to consider how we shall take responsive measures in future." • Question was raised by a journalist "It was previously explained that water level gauges were credible to a certain extent. If so, it is current situation that considerable volume of seawater like that has continuously been injected but it has not reached to fuel rods which have continuously been exposed. What is actual condition of #1 and #3? As especially for #1 it was explained in this morning that inside of pressure vessel had been filled with water, please explain actual situation including this. Answering to this, Mr. Komori, Managing Director stated "Regarding #1 and #3, it is serious that such situation that water has not reached to upper part of fuel rods has been continued. While we would like to recognize this event itself should be considered certainly as a problem in acc	He explained "it was not the level that immediately affected human health".

D	ate / time	Evaluation *	Main external explanation matter (including those with the press unexecuted though informed to administrative body) / event	Remarks
Mar. 14	Early morning ~ Around 9:00	*	Main external explanation matter (including those with the press unexecuted though informed to administrative body) / event Handling of press release after pressure rise of #3 It was said that although TEPCO prepared press release since abnormal rise of pressure in #3 containment vessel had been observed around 08:00 this press release was not issued because of direction not to make announcement made by Prime Minister's Office and NISA. According to TEPCO, while the event of #3 was reported to NISA, etc. because it is obligated pursuant to the law, the press release was not issued in accordance with direction of Prime Minister's Office, etc. since the press release is not an obligation as an operator. It may be considered to be reasonable in itself that TEPCO acts in compliance with Prime Minister's Office, competent authorities, etc. Under the circumstance that neighboring residents were suffering from danger, however, it could be viewed as revealing TEPCO's corporate culture that TEPCO showed its stance giving priority to its position toward government over transparency of information. (Pictures of TV conference at 08:40) 1 FPublicty Team: "Following abnormal rise of pressure in #3 containment vessel, a press release concerning Article 15 has been prepared. Since release to mass media was stopped by the government, we have been waiting for instruction without issuing the press release. Since Fukushima Prefecture intends to open meeting of dept. managers scheduled for 09:00 to mass media, we were requested to issue the press release before 09:00. We would expect your coordination on this matter." Headquarters: "We have no alternative but to ask coordination between the Prefecture and NISA upon communicating them that the Prefecture said so. Our decision is now rather much more influenced by the government based on Act on Special Measures Concerning Nuclear Preparedness, while we cannot ignore the Prefecture. Prize Minister's Office to obtain and prefecture under the government was found that they were of	Remarks
	09:15		 NISA interview Although the executives of NISA made affirmative statement that core melt-down of #1 and #3 is possible, a staff attending there explained "In view of the fact that Hydrogen was generated, it is estimated that there should have been reaction with Zircaloy, fuel claddings, but we are of the definite opinion that it has not yet reached to stage like what is called as melt-down, which he appeared to deny possibility of core melt-down. Accident Investigation Committee of Government 	
	12:08 ~ 12:54	а	 Press conference concerning "Hydrogen explosion of 1F3" (attended by Mr. Komori, Managing Director and others) To question about possibility of core melt-down, he answered that it was possible. To further question whether it was melted, he answered "Even if tops of fuel rods are exposed, it is cooled by steam evaporated underneath. It is difficult at this moment to assess this effect." Newspapers coverage, etc. 	According to the record of conversation during the emergency TV conference, Mr. Komori, executive director, spoke at 13:15 "I didn't answer directly to the question asking possibility of core melt because it could not be strictly denied I just mentioned its possibility and inadequacy of information. That might be taken as words suggesting serious core damage."
	16:45		 NISA interview Answering to question "Since generation of Hydrogen means that melt-down occurs, may we understand that it is melted?" the executives of NISA explained "Hydrogen generation is possible at stage of damage, too." Immediately followed by a statement of a NISA staff "Since Hydrogen is generated from reaction with the part of fuels and fuel claddings, the term of melt-down is not appropriate" which he appeared to deny possibility of core melt-down. Accident Investigation Committee of Government 	

Date / time	Evaluation *	Main external explanation matter (including those with the press unexecuted though informed to administrative body) / event	Remarks
20:40 ~ Around 21:45	b	Press conference of Mr. Mutoh, EVP concerning "after down-scale of #2 When it was announced to journalists who had been waiting for press conference concerning planned power outage at 3 rd floor of head office that down-scale of #2 occurred and this would be explained at 1 rd floor (in the press conference concerning planned power outage), the journalists requested separate press conference on this matter at 3 rd floor and immediately press conference of Mr. Mutoh, EVP took place there. The fact that water level gauge started responding to sea water injection at 19:54 and was still hunting at 20:07 was briefed at the beginning of the press conference, and additional explanation that "Upon depressurization of reactor by opening of SR valves at 21:20, water level was recovered from minus 3.400mm at 21:21 to minus 2.000mm at 21:34 and it is estimated that pouring of seawater has been increasing due to depressurization of reactor." was given during the conference. During this conference, he explained "Upon depressurization of reactor by opening of SR valves at 21:20, water level was recovered from minus 3.400mm at 21:21 to minus 2.000mm at 21:34 and it is estimated that pouring of seawater has been increasing due to depressurization of reactor." In O&A, question was raised "You explained that lowering of water level resulted in down-scale. Does it mean that fuel rods were completely exposed and it came closer to the situation of heating without water?" Answering to this question, he stated "This is the situation that gradual lowering of water level from top of fuel rods resulted in down-scale of water level gauge for fuel area and thus exposed never occurred. In this event, however, we assume that considerable amount of fuels had been melted. How do you think about this?" he answered "Since we could not make judgment without observing parameters, level of radiation around there and the like, it is impossible for us at this moment to clearly state how is the situation of fuels inside reactor." Additionally ans	According to the record of conversation during the emergency TV conference at around 19:21, station side spoke "Core water level is predicted to fall below TAF at 16:16, so the fuel completely lost coolant water in 2 hours, at 18:16. This is the rough prediction. Thus, the RPV damage will occur in two more hours according to the data on the accident management guideline." Mr. Muto, vice president, replied "we have a common understanding that the fuel lost coolant water completely at 18:22, don't we?" and "core melt will occur in two hours, so, RPV damage alright?

	Evaluation		Reference - 5
Date / time	*	Main external explanation matter (including those with the press unexecuted though informed to administrative body) / event	Remarks
Mar. Night	b	 Announcement regarding condition of core damage TEPCO made announcement on March 15 that ratio of "core damage" is 70% for #1 core, 30% for #2 core and 25% for #3, respectively based on information obtained from Containment Vessel Atmospheric Monitoring System CAMS), and thereafter expression of "Core Damage" was used in press conferences. TEPCO reported to Headquarters for Disaster Control of Fukushima Prefecture estimation results that nuclear fuels of #1 and #2 could possibly be damaged by 70% and 30%, respectively. According to TEPCO, rough estimate was made on extent of damage to metal covering fuels from measurement of amount of radioactive materials inside reactor containment vessel, elapse of time since stop of operation, etc. Based on the results, it was assumed that 70% of 400 pieces of fuel assembly of #1 and 33% of 548 pieces of #2 had risk of small holes or cracks. Since the condition that a part of fuel rods of #1 and #2 have lasted for long hours, the damage appeared to progress. At #3 which experienced Hydrogen explosion on Mar. 14, the apparatus to measure radioactive materials inside containment vessel was in failure and it was said that no estimate of damage was possible. TEPCO completed estimate that 70% of nuclear fuel rods existing in #1 core were damaged and reported it to Government and Fukushima Prefecture. It was said that similarly 33% was damaged in #2. According to TEPCO, fuel clads covering fuel rods and preventing radioactive materials from releasing to outside were damaged due to excessive heating caused by lack of cooling water and had cracks and holes. It was said, however, that condition was not such that internal Uranium fuels could be melted out. At #1and #2, cooling water was reduced due to stop of feed water function. Nuclear fuels were damaged, including possibility of core melt-down condition such that a part of fuel rods that reached to high temperature were melted out. Intermediate report of Accident Inve	During press briefing in Tokyo ,there is no document of a explanation about core damage .
Apr.1 0		 Terms of core damage to be used in explanation made externally NISA launched adjustment of terms to be used in explanation of core condition and analysis of core condition. In integrated headquarters the member of headquarters discussed the term to be used in explanation of core condition at the same time, one of the leading members stated that it would be more appropriate to use the term of "melt-down of fuel pellets" instead of "core melt-down" Staff of NISA heard from employees of TEPCO that such discussion had taken place, determined that the term of "melt-down of fuel pellets" should be used instead of "core melt-down" when explaining core condition and communicated so to TEPCO. Accident Investigation Committee of Government 	
	а	Public announcement of results of investigation on occurrence of the accident and its situation of progress was released. TEPCO estimated situation of accident progress using analysis results of severe accident analysis code (MAAP) and plant data (reported to NISA on May 23 and announced on May 24). #1: "Results shows that RPV was damaged by melted fuels. In addition to this results, TEPCO assesses that large portion of fuels were actually cooled at lower part of RPV based on results of measurement of temperature of RPV ever collected." #2: "TEPCO's analysis shows the results that in the case that volume of alternative water injection was less RPV was damaged by melted fuels. In addition to this results, TEPCO assesses that large portion of fuels were actually cooled at lower part of RPV based on results of measurement of temperature of RPV ever collected." #3: "TEPCO's analysis shows the results that in the case that volume of alternative water injection was less RPV was damaged by melted fuels. In addition to this results, TEPCO assesses that large portion of fuels were actually cooled at lower part of RPV based on results of measurement of temperature of RPV ever collected."	The result of having overestimated the indicated value of the thermometer, The core damage state has been incorrect-recognized.

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Jun.		 NISA also conducted cross-checking using severe accident analysis code (MELCOR) and together with plant data, estimated situation of accident progress (announced by NISA on June 6). #1: "It is estimated at this moment that fuels were melted and the considerable amount was accumulated at the bottom of RPV. It is also considered to be possible at this moment, however, that the bottom of RPV was damaged and a part of fuels were dropped to D/W floor (lower pedestal) and accumulated there. Based on measurement results of temperature of RPV, it is considered that considerable amount of fuels have been cooled at lower part of RPV." #2: "It is estimated at this moment that considerable amount of fuels remain in RPV. It cannot be denied, however, that it is possible that the bottom of RPV was damaged and a part of fuels were dropped to D/W floor (lower pedestal) and accumulated there." #3: "It is estimated at this moment that considerable amount of fuels remain in RPV. It cannot be denied, however, that it is possible that the bottom of RPV was damaged and a part of fuels were dropped to D/W floor (lower pedestal) and accumulated there." Report of Japanese Government to IAEA Ministerial Meeting Concerning Nuclear Safety (June 7). (The above descriptions are from public announcement of TEPCO on May 24 and public announcement of NISA on June 6 extracted from Report of Japanese Government to IAEA Ministerial Meeting Concerning Nuclear Safety) 	
Nov3 0	С	Publication of estimation of core damage situation • TEPCO announced the following estimated content at workshop "Technology Workshop" organized by NISA and press conference. Unit 1: We estimated that most of the fuel we're falling into the containment because amount of heat injection period until the collapse of the seawater must be exceeds the amount of heat absorbed and the amount of irrigation and temperature reactor pressure vessel was low from an early stage. Unit2, Unit3: We estimated the extent of damage is small, less amount of fuel storage container to fall compared to Unit 1 because decay heat when the injection is stopped enough to be absorbed by evaporation of the water initially present in the pressure vessel and the extent of damage is small compared to Unit 1, etc. In view of the fall in temperature due to CS water injection system. Erosion reaction concrete core of Unit 1 is about 70cm considering the realistic conditions. We expect the gas in the storage container at the moment estimation core concrete reaction has unlikely occurred in the form of progress is at current status, and that the fuel remains in the storage container For Units 1-3: Estimated from the occurrence of each containment temperature and the steam in the reactor building, fuel is assumed to be sufficiently cooled. "Technical Workshop on estimating the status of core damage of Unit 1-3 Fukushima Daiichi Nuclear Power Station," held by NISA on 30 th Nov, and our press conference	 We have been preparing plans to announce about the content of core damage situation in the end of September 2011. About the presumed contents of the core damage situation, The explanation to Nuclear and Industrial Safety Agency took time.