

Record: 2286	Facility:	<ul style="list-style-type: none"> • Plant status nothing remarkable difference. Japan briefing report. o (b)(5) o 2nd priority is the stability document. Not sure how many people have vetted the document. Stability document was issued but treat it as draft. Spoke with someone from naval reactors use as re-entry criteria. o 3rd revision to re-assessing o 4 spent fuel pool assessment. Waiting for team comments. In stand by pending team review • Slurry document provided to the team. Considered close till the team reviews • Tasking list for the teams low power criticality in the spent pool fuel. Unit 4 spent fuel pool • Been sending the HOO updates to the States • Jim - naval reactors • Hearing Cong. Markey controversy material in the core escape the vessel. • Protection of information. RST assessment that was handed in the NY Times. Plans to cover the TA brief. ILTAB invited to the meetings. • Please do not put OUO in the recycle bin.
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Source: ET	
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Date/Time: 04/08/2011 10:26:26 (ET)	@8am	
Position: EST Chronology Officer	Events in Japan; telecom w. site team in Japan	
Name: Stella Opara	• Operations officer - unusual event at Columbia Generating Station hydrogen burn.	
Record: 2289	Heightened awareness. Region 4 OPA.	
	• Several discussions with site team in Japan. Response to the conditions in Japan.	<ul style="list-style-type: none"> o (b)(5) • For the near term NRC will be the lead role in the reactor event in Japan. Expansion of the site team to an 11 person team. Team members will serve for 3 weeks each. Looking for replacement for Elmo and current team members in Japan. Looking for Div. Directors to replace Elmo. Need to have the broad prospective and technical skill; as

(b)(5))

well can deal with the public.

- Developing a document for the Chairman to sign today, from him to Bill and Bill to him.
- Staffing of the Ops Center. 18 people per day assigned to the Ops Center. Go down to a minimum set in the Ops Center. 1 SES. Need to get a signature on the document. Spoke with the Chairman and he agrees with the approach.
- Influence agenda for Deputy meeting on Monday. Agreeing to what stable conditions at the site. Defining stable. #1 Ready to implement protective action, #2 Criteria to relax 50 miles EPZ.

Facility:

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- Slurry mix in the spent fuel pool.

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- Fukushima ACRS meeting. Follow up. Develop talking points to support the Chairman. Foia and congressional letters are increasing. Meeting setup to discuss FOIA process. Tuesday at 10:30a. Email from Dave Decker organizing a staff briefing with the senate. Where are we going giving the Japan event? Need alignment on what and why we are doing in Japan.

- Shutdown – pulling several triggers today and tomorrow. Concerning travel...if it's not essential to the mission not going. As of Monday will start deciding who is essential. Waiting for Monday for risk and Monday for essential personnel. Need to be clear in the edo update what travel is essential.

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Date/Time:	04/08/2011 05:51:47 (ET)	RST waiting for NRC Site Team comments on Stable Condition paper. RST has received NR comments. After receiving Site Team comments, RST will send for Consortium review. RST reports that TEPCO official position is that RPVs are intact. RST has prepared list of its current actions.
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	
Record:	2284	

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Facility:

RST does not have further action on slurry issue. RST reports that Japan does not plan to proceed with slurry effort.

PMT sent Q/A paper to Elliot and Trish.

PMT has draft Summary of Rad Hazards in Japan. PMT will send to Site Team for comment. PMT considers Site Team and Chairman will use the summary for general information.

PMT not currently interacting with NOAA on ocean plume modeling.

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Sandia is running a separate source term for the federal family.

PMT checking on whether we have received 6-page questions from PACOM.

ET asks PMT to check with Trish on her document to clarify plant status.

ET also asks that wording on 2 SFPs cooling status be clear.

Source: ET Briefing

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Date/Time: 04/08/2011 00:00:39 (ET)

Earthquake 7.1 in Japan. Lost offsite power at some plants, but no station blackouts.

Position: EST Chronology Officer

Minimal impact.

Name: Thomas Scarbrough

Record: 2283

Chairman is in town. Chairman call planned for Friday at 7:15 am canceled.

PMT working on one pager due at 0600 today: Summary of Rad Hazards in Japan.

PMT working on Q/A from Kyota News on NRC 50 mile evac vs. DOE SITREP with no rad concerns beyond 25 miles. PMT will provide to OPA.

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Facility:	<p>RST issue summary:</p> <ol style="list-style-type: none"> 1. RST Assessment Document Rev 1 issued (not working on Rev 2 at this time). Ditra might request copy of most recent version from RST. LT will check with partners. 2. Vince said no 6-pages of questions from PACOM. ET asks PMT to e-mail questions to Vince for his evaluation. <p>Telecon with Roy to discuss papers due for Deputies Meeting.</p> <p>ET lists papers being prepared:</p> <ol style="list-style-type: none"> 1. Stable condition paper (RST) 2. Current rad conditions paper (PMT) 3. Tokyo return paper with Ambassador and PMT work completed <div style="border: 1px solid black; width: 50%; margin: 5px auto; text-align: center;">(b)(5)</div> <p>Ops Teams will work on these papers tonight and decide which papers to combine tomorrow.</p> <p>LT: Transitioning to Embassy for preparation of agenda and summaries for 8 p.m. daily Consortium call.</p>
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Source: ET Briefing
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Date/Time: 04/07/2011 23:01:27 (ET)	Discussion of DOD request for Vince to extend his tour. Vince willing to support mission for additional time.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 2282	
Facility:	
Source: Telecon with Vince	Vince not aware of any Pacom questions reported to ET. Vince will refer any requests for Assessment Document to RST.

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Date/Time: 04/07/2011 22:13:18 (ET)	Vince called in - he got request from NISA that they want the stability document. Told
Position: EST Chronology Officer	him still working the document. Question is at what point it would be ready for NISA.
Name: Rebecca Karas	
Record: 2281	
Facility:	
Source: RST	

Address/Location:

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Date/Time: 04/07/2011 19:57:55 (ET)	Want to be able to merge the various lists. Blamey - Embassy would really like to have 1
Position: EST Chronology Officer	list.
Name: Rebecca Karas	
Record: 2280	Evap technologies - 21 - new item - has come up in regular meetings with GOJ - believe this is related to DOE's processes for reducing large volumes of water down to smaller ones. DOE - have not heard discussions on this item. Need to better organize and prioritize the various items under #21. Next step is to clarify these items with GOJ and DOE HQ.
	Water tanks - in telecon with (b)(6) they want to go by sea. Will have quote tomorrow am. May need to truck across country and ship out of LA if want in 1 wk - 10d. Waiting on if GOJ/TEPCO want urgently, but not commercially, then could talk about military air. It does not appear to be urgent. Blamey - having another meeting on Tuesday with sub-group on this. Hoping to get technical contacts.
	20 - heat exchanger for sfp - placed design order with Toshiba - Blamey - going to talk to INPO, and they will forward info to NISA - believe commercial contracts have been let on this. TEPCO apparently have subcontract with Shaw via Toshiba. Just passing the info to NISA.
	4 - Germanium semiconductor detectors - loaned 2 high purity, and have 4 more coming from Naval Res Labs to Yokoda on Apr 11. Cherry - DOE AMS team at embassy was asked to help break down the section, as different detectors going to different ministries.

(b)(5)

87707

13A - dosimetry, iodine masks, etc

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Everyone going back into area is supposed to get dosimeter. Have to see what is manageable on our side. Also need to know what kind they need. Had provided info on dosimetry and iodine masks regarding commercial availability, and had no response from GOJ.

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Aerial survey measurement data sharing/analysis - ongoing with no problems. - should be closed? - do have joint aerial monitoring mission taking place over next couple of weeks. After that, US and Japanese analysts will get together and create joint product on results. Outstanding action to complete product. But can close. Process is working.

Ground monitoring devices, mobile and stationary - DOE has operating air samplers at several locations, working to install 8 infield detectors from 10-35 miles out. MEXT has approved, and waiting for coordination with police to implement.

Bruce has not yet shipped. Need approval of cost at Bruce to ship. No update yet. Still also need to work with GOJ to free up receipt of low level contamination. Have POC with 2 people at NISA - will email them and let them know what is coming.

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(b)(5)

(b)(5) Items coming from Bruce do not have contamination.

Rad diffusion/SPEEDI models sharing going fine.

Robotic monitoring devices - update says waiting on GOJ to decide if they want experts to come over.

5A, 5B - under control.

5C - W working on UAV request and coordination with expert. UAV onsite and Texas A&M expert has been coordinating. Not aware of any other UAV requests. Close item.

Facility:

(b)(5)

Unmanned helicopter - closed.

Withdrawn items are being removed from list, closed items being indicated closed.

16 - materials for masks - redundant to 13A - close.

[Redacted] (b)(5)

24 - [Redacted] (b)(5)

Extinguishant coolant - forwarding to NISA POC - was not priority yesterday. Not sure what item is.

26 - PNL - crisis management dialogue - PNL in Japan. Will raise tomorrow with Ron.

27 - [Redacted] (b)(5),(b)(6) - will revisit tomorrow.

29 - assessment of sfp structural stability - have to get input from GOJ - did assessment, but not sure if they need more specific calcs. Not on their priority list yesterday.

NISA was really only worried about water control - not sure when lower priority items will be focused on.

29b - [Redacted] (b)(5)

31 - SAMG tech document - guidance sent to INPO contacts in Japan - they already provided to TEPCO. Close item.

32 - GEH following up on N2 purge analysis - going to review this item and move to TEPCO/NISA.

[Redacted] (b)(5)

33 - indications to assess rpv integrity and location of core - ongoing

34 - alt flowpaths for purging - Blamey - believe was provided. Will look.

35 - confirm RST rec - ongoing.

Other items all closed.

Item 12 - Casto asked item be added on titanium body armor - believe INPO already provided that - keep closed. Hochevar - did provide info.

Combination filters and demin - 2 in stock, TEPCO committed to purchase and ship - close as is not on embassy list. - being handled commercially by TEPCO

Source: Consortium Call

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Date/Time: 04/07/2011 19:46:32 (ET)

The sample taken from U4 TB was March 24.

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2279

Facility:

Source: RST

Address/Location:

Attachment:

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Date/Time: 04/07/2011 19:08:27 (ET)

2 hour half-life in U4 TB. I-132? U4 SFP is non-borated racks. U3 and U4 TBs are connected also. Could be minor criticalities going on in cores, salt-encrusted. Maybe should have someone run SCALE and KENO to see if you can have criticality. Generally hard with geometry. If go to chemical slurry, will it take any boron out that they had in there?

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2278

Marty - in prep for 11th deputies meeting, Chairman wants phase 1 to be adjusted. Also need to combine that document with the return guidance document from PMT. Also

(b)(5)

Facility:	need Melcor run. PMT - should do projected doses based on actual monitoring conditions. And know actual plant conditions. If plant unstable, then should not back off on PAR. Roy - really need to get in with robots and figure out how sound the structures are. Roy - need to figure out where go and grab reentry guidance is. Embassy keeps asking for. PMT - do not believe we need Melcor run - have good sampling data, etc. RST - havent done assessment on whether they are stable or not. Marty - good to have that assessed by Monday meeting. Roy - maybe put this back in line? Marty - yes, OK with that. They would have to work the weekend.
Source:	RST

Address/Location:	
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Date/Time:	04/07/2011 18:59:32 (ET)	(b)(5)
Position:	EST Chronology Officer	Chuck - they are training on it now with 30 SDF troops. Rather get status
Name:	Rebecca Karas	with cameras, etc. Structural integrity issue worries people with sand, as well as
Record:	2277	cooling/heat transfer. Should have dialogue on this. Chuck - not sure of motivations -
Facility:		maybe limiting water put in, or if there is other issue. Brian H. - Blamey showed data in
		70p document that showed I-132 out of U4 TB - they may have questions about fuel
		configuration. Chuck - also heard. They are worried they are pushing source term
		around the building. Chuck - downside is more source term throughout plant, but
		temperature is probably overriding consideration.
Source:	Chuck	

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Date/Time:	04/07/2011 18:31:02 (ET)	Marty - want to make sure we are aligned on staffing for Japan Team and also
Position:	EST Chronology Officer	headquarters. Chuck - N2 injected. FW inlet temp went up immediately when injected -
Name:	Rebecca Karas	not sure why. Earthquake does not appear to have caused problems at Daiichi. Roy -
Record:	2276	several other sites lost offsite power due to quake. Chairman - ongoing issue of
		calcs/Melcor runs. Chuck - trying to emulate what happened so we can determine
		amount of energy left in reactors and SFPs. (b)(5)
		(b)(5) Think can make argument on needing to look at reactors, not
		dose. Chuck - looking at how much source term is remaining so we can give
		perspective of what energy might be left and how hazardous it might be. ET - trying to
		(b)(5)

understand status of PMT in looking at issue. Chuck - what we need to know from Melcor is how much U1 energy is left - need to push on flooding still? Also, SFP4, information will help them decide how to approach - water or slurry.

(b)(5)

Getting discussed on 11th meeting. Chairman - need to stop MACCS runs - rely on DOE for that. Melcor work is fine, we need that to give tech recommendations on reactors. Chuck

(b)(5)

Facility:

Chairman - work on agenda,

reentry, criteria for relaxation of 50 miles, and mention it will include additional dose modeling. Trish - working with EPA as they were tasked with long-term reentry guidance. Worked to get document we are pretty comfortable with. Chairman, OK, then just turn off MACCS piece for now. Chuck - drew down to 9 people. Yesterday and day before, very strapped. Noone to cover office. Yesterday asked by Japanese to include

(b)(5)

. With INPO team standing up, has led to more dialogue. 11 is probably right number. A good PM to work with DART on equipment. Blamey trying to run RST and equipment - too much. 3 week rotations would be best, not 2 weeks. 11th person should be either PMT or RST type person. Marty - would rather keep more PMT functions out of HQ. Chuck - RST type is fine. Chairman - will get 2 more people, use 3 week rotations, and focus PMT more here and see if it works. Chuck - Embassy is doing lots of briefings, like for American Club, so we get many taskings for that. Marty - maybe someone with HP/Health Effects background. Add 1 PM and 1 HP/Health Effects/Communicator. PM with strong BWR nuclear background would be helpful.

Source: Chairman/Chuck

Address/Location:

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Date/Time: 04/07/2011 18:30:22 (ET)	Paper is with the Chairman for comments/concurrence on collapsing down into 1 team
Position: EST Chronology Officer	for response.
Name: Rebecca Karas	

(b)(5)

Record:	2275
Facility:	
Source:	ET

Address/Location:	
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Date/Time:	04/07/2011 16:54:29 (ET)	Discusses slurry document edits by Roy.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2274	
Facility:		
Source:	RST	

Address/Location:	
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Date/Time:	04/07/2011 16:05:33 (ET)	Got email from press shop in Tokyo. Mentions 30 experts in Tokyo over the period. Roy - sounds about right. Brian Holian to give Eliot a call back.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2273	
Facility:		
Source:	Brenner	

Address/Location:	
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Date/Time:	04/07/2011 15:54:19 (ET)	Agreement with NR last night is to treat what we sent to Japan as draft, and then incorporate their comments. (b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2272	
Facility:		
Source:	RST	

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Date/Time:	04/07/2011 15:30:35 (ET)	Large aftershock - evacuated site, then went back onsite, no impact on facility based on (b)(5)
(b)(5)		

Position:	EST Chronology Officer	rad levels. At Onagawa, 2-3 lines were impacted. Work with high-level briefing Chuck is providing on 17th - we have an outline and work to support his brief. Site team needs help from RST, PMT, LT. They are continuing to inert U1 drywell, but as pressure increases, they are cutting back. Still dont know U4 SFP status. RST is looking at slurry mixture. RST sent draft to RES for comment. Still looking for list from RST of all papers working on and status. PACOM question answers due by 6pm. Trying to get rad maps from EPA on Japan. NYT article - there is now a FOIA on the assessment. There will be a template/sheet on the top of any OUO document sent outside government. Embassy in Japan wants re-entry criteria. Needs to go to 11th meeting.
Name:	Rebecca Karas	
Record:	2271	
Facility:		(b)(5)
Source:	ET	

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Date/Time:	04/07/2011 14:47:15 (ET)	Turnover in progress.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	2270	
Facility:		
Source:		

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Date/Time:	04/07/2011 14:39:51 (ET)	By 5pm today
Position:	EST Chronology Officer	(b)(5)
Name:	Jessica Kratchman	
Record:	2269	
Facility:		
Source:	PACOM	

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Date/Time:	04/07/2011 14:32:56 (ET)	RST spoke with GE senior VP.
Position:	EST Chronology Officer	<div style="border: 1px solid black; width: 500px; height: 50px; margin: 5px 0;"></div> (b)(5)
Name:	Jessica Kratchman	
Record:	2268	
Facility:		
Source:	RST	-RST will email partner groups and recommend revisiting and making a Rev2.

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Date/Time:	04/07/2011 13:37:21 (ET)	Daily sitrep ready- Bruce going to safeguards room to review.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	2267	
Facility:		
Source:		

Address/Location:	
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Date/Time:	04/07/2011 13:22:40 (ET)	NRC Japan Team Briefing Report: -provided by Michael Hay.
Position:	EST Chronology Officer	-Some clarification and additional items were added.
Name:	Jessica Kratchman	-RST tasked with providing a summary of "Consortium Activities."
Record:	2266	
Facility:		-RST, LT and PMT help will be needed.
Source:	Mike Weber	

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Date/Time:	04/07/2011 13:09:59 (ET)	<div style="border: 1px solid black; width: 400px; height: 20px; margin: 5px 0;"></div> (b)(5)
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	2265	
Facility:		
Source:	Jeff Temple	

(b)(5)

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Date/Time:	04/07/2011 12:34:38 (ET)	Jeff Temple was sent updated information from Emche (Japan Team) on current status after plant pot-7.5 aftershock. He is passing this information to ET, who will in turn get
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	(b)(5)
Record:	2264	
Facility:		
Source:		

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Date/Time:	04/07/2011 12:04:41 (ET)	Tsunami warning lifted.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	2263	
Facility:		
Source:	CNN	

Address/Location:	
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Date/Time:	04/07/2011 11:45:50 (ET)	ET briefs the Chairman on 7.4 earthquake/ tsunami warning.
Position:	EST Chronology Officer	(b)(5)
Name:	Jessica Kratchman	-There is still off site power.
Record:	2262	-There has been some site abandonment (most likely related to tsunami warning).
Facility:		-Chairman wants to make sure we have a plan to confirm conditions at the site.
		-ET indicated that they will have a Japan Team member try to reach out to TEPCO for information.
Source:	ET to Chairman	

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Date/Time:	04/07/2011 11:28:05 (ET)	Breaking news- no damage to Fukushima plant from the 7.4 aftershock.
Position:	EST Chronology Officer	
	(b)(5)	

Name:	Jessica Kratchman
Record:	2261
Facility:	
Source:	CNN

Address/Location:	
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Date/Time:	04/07/2011 11:26:28 (ET)	INPO is going to step down their 24-7 approach.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	2260	
Facility:		
Source:		

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Date/Time:	04/07/2011 11:07:54 (ET)	Chuck Casto called into ET: -Checking to make sure ET is aware of the 7.4 aftershock. -Tsunami warning; 0.5m expected in Fukushima; 2m expected elsewhere in Japan. -ET asked if there is any indication that UNits 2 or 3 has gone ex-vessel. Chuck said that is something they will not know for a long time.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	2259	
Facility:		
Source:	Chuck Casto	

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Date/Time:	04/07/2011 10:52:24 (ET)	7.5 Earthquake just hit Japan. Tsunami warning.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	2258	
Facility:		
Source:		

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Date/Time:	04/07/2011 10:42:10 (ET)	RST dicussion with ET Director regarding SFP (end state) assessment and RST (all unit) assessment. Awaiting input on SFP assessment from stakeholders. Naval Reactors is recommending that both assessments be combined. RST intends to keep assessments separate and focus on SFPs.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	2257	
Facility:		
Source:		

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Date/Time:	04/07/2011 10:02:23 (ET)	CA conference call in progress.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	2256	
Facility:		
Source:	ET	

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Date/Time:	04/07/2011 09:29:08 (ET)	Discussion of leaked RST document. *Concerns of whether there is proprietary information involved.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	2255	
Facility:		
Source:	ET Meeting	

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Date/Time:	04/07/2011 08:07:11 (ET)	Priorities for the day: RST- Has a tasker from Chuck to consider the "slurry" issue and get him a one-pager by 5pm. RST concerned with this deadline because they have to consult with consortium and this typically takes time to come to a consensus. ET- get what you can to Chuck by 5pm. -RST- Unit1 is putting hydrogen in containment. RST- Markey continues to challenge NRC on status of Unit1 core; ask site team if they
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	2254	
Source:		

(b)(5)

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Date/Time:	04/07/2011 06:42:37 (ET)	ET turnover begun.
Position:	EST Chronology Officer	
Name:	Carolyn Faria	
Record:	2250	
Facility:		
Source:	ET	

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Date/Time:	04/07/2011 06:27:32 (ET)	Chuck Casto calls for Site Team: - Have some needs: - Site Team RST safety team is talking to OPS RST - Spent fuel pools 3 & 4, if there were a proposal to put a "slurry mix" that uses a cement mixer in there, there are concerns of weight, heat transfer, and moderator... - There is an assessment paper from last week about putting sand in the Spent fuel pool/ is there a substance that someone in industry has/ knows about? - If we don't know the exact material, we should let know about the concerns, and something like" this is the max. amount of weight" - Have asked INPO about this; Japan has asked about titanium protective wear (vests) as individual protective gear; INPO has already provided this information, and they will re-provide the information to Site Team. - There is more to talk about, it will be discussed later on: o (b)(5) o Seems Japan is going to be plugged in with AREVA o Need to see how to plug in international entities into the consortium.
Position:	EST Chronology Officer	
Name:	Carolyn Faria	
Record:	2249	
Facility:		

Source:	Site Team
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Date/Time: 04/07/2011 04:01:36 (ET)	4am Problem Solving section
Position: EST Chronology Officer	Recap on shift between ET, RST, PMT, LT
Name: Carolyn Faria	-tasks closed
Record: 2247	-draft documents being issued
Facility:	-call summaries
	-went thru guidance/recommended template- tweaking amongst RST, PMT, ET, and LT.
	PMT- discussed 3rd run that was sent up to the Commission
Source: ET	

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Date/Time: 04/07/2011 04:01:36 (ET)	4am Problem Solving section
Position: EST Chronology Officer	Recap on shift between ET, RST, PMT, LT
Name: Carolyn Faria	-tasks closed
Record: 2248	-draft documents being issued
Facility:	-call summaries
	-went thru guidance/recommended template- tweaking amongst RST, PMT, ET, and LT.
Source: ET	

Address/Location:	
Attachment:	

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Date/Time: 04/07/2011 03:52:17 (ET)	3am call brief:
Position: EST Chronology Officer	(b)(5)
Name: Carolyn Faria	-Need to establish who is doing what for whom? e.i. -Site Team-Naval Reactor-NRC-
Record: 2245	INPO
Facility:	-draft guidance/template for OPS center documents being shared and commented on (headers, purpose, rev...)

(b)(5)

Source: RST

Address/Location:

Attachment:

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Date/Time: 04/07/2011 03:52:17 (ET) 3am call bref:

Position: EST Chronology Officer (b)(5)

Name: Carolyn Faria -Need to establish who is doing what for whom? e.i. -Site Team-Naval Reactor-NRC-

Record: 2246 INPO

Facility: -draft guidance/template for OPS center documents being shared and commented on (headers, purpose, rev...)

Source: RST

Address/Location:

Attachment:

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Date/Time: 04/07/2011 03:41:41 (ET) -Received a call from Admiral John Haley, wants NRC to share a contaminated water

Position: EST Chronology Officer plan. (TEPCOs plan) if known

Name: Carolyn Faria -wants additional information

Record: 2244

Facility:

Source: LT

Address/Location:

Attachment:

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Date/Time: 04/07/2011 01:56:20 (ET) Scott clarifies that initiative for the "re entry" document, according to past email was

Position: EST Chronology Officer about American "re entry" to Japan.

Name: Carolyn Faria

Record: 2243

Facility:

Source: ET

Address/Location:

Attachment:

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Date/Time: Turnover debriefings:

(b)(5)

	04/07/2011 00:01:47 (ET)	RST: tasker #4131 update spent fuel pool (criticality, structure) document sent to the consortium on 4/6; #4212 talks about PACON commenting on this document and ET agreeing, but these are not tasked for this shift. 2 tasks have been completed by the earlier shifts: 1. INPO one pager 2. "goop", synthetic document. Two tasks that were opened last night shift 1. Spent fuel pool structure document 2. Site team time line request is still open, but progress has occurred. New task: list of RST documents (what? Where? Who?). Task#4207-Stable condition document
Position:	EST Chronology Officer	
Name:	Carolyn Faria	
Record:	2242	
Facility:		<p>ET- discussion over document quality control (markings, dates, purpose, recipients, revisions)</p> <p>PMT- "guidance for return" "re-entry document" - being put together outside of the OPS center</p> <p>(b)(5)</p> <p>Still working with site team on meteorology data.</p> <p>PACON call did not occur, pending connectivity success to secured line.</p> <p>(b)(5)</p> <p>LT- call w/ industry occurred at 8pm. Discussion on embassy taking over the management of matrix; still pending. OMP meeting will occur tomorrow, set up is done.</p> <p>(b)(5)</p> <p>ET- Task #4181- leaking documents task</p>
Source:	ET	
Address/Location:		
Attachment:		

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(b)(5)

Date/Time:	04/06/2011 23:34:02 (ET)	
Position:	EST Chronology Officer	
Name:	Carolyn Faria	
Record:	2241	
Facility:		(b)(5)
Source:	Site Team/ ET call	

Address/Location:	
Attachment:	

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Date/Time:	04/06/2011 22:35:53 (ET)	Begins turnover.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2240	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

(b)(5)

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 04/06/2011 22:20:39 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2239

Facility:

(b)(5)

Source: PMT

Address/Location:

Attachment:

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Date/Time: 04/06/2011 21:27:37 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2238

Roy - certain documents we put out as agency documents, and they go through the teams, and are coordinated with other entities. Couple times they have bounced back. Lot of documents are not ones that ET director or ET sees. Need to discuss with incoming shifts. If leads to major decisions, or policy document, then should come to ET.

Look for opportunities to share with others the need to respect the OUO markings on documents. Many are predecisional, many may not yet be 100% accurate. May need to remind partners about honoring OUO.

PMT - shift has been quiet. Had phone call with Vince - he asked for us to share info with him about background info, such as reentry criteria - told him its in process. Not sure that all comments have been incorporated.

(b)(5)

RST - think most of products could be done on day shift in line organization. Should be team devoted to this in the line organization.

Should finish reentry document, incorporate comments, and send back out as draft that would go to 4/11 deputys meeting.

(b)(5)

Facility:

PMT - also want to confirm which scenarios Sandia is working on - going to talk to site team.

RST - assigned a tasker to RST to determine number of documents in works and in what state. 1-pagers had been sent out earlier on containment fill and injection. Gotten comments, and updated and sent to site team. Had call with site team - they wanted to have assessment of goop - we had except without DOE comments. Team decided that it should go to site team and DOE can catch up with comments. Been sent out. Awaiting update of GEH H2 assumptions. No update on SFP structural assessment. With Syed and Abdul to do. Steam cooling question - Chuck thinks that this type of cooling may be good enough. Clear there is boiling in the SP. Shouldnt impede flooding up. Have not found out if anyone did criticality anlaysis at any point - line organization may be able to do.

LT - turned over OMB meeting - NSIR is taking. LT doesnt fit into line organization model. Some parts do, but not all.

Source: ET

Address/Location:

Attachment:

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Date/Time: 04/06/2011 21:16:13 (ET)	Discusses with CDC rep the answers the RST provided to CDCs questions. The answers will be marked OUO.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2237	
Facility:	
Source: ET	

Address/Location:

Attachment:

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Date/Time: 04/06/2011 20:01:00 (ET)	Roy - Consortium making good progress.
Position: EST Chronology Officer	
Name: Rebecca Karas	Roles and responsibilities (b)(5)

((b)(5))

Record: 2236

until we hear from DOE on their acceptance of that role. Tilden/DOE/NNSA - comfortable with how NRC is doing that

(b)(5)

1 - Nielsen - San Onofre has shipped items, may have already landed in Japan - Radiacs are targeted to TEPCO receipt. We will make sure it arrived OK. STP had 2 parcels, 1 contaminated and told by POC that they couldnt receive it. Believe they have shipped other one, but dont have confirmation. STP still trying to work with POC on contaminated item. Bruce has either shipped a small number (3-4) of hand and frisk monitors by air - would have left by now, but havent confirmed. Monitors going to GOJ.

3 - conduct of simulation by rad diffusion model - Tilden - no update, ongoing - will close since is ongoing.

4 - germanium semiconductor detectors - 2 units loaned to GOJ today - another 2 being shipped (maybe 4) - next increment already on its way.

2a - use of rad monitoring devices - stationary - on the ground - waiting on GOJ to say what they want us to do. Equipment is there, and we are ready to go. Blamey - will discuss in meeting this afternoon. Ron Cherry has details.

5 - Westinghouse has separately contracted - they have other robotic devices they are using - close to being deployed. Blamey - need to know holistic approach - some is industry to industry, some govt to govt, etc. Embassy - will combine lists and fold together updates, and then send out and have everyone add in industry to industry information. Nielsen - Hochevar knows industry to industry efforts. Also want to check what other countries are fulfilling. Hochevar is being relieved by Lee Gard this week. Have tech experts available to travel - need to know if GOJ wants this. Robot arrived Friday. 1 robot, 5 cameras, 1 gamma cam, detectors. DOE paying for all.

Facility:

(b)(5)

27 - extinguishant coolant - do we understand request? awaiting clarification.

Concept for disposing of TB water - updated paper to be released tomorrow. comments mentions need to develop single water management team - not sure how that got added? Blamey - thought there should be one water management item with sub-items under it. Should get more details on this item at cabinet meeting.

31 - temp holding tanks/trucks - still open, being worked. Said need to know priority of this. These are large, and heavy lift aircraft is only way to get fast. Willing to give items over if TEPCO/GOJ pays for freight. Need to know sea/air. Being worked now.

Roy - should capture "next steps" better in document.

33 - shielding expertise on whether buildings strong enough to hold up under additional pressure - is industry expertise that was provided to GOJ -

iodine masks, dosimeters, etc - in holding pattern - keep open until Friday, and if no response or interest from GOJ, will close out. We provided catalog for GOJ/TEPCO to select from. Blamey - have some feedback - GOJ already lined out some of items. Need to confirm - looks like they lined out redundant ones.

Robot devices for rubble removal - They retracted equipment request, just need advice on shielding. Open.

DOE - question on item 30 - is task tracker number still valid? Unknown, will strike out.

Source: Consortium Call

Address/Location:

Attachment:

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Date/Time: 04/06/2011 19:37:59 (ET)

(b)(5)

Position: EST Chronology Officer

Name: Rebecca Karas

Discusses DOE taking lead.

Record: 2235

(b)(5)

Facility:	Roy - On IPC call next week, they want lessons learned and corrective actions on NYT leak.
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Source: ET	
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Address/Location:	
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Attachment:	
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Date/Time: 04/06/2011 19:32:36 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2234	
Facility:	
Source: ET/Weber	

Address/Location:	
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Attachment:	
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Date/Time: 04/06/2011 19:17:25 (ET)	On call with NR (Tom Vivoso). NR had heard our team would be scaling down - thought people with reactor expertise would be scaled back. We pointed out there were people who had that expertise, including Elmo and Chuck. NR is realizing that it would help them to know more specifically when we are seeking their concurrence. Discussed stability definition. They are concerned that multiple audiences will use the document for multiple different decisions. Also discussed industry interface with TEPCO - seems promising. They perceive tempo of response has reduced, and perhaps can be worked on day shift. Would also help with continuity, and enable products to be worked in parallel.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2233	
Facility:	
Source: Weber	

Address/Location:	
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Date/Time: 04/06/2011 19:08:04 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2232	

(b)(5)

Facility:	(b)(5)
Source: NHK TV/NSC	

Address/Location:	
Attachment:	

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Date/Time: 04/06/2011 18:51:02 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2231	
Facility:	
Source: ET	

Address/Location:	
Attachment:	

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Date/Time: 04/06/2011 18:20:50 (ET)	CDC rep here asked RST several questions - RST has answers. ET will review and discuss with CDC rep.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2230	
Facility:	
Source: ET	

Address/Location:	
Attachment:	

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Date/Time: 04/06/2011 18:12:11 (ET)	Discusses criticality - was questioned over the weekend - PMT reported seeing increasing isotopics in some short-lived. Possibly should have RST look at - possibly do criticality calculation?
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2229	
Facility:	
Source: ET	

Address/Location:	
Attachment:	

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(b)(5)

Date/Time: 04/06/2011 17:41:56 (ET)
Position: EST Chronology Officer
Name: Rebecca Karas
Record: 2228
Facility:
Source: RST

(b)(5)

(b)(5)

(b)(5)

Address/Location:

Attachment:

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Date/Time: 04/06/2011 17:25:37 (ET)
Position: EST Chronology Officer
Name: Rebecca Karas
Record: 2227
Facility:
Source: RST

No change in plant status, but appears they started N2 injection at 8:30 EST yesterday?
 We have not been able to independently verify. Going to followup and see where consortium is on need to inert.

Address/Location:

Attachment:

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Date/Time: 04/06/2011 17:13:31 (ET)
Position: EST Chronology Officer
Name: Rebecca Karas
Record: 2226

DOE mentioned they were working with the Russians on water treatment options. Apparently have ship with ion exchange. Another concrete pump truck is en route to site - from Hanford. Still working on cargo ships. They have 0.4 - 4 Bq limit. Spain is looking on enforcing with ships. India banning food imports. OMB issue on resource mgt. Phone call tomorrow is 3-4pm. Dyer needs to be aware. They want list of reimbursible items from each agency. Not much criteria. They are interested in things already done and planned in future. Japanese want to know about how much spent.

(b)(5)

Facility:

(b)(5)

DOE said expect requests for Japan will probably change from now on - more technological help where they have contractors giving recommendations to them - independent verification of engineering work. Travel restrictions document will be put together by end of week. Also generic document on rad health effects for embassy. Embassy wants the reentry status we have been working on - thought was done and sent to team? Embassy doesnt have and wants. On this shift, want to understand status of reentry criteria we sent out.

Source: ET/summary of phone call

Address/Location:

Attachment:

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Date/Time: 04/06/2011 17:09:26 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2225

Facility:

Source: ET

Roy - will need to let people who are attending that we have a tasking to preclude this from happening in the future.

Address/Location:

Attachment:

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Date/Time: 04/06/2011 17:02:44 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2224

Joe: Meeting scheduled for tomorrow to provide NYT assessment document - we think they got rev. 0. RST thinks they were different versions, NYT got wrong rev. Mat Wall did not write. James Glance or Will Ward wrote. Benefit by what is our statement. Will respond to inquiries. Has OPA responded to NYT? Previous shift talked to OPA about response. We wil get you a copy. Not sure if we will provide statement or respond to queries. Will discuss about providing rev. 1. Joe - hearing on the hill - Markey had email generated from RST to OCA that suggested there could be a breach in reactor vessel.

(b)(5)

Facility:	(b)(5)
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Source: Elmo	
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Address/Location:	
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Attachment:	
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Date/Time: 04/06/2011 16:36:25 (ET)	Stable conditions sent to site team in final form. NR believed it was still open for
Position: EST Chronology Officer	comment and had issues with longer-term piece. They are requesting their input be sent
Name: Rebecca Karas	in. (b)(5)
Record: 2223	
Facility:	

Source: RST	
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Address/Location:	
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Attachment:	
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Date/Time: 04/06/2011 16:18:57 (ET)	
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2222	
Facility:	(b)(5)

Source: RST	
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Address/Location:	
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(b)(5)

Date/Time: 04/06/2011 16:02:31 (ET)	OMB meeting is top priority. Going to talk to Dyer about it. USAID had sent over Q&A for Ambassador. Sent to OPA, and they were OK with them except for a few comments. Questions are related to event - what his thoughts are on visits to Prefectures - what response has been, etc. Very high level.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2221	
Facility:	
Source: LT	

Address/Location:	
Attachment:	

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Date/Time: 04/06/2011 15:23:04 (ET)	Discusses leak being plugged by TEPCO. Discusses that water may just be going somewhere else now - acknowledges TEPCO has said same thing on news.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2220	
Facility:	
Source: ET	

Address/Location:	
Attachment:	

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Date/Time: 04/06/2011 15:17:00 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2219	
Facility:	
Source: ET	

Address/Location:	
Attachment:	

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Date/Time: 04/06/2011 14:28:14 (ET)	ET turnover begins. J. Wiggins providing status updates to R. Zimmerman.
Position: EST Chronology Officer	
Name: Stella Opara	
Record: 2218	
Facility:	
Source: ET	

Address/Location:	
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(b)(5)

Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	04/06/2011 12:16:46 (ET)	<ul style="list-style-type: none"> • Call with Marty Virgilio. On his way over to HQ Ops Center to debrief on hearing. Returning from Capitol Hill hearing. • Congressman Markey released email from NRC staff regarding NRC speculation that part of the Unit 2 core may be out of the reactor vessel. Group discussed that it can get core material in the drywell without losing the vessel. OCA included and suggests that there was a vessel failure depending on how data is interpreted and descriptions formulated. Agreement that conclusions are speculation at this point. Its factual that people have speculated that there is leakage in Unit 2. • RST assessment obtained by NY Times. Meeting tomorrow morning on next steps.
Position:	EST Chronology Officer	
Name:	Stella Opara	
Record:	2217	
Facility:		
Source:	ET	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	04/06/2011 10:35:26 (ET)	<p>Marty Virgilio on the Hill. Viewing the hearing. Sorca discussion.</p> <p>TA Briefing @ 10am</p> <ul style="list-style-type: none"> • Inert drywell with nitrogen. Staff focused on Unit 1 to reduce possibility of lower head failure. Licensee intentionally releasing lower level rad waste to make room for higher levels rad waste. Work on suitable definition for stable conditions. Should be complete during day shift. Site fuel pool assessment paper out for comment. • IPC call with the national security staff at the White House today at 1500. Will go over high level status of activities. A technical phone call with PACOM at 5p tonight. Site team is getting a lot of technical questions from PACOM that we in HQ and Naval Reactors can hopefully alleviate load on the site team. • NY Times article. RST assessment was the basis. Discussed different potential actions. • FOIA requests – Receiving a myriad of FOIA requests. Saving all documents. Documents currently exist in file folders, drives, and/or emails. Have to figure a way to deal with the FOIAs. Meeting with OIS to make an efficient process. Thinking of doing a
Position:	EST Chronology Officer	
Name:	Stella Opara	
Record:	2216	
Facility:		

(b)(5)

<p>Record: 2213</p> <p>Facility:</p>	<p>to take the lead.</p> <ul style="list-style-type: none"> - RST – stability document out for comments (memo on the stability of the plant) from the team due back at midnight. Spent fuel pool document out for comments. Site team putting a time-line together. Mike Johnson passed document around. Need alignment. John Thorpe/Don Marksberry has been tasked in the line organizations to help out on the time-line. Plan to inject nitrogen inert the Unit 1 drywell. - Two people in Japan from SANDIA. Developing a source term. SANDIA would run MELCOR assessments for periods between 1 month to 290 days. Will use MAX to figure out what the issue is. Working with NOAA. PACOM (Hawaii) call at 5:00p (1700) today. Naval reactors will take the lead for DoD. Accumulate a list of questions prior to the call. (Priority) Site team has yet to receive trigger letter document from Department of State. Relates to protective actions. Evacuation document, not trigger document, sent to the Commission. State Department has the lead for sending the trigger letter document. - USAID asking the roles and cost of supporting our teams over in Japan. Talk to CFO about possible funding issue supporting the site team in Japan. USAID does not want to diminish the role of the site team, but want to get an understanding of their role out there. USAID is currently paying for it. Need an update on who is in the country. - Send Japan event related emails to the FOIA email box. Electronically search for duplicates. Emails cannot be deleted. Looking for specific dates. Records retention. Make sure all relevant information is retained. A team later will figure out what information is relevant. Do not delete anything. - Phone calls today: <ul style="list-style-type: none"> o TA brief @ 10a. o (b)(5) o PACOM call @ 5p. o Consortium call @ 8p.
<p>Source: ET</p>	
<p>Address/Location:</p>	
<p>Attachment:</p>	
<p>This information is Official Use Only - Sensitive Internal Information.</p>	
<p>Date/Time: 04/06/2011 06:30:31 (ET)</p>	<p>ET turnover has begun.</p>
<p>(b)(5))</p>	

Position:	EST Chronology Officer
Name:	Carolyn Faria
Record:	2212
Facility:	
Source:	ET

Address/Location:	
Attachment:	
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Date/Time:	04/06/2011 06:13:44 (ET)	RST debrief:
Position:	EST Chronology Officer	-0300 call has been status.
Name:	Carolyn Faria	- 2 new tasks were formed from site team's requests: 1. Timeline 2. Task #4146: Unit 4
Record:	2211	analysis with TEPCO
Facility:		
Source:	RST	

Address/Location:	
Attachment:	
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Date/Time:	04/06/2011 06:04:19 (ET)	PMT 6am Debrief
Position:	EST Chronology Officer	-PMT is proposing to go down to only day shift full team and 2nd and 3rd shift reduced
Name:	Carolyn Faria	to 2 people.
Record:	2210	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	
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Date/Time:	04/06/2011 00:35:37 (ET)	Brief on
Position:	EST Chronology Officer	-Sandia.
Name:	Carolyn Faria	-Trigger level document, PMT has to confirm whether or not we have closed this task.
Record:	2204	(have we seen it?)
		Other low level issues:
		-CdC liason contact.

(b)(5)

Facility:

- PACON wants a call with RST and PMT: with regards to get fast/direct communications. They want to set-up a communication pathway to get the information on real-time status.
- What are the expectations on roles and responsibilities as priorities have shifted? Task-4126 will include this topic.
- Rascal runs attached to press release with their explanation for the evacuation miles. Third run questioning

Source: PMT

Address/Location:

Attachment:

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Date/Time: 04/06/2011 04:39:41 (ET) RST and PMT briefed on 3am calls.

Position: EST Chronology Officer RST had discussion on stability document.

Name: Carolyn Faria PMT had contact with Sandia team.

Record: 2207

Facility:

- discussed weather historical information from NOAA and *****
- Embassy accepted PMT comments on memo (returning people).
- PMT content to talk with PACON.
- Trigger level document has not made its way to NRC yet. NRC will get it and work on it.
- PMT staffing needs were discussed.

Source: ET

Address/Location:

Attachment:

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Date/Time: 04/06/2011 04:39:41 (ET) RST and PMT briefed on 3am calls.

Position: EST Chronology Officer RST had discussion on stability document.

Name: Carolyn Faria PMT had contact with Sandia team.

Record: 2208

Facility:

- discussed weather historical information from NOAA and *****

(b)(5)

Source: ET

Address/Location:

Attachment:

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Date/Time: 04/06/2011 02:46:57 (ET)	Status update sheet had/has a Global Assessment in it. After a call with Elmo: GA is expected to be a snapshot assessment about where are they; where do they see the status of plant moving forward. 1. Result of the core melt information that the Sandia group is working on it. This outline was sent out to M. Weber. There is a question about our groups having to look at this or not. Discussion on PACON questions to be shared with OPS team. Discussion on guidance that we can give the Team(??) on FOIA.
Position: EST Chronology Officer	
Name: Carolyn Faria	
Record: 2206	
Facility:	

Source: ET

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 04/06/2011 01:02:23 (ET)	Brief about various calls -ICOMM: who's going to pay what? -statement about technical lead -IAEA 3 man-team should be at the site (Japan) today's afternoon 4/6 -Clarification about roles and responsibilities
Position: EST Chronology Officer	
Name: Carolyn Faria	
Record: 2205	
Facility:	

Source: LT

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 04/06/2011 00:35:37 (ET)	Brief on -Sandia. -Trigger level document, PMT has to confirm whether or not we have closed this task. (have we seen it?)
Position: EST Chronology Officer	
Name: Carolyn Faria	
Record: 2209	

Other low level issues:

(b)(5)

Facility:	<p>-CdC liason contact.</p> <p>-ICOM wants a call with RST and PMT: with regards to get fast/direct communications. They want to set-up a communication pathway to get the information on real-time status.</p> <p>-What are the expectations on roles and responsibilities as priorities have shifted? Task-4126 will include this topic.</p> <p>-Rascal runs attached to press release with their explanation for the evacuation miles.</p> <p>(b)(5)</p>
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Source:	PMT
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Address/Location:	
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Attachment:	
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Date/Time:	04/05/2011 23:58:42 (ET)	Briefing on:
Position:	EST Chronology Officer	1. "Goop"
Name:	Carolyn Faria	3am call, INPO was going to send their assessment of the "Goop" to TEMPCO.
Record:	2203	There is a technical name for this goop, described in INPO's one pager with the chemical composition of it.
Facility:		<p>2. Communication path of a Site Team, and our Consortium distribution. From there on, the industry will communicate with industry/ TEMPO.</p> <p>Additional call measures. Task has been closed, however 2 one pager industry consortium 1. Containment and 2.RPV injection. RST will be working on the review of the one pagers for consistency.</p> <p>-stability documents are still being worked on.</p> <p>M. Johnson asks for clarification of the white paper. Task 4040 will be closed; task 4131 will be reference</p>
Source:	RST	

Address/Location:	
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Attachment:	
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(b)(5)

Date/Time:	04/05/2011 22:28:57 (ET)	In process of asking GEH if Unit 1 is steam blanketed and possibly only cooling via radiative heat transfer. Trying to close out Goop paper.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2202	
Facility:		
Source:	RST	

Address/Location:	
Attachment:	

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Date/Time:	04/05/2011 22:07:29 (ET)	Water has been stopped as of this morning. Source still not known, and needs to be identified to be certain will not leak elsewhere.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2201	
Facility:		
Source:	NHK TV - Chief Cab. Secy	

Address/Location:	
Attachment:	

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Date/Time:	04/05/2011 21:28:16 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2200	
Facility:		
Source:	Elmo	

Address/Location:	
Attachment:	

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Date/Time:	04/05/2011 21:13:57 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2199	

(b)(5)

Facility: (b)(5)

Source: ET

Address/Location:

Attachment:

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Date/Time:	04/05/2011 21:02:56 (ET)
Position:	EST Chronology Officer
Name:	Rebecca Karas
Record:	2198
Facility:	(b)(5)

Source: PMT

Address/Location:

Attachment:

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Date/Time:	04/05/2011 19:56:51 (ET)	Roles and responsibilities - any updates? Lombard - roles and leads still being discussed at high levels. Hopefully in next couple days will have decision and process for validating funding sources and needs. Reaffirmed that DOE is tech lead. In earlier phone call, their understanding was that Roos, NRC and DOE are clearinghouse for Japan. Will have process for funding sources next couple days, OMB helping. DOS, NSS, WH tasked with pulling process together. NRC should take consortium and embassy lists to compile. Only a few items not consistent between lists. Not sure if future calls like one earlier today will continue to be held.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2197	
Facility:		Item 1 - rad monitors - STP had 2 parcels, one contaminated and one not. Japanese did not accept contaminated shipment. Bruce hand and foot friskers - severals will be shipped by air, 3 or 4. Lombard - could friskers be sent along with concrete pumping truck from GA? INPO - could do if can coordinate. DOE - we are not coordinating that -

(b)(5)

that was direct pact between TEPCO and truck owner. Also believe it already departed Atlanta. Dont know arrival time.

2 - simulation - understand this is ongoing

3 - Germanium semiconductor detectors - DOE - status as stated. Should have arrived today, and no update on how many also shipped.

4 - use of rad monitoring devices on ground - we have equipment in-country, awaiting GOJ approval if they want it deployed. We would have to man equipment, but waiting on GOJ decision.

Use of robotic devices - DOE/DOD - Talon robot and equipment set should arrive on Friday, shipped today. Still going back and forth if need to send experts once it arrives.

Use of extinguishant coolant - NRC - Site team not on call.

Treating and storing rad water - DOE/DOD - no update, will try for tomorrows meeting. We are working it - gone through export controls issues.

Temp holding tanks/trucks: Trying to figure out if GOJ wants tanks and a trailer, and how quick. Trying to find out if GOJ wants to pay air freight. All coming from Savannah River. Maybe can combine with hand and foot monitors on shipment if GOJ wants.

Facility:

33 - closed

34 - rad survey meters/dosimetry/iodine masks - Provided preliminary list to see if catalog is what they want. Havent gotten any indication that it has even been looked at. Would like feedback before continue further. RADIAC stocks have been bought up by opportunists shortly after accident. Blamey - other donor nations have had requests for dosimeters also - have not heard from GOJ the specific numbers requested. They were trying to set up additional discussions with GOJ - another cabinet meeting tonight - will try and get clarity. INPO - will wait for feedback before taking additional action. Request might be old - was from right after accident.

(b)(5)

Use of robotic devices for rubble removal - DOE - Understand GOJ has withdrawn request for any equipment, but they want to be advised on shielding. Will send updated information after call for all DOE items. Who in GOJ withdrew request? DOE - remote-controlled project team. Is interagency group with NEXT, METI, NISA, MOFA, MOD, TEPCO, KOMATSU, etc. They decided that Thurs pm or Fri. We are trying to gather documentation on shielding. Problem is dont have good rad map of site.

20 - use of extinguishant coolant - Blamey - no update. Will have to come back through Japanese and they will have to request actionable item.

Other new actions/items? INPO - we got phone call from BP saying they have lots of shoe covers/rubber booties, 14 warehouses left over from Gulf Oil spill. Blamey - requests contact name/phone number. Will pass to Berger (b)(5)

(b)(5)

(b)(5)

Blamey - we are trying to keep list in embassy updated. Embassy appreciates NRCs work, but we need to coordinate activities so the work is currently being done and updating NRCs list - where that can be electronically transmitted to embassy so their list can be updated. Longer term, would move function to embassy. Still trying to finalize process. Embassys list is official list. NRC can then transmit embassys list for these meetings. Embassy POC will email LT.

Source: Consortium Call

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/05/2011 19:28:08 (ET)

TEPCO has said that leakage from concrete pit into ocean has stopped.

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2196

Facility:

Source: NHK TV

Address/Location:

(b)(5)

Attachment:

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Date/Time: 04/05/2011 19:19:16 (ET)	States are interested in us providing monitoring data from Japan so they can understand what may be coming. They also want our assessment/whether or not we can say the plants are in a stable condition or not. CDC led the call. Referred them to METI site. [redacted] (b)(5) ET - could point them to DOEs publically available information. DOE is sharing AMS data with Japan and getting SPEEDI data from them. For now, point them to DOEs publically available information, and have DOE participate in next call. PMT - made that request.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2195	
Facility:	
Source: PMT	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/05/2011 17:43:53 (ET)	Report on phone call - IPC call: NRC and Roos are clearinghouse for all requests from GOJ. Talked about consortium call we have every day. Dont think DOE was in on call. LT mentioned DOE has lead for all tech support in Japan. Everyone on phone call agreed we were clearinghouse with embassy staff for all requests, though. Admiral Swift said his staff was not tied into consortium call, but he was going to check if they should be tied in. They need to have cross-talk with embassy. Mentioned vetting process. Unclear who would approve the vetting, and how would interface with DOS and WH. They need a lead agency. DOE, NRC and USAID are coordinating body in Japan. Next 45 minutes was discussing funding sources. 2 OMB people on call, including Kristine McDonald. [redacted] (b)(5)
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2194	
Facility:	

[redacted] (b)(5)

(b)(5)

Talking about common spreadsheet by Friday. Received email with 2 spreadsheets: LT going to look at deltas between spreadsheets we got and consortium one. One has entire spreadsheet on NRC. A bunch of the consortium stuff shows up under NRC on their list. NSS said top levels in govt very supportive. Have ability to get urgent reserve funds. OMB asked about process/timing for reimbursements. LT asked who would maintain lists? How integrated with consortium? Also asked what communication strategy would be going forward? No real answers to questions posed. They just said NRC and USAID would still vet requests. As process is developed, will decide who owns. We are supposed to develop our list and get up to DOS to disseminate. Call ended.

They are talking about April 11 ending to all humanitarian assistance to Japan. LT will analyze spreadsheets.

Source: LT

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/05/2011 16:11:53 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2193

Working on 2 one pagers to be provided to technical consortium by 1700 today, 1-injection rate, 2 - venting. These papers are condensations of papers working on for Elmo questions. Tech consortium will get back by 0400 with comments so we can get to INPO by 0500 to feed Hochivar. Additional considerations doc essentially complete, cleaning up. 1-pagers will be consistent. Going to send considerations doc to site team for their use. Goal is to do this evening.

(b)(5)

Facility:

GE doing calcs and revising them on H2/O2 concentrations in U1 cont based on

(b)(5)

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Date/Time: 04/05/2011 10:00:40 (ET)
Position: EST Chronology Officer
Name: T Rowe
Record: 2190

ET/TA Phone Call Discussion

Plant status unchanged, remains the same. Unit 1 has a decreased feed rate.

Spent Fuel Pool Assessment Paper will not have a Rev 2 version it is being used for a future thought paper due by April 6, 2011.

Stuck SRV indication for Unit 1, and overall plant status.

(b)(5)

Facility:

Discussion of staffing -- NRC staff in Japan is returning while there will be at least 6 people in the future. NRC Ops Center has had decreases on the LT and PMT.

Discussed IAEA document and how to make available due to sensitivity.

(b)(5)

Also discussed making a daily report from IAEA available on the NRR SharePoint site, and potentially for sharing with the CA's.

Source: ET/TA Call

Address/Location:

Attachment:

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Date/Time: 04/05/2011 08:31:49 (ET)
Position: EST Chronology Officer
Name: T Rowe

Team Meeting Summary

RST

(b)(5)

Record: 2188

PLANT STATUS DISCUSSION

The Site Team "stoplight" summary, which has been used by the Site team to the Ambassador, discussed the reasons why sharing it with the ET and RST could be beneficial. Stuck SRV indication for Unit 1, and overall plant status. OEDO request to evaluate daily information available via ENAC by IAEA as a SITREP replacement.

(b)(5)

"Additional Measures in light of TEPCO's Feed and Bleed Approach", paper has been shared with the Site team for use with TEPCO, if desired. No specific comments have been received. Plans are to make it final at the 1100 EDT call with the technical contacts today. INPO's effectiveness with TEPCO is significantly improving, via interactions inside the ERC, according to recent technical exchange meetings.

Spent Fuel Pool Assessment Paper - advice for when we can stop worrying about the SFP's. We are still not sure if they are hold water. Basically keep filled, establish cooling. Will also be discussed with the Consortium today at 1100.

Another paper being worked, "Stable state" paper. When can we say that the likelihood of an energetic event is slow (Phase I), and Phase 2 is on long term cooling. This has also been shared with the technical consortium for comment and will be discussed at 1100 as well.

(b)(5)

PMT

Facility:

(b)(5)

Chairman asked for the "runs" which justified the 50 mile EPZ a few weeks ago, and has

(b)(5)

been shared.

EPA has asked for information on iodine releases and cesium to iodine ratios, which we discussed and turned off.

PMT confirmed that no new source terms are being developed by NRC.

LT

PMT RASCAL runs were delivered to OCA this morning.

Consortium call at 2000 EDT, significant updates not occurring often in advance. NRC role as primarily facilitation, and may not be need much longer. VTC at 1600 with DOD, pulling the string on what that will entail. New daily call with NEI on air monitoring data from U.S. plants and other sources, and shared with EPA.

Also discussed making a daily report from IAEA available on the NRR SharePoint site, and potentially for sharing with the CA's.

Source: ET

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 04/05/2011 08:31:49 (ET) Team Meeting Summary

Position: EST Chronology Officer

Name: T Rowe RST

Record: 2189

PLANT STATUS DISCUSSION

The Site Team "spotlight" summary, which has been used by the Site team to the Ambassador, discussed the reasons why sharing it with the ET and RST could be beneficial. Stuck SRV indication for Unit 1, and overall plant status. OEDO request to evaluate daily information available via ENAC by IAEA as a SITREP replacement.

(b)(5)

Recommendation likely to keep SITREP in place while staffing the center, perhaps in the future if NRC stands down.

"Additional Measures in light of TEPCO's Feed and Bleed Approach", paper has been shared with the Site team for use with TEPCO, if desired. No specific comments have been received. Plans are to make it final at the 1100 EDT call with the technical contacts today. INPO's effectiveness with TEPCO is significantly improving, via interactions inside the ERC, according to recent technical exchange meetings.

Spent Fuel Pool Assessment Paper - advice for when we can stop worrying about the SFP's. We are still not sure if they are hold water. Basically keep filled, establish cooling. Will also be discussed with the Consortium today at 1100.

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[Redacted] (b)(5)

Facility:

PMT

[Redacted] (b)(5)

Chairman asked for the "runs" which justified the 50 mile EPZ a few weeks ago, and has been shared.

EPA has asked for information on iodine releases and cesium to iodine ratios, which we discussed and turned off.

PMT confirmed that no new source terms are being developed by NRC.

[Redacted] (b)(5)

LT

PMT RASCAL runs were delivered to OCA this morning.

Consortium call at 2000 EDT, significant updates not occurring often in advance. NRC role as primarily facilitation, and may not be need much longer. VTC at 1600 with DOD, pulling the string on what that will entail. New daily call with NEI on air monitoring data from U.S. plants and other sources, and shared with EPA.

Also discussed making a daily report from IAEA available on the NRR SharePoint site, and potentially for sharing with the CA's.

Source: ET

Address/Location:

Attachment:

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Date/Time: 04/05/2011 04:53:59 (ET)

PMT discussed current tasks with NRC Site Team:

Position: EST Chronology Officer

PMT provided comments to NRC Site Team on draft memo from US Ambassador in

Name: Thomas Scarbrough

Japan to DOS regarding the return of dependents to Tokyo.

Record: 2187

NRC Site Team will check with State Dept on trigger request.

Facility:

NRC Site Team does not have any new information on radioactive release into ocean.

NRC Site Team checking on this issue.

PMT checking trends of dose rates around site and finding spikes with wind shifts.

Source: PMT

Address/Location:

Attachment:

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Date/Time: 04/05/2011 03:03:19 (ET)

Discussion of document on Additional Measures in response to TEPCO activities. INPO

Position: EST Chronology Officer

working with TEPCO on this issue. Site team preparing comments on document. This is

Name: Thomas Scarbrough

Site Team action item.

Record: 2186

Discussion of GEH and TEPCO calcs on hydrogen concentration in drywell. GEH will

(b)(5)

reperform calc based on new leakage assumption to determine if consistent with TEPCO calc. GEH does not consider significant water on drywell floor (so assume full volume for hydrogen calc). TEPCO does not believe unit in flammability range. Consortium viewpoint has been to maximize flow and flood drywell. Site Team indicates calc needs to be completed. After calc completed, Consortium will re-evaluate position with new calc results.

TEPCO has connected nitrogen and finalizing procedure. TEPCO plans to complete procedure later today or tomorrow morning and then initiate nitrogen injection.

TEPCO believes Unit 1 had partially open safety relief valve.

Facility:

- Item 1: Waiting for GEH hydrogen calc.
- Item 2: Site Team will provide comments.
- Item 3: RST working on SFP document. Site Team suggests Thursday Japan time for completion (48 hours from now).
- Item 4: Waiting for comments from Consortium. NISA requested this document.
- Item 5: Site Team determined issue can be dropped.
- Item 6: INPO says TEPCO should not use goop as leak sealant inside pool, but small amount not an issue. RST checking with RES for confirmation. Site Team will provide INPO conclusion to NISA tomorrow.
- Item 7: Site Team aware of NR document on leakage into ocean. RST will provide to Consortium for review.

Site Team needs timeline by later this week.

Source: 0300 Call Highlights

Address/Location:

Attachment:

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Date/Time: 04/05/2011 02:43:30 (ET)
 Position: EST Chronology Officer
 Name: Thomas Scarbrough
 Record: 2185
 Facility:

PMT received for comment the draft paper on provisions for allowing military dependents to return to Tokyo. PMT preparing comments for fast turnaround.

(b)(5)

Source:	PMT
Address/Location:	
Attachment:	

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Date/Time:	04/04/2011 23:52:02 (ET)	RST: Updating 6 items from Laura Dudes e-mail and will include items on Task Tracker.
Position:	EST Chronology Officer	1. Hydrogen concentration analysis issued to Japan on day shift.
Name:	Thomas Scarbrough	2. "Additional measures in light of TEPCO strategy" document being prepared. Hope to close this shift.
Record:	2184	3. SFP White Paper is on action list. RST will follow-up with site team at 0300 call.
Facility:		4. "Stable plant conditions" document being prepared. NR, DOE, and GEH comments received. Document near completion.
		5. Site Team requested clarification from GEH on flooding and building seismic capability. RST will clarify during 0300 call.
		6. Checking on question on impact of Goop.
		Another RST item: GEH requested that NRC emphasize Consortium team in products.
		PMT priorities tonight:
		1. Review of DOE sitrep on data.
		2. Work with Site Team on State Dept effort on trigger system.
		PMT updating meteorology data and exposure data. Dose rates trending down. E.g., factor of 3 reduction over 1 week.
		PMT checking on request from DOD for DOE source term runs. Sandia is performing source term runs. PMT will follow-up. Sandia will be on 0300 call. NOAA is performing ocean plume run.
		PMT will review white paper on returning military dependents to Tokyo when provided by Site Team.
		Plant visit being considered in Japan.
		PMT supporting Site Team as needed.
		LT: Operating in Admin support mode during night shift. (b)(5)
		(b)(5) CDC will embed with LT starting tomorrow (probably day shift). LT supporting team in Japan as needed. Running table tops to help with logistics planning.
		ET: Take opportunity to update Tasker and briefing sheet.

Source:	ET Briefing
Address/Location:	
Attachment:	

(b)(5)

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Date/Time:	04/04/2011 21:48:22 (ET)	Think now they can operate vent valves from control room - so plan to inert today.
Position:	EST Chronology Officer	TEPCO plans by April 11 to plant probe with level indication ability in Unit 4 SFP. Mike
Name:	Rebecca Karas	Scott returning tomorrow. Blamey will take over Mikes duties. (b)(5)
Record:	2183	(b)(5)
Facility:	(b)(5)	
Source:	RST	

Address/Location: _____
Attachment: _____

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Date/Time:	04/04/2011 21:01:34 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2182	
Facility:		RST - focus is on 6 items of Laura Dudes email. Waiting from feedback from our partners on several of them. On call, talked about DOE putting together process for technical questions - we have the draft of the process. Not sure if they will be gatekeeper from now on. Gitter - probably when get past possibility of energetic release, when moves to cleanup, DOE will probably take lead. Still issues with Unit 1, Hydrogen, cont. integrity.
Source:	ET	

Address/Location: _____
Attachment: _____

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Date/Time:	04/04/2011 20:00:57 (ET)	Roles and responsibilities: anything additional? Was meeting with Japanese, and understand DOE will take lead for technical support for Japan efforts. Can try and get name of person who has lead at DOE. DOE - as followon from last night on action assigned at principles meeting - DOE will lead coordination of establishing database of capabilities. Clarification today is that DOE would develop process for vetting requests from GOJ, setup to ensure interagency coordination and that requests are properly validated. DOE agreed to manage process for vetting - draft process in concurrence at
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2181	

(b)(5)

DOE, will go out for interagency comment - probably tomorrow. Tilden - was in deputies meeting - this is not trying to upturn what is going on. NRC, all people at crisis team will still gather actions, and try and make sure GOJ wants actions. Then, DOE will develop process by which it takes those actions, goes through interagency process to make sure makes sense. Not a dramatic change. Its not really that DOEs taking the lead. DOE does have lead for validating the technical requirements, though.

Item 1 - rad monitors/survey meters - Nielsen - some progress. All 3 utilities agreed to pay for expense of shipping on their own. San Onofre first that will ship. Need help with duty that would be imposed by Japan on shipment - since relief effort - asking if they can get waiver. Requesting diplomatic assistance for that. INPO requests POC on duty. Is Berger contact? Site Team - yes start there. Also STP is in need of a certificate from Japan because one shipment is radioactive.

Next item - conduct of simulation - Cherry - holdup with respect to simulation - DOE is lead, working with Nucl. Saf. Cmsn., we are providing data on a daily basis from our aerial monitoring and ground measurements. Japanese are sharing info and data from many monitoring stations maintained by several ministries. Had good meeting with NSC yesterday and ministries to establish process where well use Japanese data in NARAC runs and the Japanese will use our data in SPEEDI simulations. Collaboration going well - this is not dealing with hypothetical models. This is using real data to compare how simulations would look. Spreadsheet embassy is developing on status has most up to date info. Goal is to merge spreadsheets.

Use of Germanium detectors - understanding status still correct - handcarrying 2 tomorrow, 2-4 will be shipped this week.

Use of rad monitoring devices on ground - no update. Still evaluating options.

Robotics for monitoring - Have been videotaping each piece of equipment for when they receive it. Supposed to be getting pdfs of instructions. Have not arrived at decision on sending experts. If GOJ needs, we will send. After cabinet meeting, talked to METI, who said TEPCO was in touch with Kinetic Japan regarding training. They are awaiting shipment.

(b)(5)

137707

Facility:

Use of extinguishant coolant - nothing new. At cabinet meeting, provided list to GOJ, and everyone agreed should scrub list. Working through that review process.

Temp holding tanks - part 1 is study of options on water treatment, part 2 is delivery of equipment. Propose splitting item. Delivered white paper March 31. Requests for specific equipment followed. Study of options continuing. DOE developing paper and will submit to embassy.

Tanks and tankers - very heavy items. talking to Savannah River on how to deliver. At meeting last night, GOJ did confirm request made by TEPCO for tanks and trailer. Each tank is 18,500 lbs. Truck is 78,000 lbs. What funding would cover shipping? DOE/Lyons will figure out how to cover that.

32 - delete

33 - expertise on temp shielding options - Blamey - need further discussions with NISA on list. Dont have expertise to do additional calcs - not sure where they want to put shielding - need more data to do detailed calcs.

Survey meters/dosimetry - Provided prelim list, but items like Radiac are having difficulty sourcing, so will look for substitutes. Iodine masks not available in US, so will substitute with charcoal. Berger - on HHS team, they were able to source masks - company that has Japanese outlet. Govt could purchase in Japan. Have surplus Radiacs here, but need relief on duty charges. Berger - team can help with duty charges. Going to meet with cabinet today.

Remote devices for rubble removal - have not had followup meeting - ready to advise on topics - suspect commercial suppliers will be source. Cherry - Japanese withdrew request for equipment, indicating they want our advice on shielding. TEPCO said they have additional info on details that they will give soon that our experts can use in formulating advice.

New actions/issues? Cherry - pumper truck from Savannah River - was TEPCO request

(b)(5)

138707

to construction company - how are we treating those requests? Will work to understand better, because being asked questions. They went through Putzmeister. 2 of the largest pumps were released. Understanding is that since DOE was leasing, and either Ashmoor or Putzmeister are arranging. Was supposed to have left today.

PACOM - for item 1, NRC is working with USAID on shipment? Still accurate? No, utilities are paying for shipment. Bruce shipment - ready to ship Thursday, delivery 20-25 days by sea. Will see if timeframe is acceptable. Can get shipping estimate via another route? Was \$10,000 by sea. About \$50,000 by other route. Is 1.5 containers of equipment. INPO to get estimate of cost to Berger and Blamey.

Source: Consortium call

Address/Location:

Attachment:

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Date/Time: 04/04/2011 19:27:35 (ET)	TEPCO has announced there are believed to be multiple cracks in the tunnel leading to the pit. They will inject a chemical into the adjoining sand to attempt to stop the leak. The work is scheduled for Tuesday. They are also considering setting up silt barriers in the sea adjoining the intake structures for the units.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2180	
Facility:	
Source: NHK TV	

Address/Location:

Attachment:

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Date/Time: 04/04/2011 19:25:31 (ET)	Announces company started releasing 10,000 tons contaminated water from the wastewater treatment facility, and also contaminated water from Units 5 and 6. Release of this water into the sea is necessary to make room for more highly contaminated water from Unit 2.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2179	
Facility:	
Source: NHK TV/TEPCO	

Address/Location:

Attachment:

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Date/Time: 04/04/2011 19:07:02 (ET)	Indicates intent today is to inject "liquid glass" to stop leak from pit.
Position: EST Chronology Officer	

(b)(5)

Name:	Rebecca Karas
Record:	2178
Facility:	
Source:	NHK TV

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	04/04/2011 19:01:42 (ET)	Discussed with site team - document emailed by Weber was requested by Casto. This is for Chairman, EDO, DEDOs. Document not coordinated with RST. Asked site team to send RST a copy when it is transmitted. For example, the document says U4 SFP failed, so we discussed on call with site team. Decided noone really knows if its leaking, or failed. Probably not catastrophically failed. Site team appears to have developed document for ease of communication.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2177	
Facility:		
Source:	RST	

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	04/04/2011 18:29:57 (ET)	RST concerned that throttling back water for cooling is threatening decay heat removal.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2176	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	04/04/2011 17:04:38 (ET)	Talking with GEH - the offices in Japan want to join in on the call. (b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2175	
Facility:		
Source:	RST	

Address/Location:	
Attachment:	

(b)(5)

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/04/2011 16:48:39 (ET)	We do have people with ocean plume modeling expertise - decision just needs to be made. We have 3 points of contact to get back to with a name. PMT recommends to have someone participate [redacted] (b)(5)
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2174	
Facility:	Working on input for RASCAL runs - also included info on the assumptions. Also looking at trigger levels.
Source: PMT	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/04/2011 15:36:02 (ET)	Will look at trigger points. Looking at options paper - out for comment. Working on SFP assessment.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2173	
Facility:	
Source: RST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/04/2011 15:07:09 (ET)	Deputies call feedback: Primary focus was action items from Fridays meeeting. Meteorology - no changes. DOE provided snapshot of plants. Interest in hydrogen issue in U1 and connections between vessels and water leaking to ocean. Also interested in arrival of remote handling equipment. People were interested if they have to evac site, would pumper trucks still be injecting? DOE said shipment leaving tomorrow, arriving Friday - not remote handling equipment for injecting into SFPs, though. Not sure if French shipment of robotics got there. Not sure what DOE is shipping. Update on ocean plume modeling: NOAA standing up group to do that, we are not on that group. DOE/EPA/DOD/OSTP/NSF/DOS were agencies involved on ocean plume modeling. If we want someone involved, should identify the person to [redacted] (b)(6) Jeff Rayner. Need
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2172	

[redacted] (b)(5)

to send name by tomorrow. Getting group together Thursday or Friday

(b)(5)

(b)(5)

Facility:

(b)(5)

(b)(5)

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(b)(5)

(b)(5)

(b)(5)

Source: Weber

Address/Location:

Attachment:

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Date/Time:	04/04/2011 14:03:08 (ET)
Position:	EST Chronology Officer
Name:	T Rowe
Record:	2171

Accomplishments & Comments for the Day

RST

Updated 3 Documents

Option B Paper – sent out about an hour ago comments needed by 2000. Team will give have comments by 2100. --- Chuck can use paper in draft

One Page (Stable Plant Conditions – out for comment by 2100
– Phase 1 – stable conditions recommendation for containment event (6)

(b)(5)

-- 1st draft - what conditions are required for Phase 1 Stable

-- Phase II - Stable conditions Units for cold shutdown

(Spent Fuel Pool Paper) Latest guidance for criticality and structure (sent out today) still accumulating comments

Additionally, TEPCO document was sent in response to question on low level release.

PMT

Facility:

Continuing to update meteorological data and exposure data in and around Fukushima environs.

Tasked by the Chairman's office to provide the input for the RASCAL runs that supported the PMT evacuations/sheltering recommendation on March 16th.

Evaluating Cs to I ratios around the site based on monitoring data (deposition and air monitoring)

Working on a formal request to research for assistance with developing a source term based on MELCOR modeling to support a DoD request for long-term planning (e.g., personnel evacuation and monitoring locations).

LT

Sent out Materials List Matrix Update - received no updates today

Sent Region I information concerning status on Japanese Cask Storage and provided web link to Region I for their review.

Source:

Address/Location:

(b)(5)

Attachment:

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Date/Time: 04/04/2011 11:51:05 (ET)

ET Summary to Chairman Jaczko

Position: EST Chronology Officer

Name: T Rowe

Areas that are being discussed:

Record: 2170

- 1. Unit I Containment (signs of hydrogen leaking)
- 2. NRC vs TEPCO regarding the right approach whether to increase water input
- 3. NRC vs TEPCO view of Hydrogen generation rate

Chairman Jaczko Question:

Why Hydrogen less incline to fill?

ET Answer:

It is complicated -- do not want Hydrogen explosion. They now have open space. There is a lot of pressure. There is extensive use of saltwater with aggressive corrosion rate. There is more quenching vs energetic.

Chairman Jaczko Question:

Is there more information on feed and bleed?

ET Answer:

Paper being worked on.

Chuck (on phone):

- 1. Need Hydrogen calculations to determine how much leakage.
- 2. Getting inquiries about flooding.
- 3. Possibility of Nitrogen injection tomorrow.
- 4. Getting inquiries from NISA - what does safe look like?

Facility:

(b)(5)

(b)(5)

ET Comments

What does stable look like?

Chairman Jaczko Question:

Are there any nontechnical coordination issues/concerns.

ET Answer:

CDC Personnel to arrive tomorrow (will determine role and responsibility once the staffer arrives).

Chairman Jaczko's Comment:

It is serves as good coordination from the CDC.

Going to DGs Meeting

Requested 90 Task Force Charter be sent (ET sent Charter)

Source: Chairman Jaczkos Call with ET

Address/Location:

Attachment:

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Date/Time: 04/04/2011 10:02:05 (ET)

TA Briefing -- 16 Attendees on Phone

Position: EST Chronology Officer

Name: T Rowe

Focus appears to be on Unit

Record: 2169

Signs of containment pressures decreasing (self-venting)

(b)(5)

NRC would like to expedite flooding containment.

(b)(5)

NRC Response Team was recently joined by two Sandia staffers. Chuck was able to define roles and responsibilities for Sandia staffers.

Liaison team is expecting CDC staffer tomorrow and will define role and responsibilities as well as expectations.

Question still remains when individuals will reenter Tokyo and the basis for their return.

Questions on Phone

Facility:

What is CDC's role? Has not been defined as of yet will find out tomorrow once the CDC staffer arrives

Answer

Looking for other government agency to take overall response effort to reduce NRC's footprint.

Question on Phone

Is there any sense any progress correlating contamination or radiation through models being run?

Answer

(b)(5)

Source: ET/10:00am TA Briefing

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 04/04/2011 07:33:58 (ET) RST

(b)(5)

Position: EST Chronology Officer

Name: T Rowe

Record: 2168

Unit 1 Containment - Pressure 7.8 pounds and decreasing (self-venting)

Option B Paper near finalization, being reviewed by GE & INPO

Spent Fuel Pool Paper - looking at mitigating options (prevent criticality/and ensure structurally sound).

Application of polymer sealant being evaluated to fix loose surface contamination.

Working a single sheet of paper - what is quasi stable reactor condition (conditions that should ensure no further energetic events or major RAD releases)

Salt accumulation in reactor vessels - U.S. would recommend higher fresh water feed rates

(b)(5)

Inerting may start sooner than expected

NRC would like better definition of water levels in Unit 1 (vessel and dry well)

PMT

(b)(5)

(b)(5)

Facility:

Japan lifted restrictions on drinking water all but one city.

Two Sandia staff are with Japan Team and working on source terms.

(b)(5)

DOE is Japan is working with Military to begin field measurement initiative to map out a warm zone (100 mrem/y) and a hot zone (300 mrem/y)

LT

Continue to facilitate Materials Support Consortium

Sending out a draft Matrix for additional updates for tonight's meeting - eventually transition it to Embassy to facilitate.

Establish contact with NOAA to find out - (a) Specific currents on the eastern coast of Japan, (b) What is its plume tracking capabilities, if any?

Expecting CDC representative to sit in today.

ET Environmental Events & Comments

TA Call @ 10:00am today

Chairman Jaczko call today @ 11:30am or 11:45am

Turnover form is important - Use WebEOC to annotate staffing

Source: ET

Address/Location:

Attachment:

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Date/Time: 04/04/2011 07:04:21 (ET)

ET Turnover in progress

Position: EST Chronology Officer

Name: T Rowe

Record: 2167

Facility:

(b)(5)

Source: ET	
Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information	

Date/Time: 04/04/2011 06:33:33 (ET)	Staff Turnover Briefing in process.
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 2166	
Facility:	
Source: ET	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information	

Date/Time: 04/04/2011 06:08:34 (ET)	Everything RST completes is getting attached into the Chron. Storing things in the M drive. It would be ideal to put them into WebEOC (that is backed up).
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 2165	3 bullets:
Facility:	<ul style="list-style-type: none"> 1 - RST working on Hydrogen question for TEPCO. Need to talk about level of concurrence on this item. Clarification to the document that had a high level concurrence. 2 - Draft document on "Option B". Also need to consider concurrence here. 3 - Spent Fuel question. <p>Started working on High Level Strategy. We will work with consortium on it and then come back for concurrence.</p>
Source: RST	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information	

Date/Time: 04/04/2011 04:26:56 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 2162	

(b)(5)

Facility:

(b)(5)

Source: RST

(b)(5)

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information~~

Date/Time: 04/04/2011 04:45:30 (ET)

Position: EST Chronology Officer

Name: Nick Ballam

Record: 2163

(b)(5)

Facility:

(b)(5)

(b)(5)

(b)(5)

Source: PMT

Address/Location:

Attachment:

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Date/Time:

ET needs to talk about this request from the site team and Japanese: "What conditions

(b)(5)

Date/Time:	04/04/2011 04:26:56 (ET)	In containment / reactors / spent fuel pools are required to consider the site "stable"?"
Position:	EST Chronology Officer	Phase 1 = No Major Events, and no major releases. Phase 2 = Long Term Cooling, Cold Shut Down.
Name:	Nick Ballam	
Record:	2164	
Facility:		(b)(5)
		9000 Rem per hour (Subject to verification) on Unit 2.
		(b)(5)
Source:	RST	

Address/Location:	
Attachment:	

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Date/Time:	04/04/2011 04:10:28 (ET)	Four ongoing activities.
Position:	EST Chronology Officer	(b)(5)
Name:	Nick Ballam	
Record:	2161	
Facility:		Two questions:
		(b)(4)
		TEPCO is on track to begin nitrogen inerting the morning of April 5 (Japan time).
Source:	RST	

Address/Location:	
Attachment:	

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(b)(5)

Date/Time: 04/04/2011 03:04:22 (ET)	Listening in on RST 03:00 call with site team and consortium.
Position: EST Chronology Officer	
Name: Nick Ballam	3 pending products:
Record: 2160	1 - Questions regarding the Hydrogen from TEPCO. 2 - "Option B" (Elmo) Additional Considerations. 3 - Spent Fuel Pool Recovery (Tuesday)
Facility:	Plant Status - Unit 1, they are decreasing the rate of injection of water. Now down to 100 liters/minute. Meeting with NISA & TEPCO on the assumptions. (b)(5) They believe that the assessment done by TEPCO seems reasonable. They gave us a 3-page document with a framework that they want to discuss. They will start putting nitrogen into the containment starting tomorrow. Their top priority is inerting followed up by filling the containment. Theyre talking about a written product response that we will provide. Level of concurrence still TBD. Will shoot for 10:00 a.m. as due date. TEPCO wants an answer by 08:00 on the 5th Japan time. RST sent the "additional considerations" document updated with NR comments out to consortium for comments. Prognosis on spent fuel pool 4 assessment. We were looking for Tuesday or Wednesday. This is in the line organization. Still on track for Tuesday. Looking for the US Government decision on what would lead to stability where there are no major events and no major release potential. RST - Sent suggestions for securing pool leaks to site team. They havent reviewed it yet.

Source: ET	
Address/Location:	
Attachment:	
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Date/Time: 04/03/2011 23:55:18 (ET)	Midnight briefing.
Position: EST Chronology Officer	

((b)(5))

Name: Nick Ballam
Record: 2159

RST - Haven't been many changes in plant status. Primary focus is this "additional considerations" document. Recommendations from RST and industry consortium. The document went out to site team and consortium. We got questions on flow rates and venting from Elmo, questions from Albert from INPO and write ups from NR as well. Tonight we will combine all of these into one document. Aiming for 02:00 for completion to send it out before our 03:00 call.

Will close 3979 question from the chairman "What is the source of the water in the trench that has been leaking into the ocean?" PMT did a writeup that explains this.

Brian - Flow rate out is about the same as the flow rate in.

Our team composition in Japan is changing. We need to start thinking about roles and responsibilities. We are down to only two reactor people.

We were hoping that some logistics people from State department would coordinate everything over in Japan. Technical questions would be routed to NRC for our consideration. We would help prioritize requests.

N.R. came up with a document to help stop the trench leak to the ocean. Sent it out to the consortium and site team for comments. Have we considered looking outside of the nuclear industry on some of these items?

PMT - Talked to Vince. The prime minister and minister of defense from Japan will be visiting the Ronald Reagan today. Will visit a base in Sendai on the 11th. They are thanking us for the support. By April 6th we will get a copy of a paper concerning the return of military personnel to Japan.

Facility:

(b)(5)

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(b)(5)

(b)(5)

RST - Venting containment question: We are going to focus more on what Japan has chosen to do, and what recommendations we would have if they continue to follow this route. We have concerns about asking them to open a valve if they wont be able to close it again. The new question is: "Is there a way to install another valve on this?" But given the condition reports that we are getting it appears that they are still OK without venting right now.

Fred Brown generated two tasks last night. NRR and Research are working on them. 1 - What can create an energetic release? 2 - Fault trees.

Source: ET

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/03/2011 22:38:46 (ET)	ET turnover in process
Position: EST Chronology Officer	
Name: Carolyn Faria	
Record: 2158	
Facility:	
Source: ET	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/03/2011 22:26:55 (ET)	Just learned from GE: To manually vent the unit: the valve has to be literally manually opened and then left open. They won't be able to close it because of the heat, therefore failing containment, not
Position: EST Chronology Officer	
Name: Carolyn Faria	
Record: 2157	

(b)(5)

Facility: venting containment.
 -postulated question: can a valve be installed far out enough to control it remotely?
 Question about where is the energy going comes up; for example: If there is steam coming out of the core, where is it going?
 Unit 1 core is probably the only core uncovered.

Source: RST

Address/Location:

Attachment:

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Date/Time: 04/03/2011 21:44:21 (ET) **Elmo questions discussion:**

Position: EST Chronology Officer - Industry has said that they have already made recommendations to Japan

Name: Carolyn Faria - Rev.#1 RST

Record: 2155

Facility: (b)(5)
 - J's strategy Feed and Bleed enough to balance the explosion mixture (steam, oxygen, hydrogen).
 - We've already told them how to avoid energetic releases
 - RST is putting together a response with the use of old documentation, and new documentation. It diverts a bit from the original direction.
 - GPM curves (decay heat curve) discussion (WITT standard or not?)
 This is RST's priority right now.

Source: RST

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information

Date/Time: 04/03/2011 21:44:21 (ET) **Elmo questions discussion:**

Position: EST Chronology Officer - Industry has said that they have already made recommendations to Japan

Name: Carolyn Faria - Rev.#1 RST

(b)(5)

Record: 2156	(b)(5)
Facility:	<p>o Here is what we recommend based on what we think you are doing.</p> <ul style="list-style-type: none"> - J's strategy Feed and Bleed enough to balance the explosion mixture (steam, oxygen, hydrogen). - We've already told them how to avoid energetic releases - RST is putting together a respond with the use of old documentation, and new documentation. It diverts from the original direction. - GPM curves (decay heat curve) discussion (WITT standard or not?) <p>This is RST's priority right now.</p>
Source: RST	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 04/03/2011 21:00:46 (ET)	Consortium Call 8pm
Position: EST Chronology Officer	
Name: Carolyn Faria	ET Director: was at call with consortium on Thursday night. Asks if everyone has received an updated list of action items? That is where he will be working from.
Record: 2154	Proposes
	Item 1: survey meters, friskers: Japan asked for these. NRC is working with .. activity awaiting authorization. Process for approving for transportation is tentative
	INPO: it is still current information
	Rick Nealson: Songs has 2 parcels.. 1 has internal contamination. Going to have to backfit some things. South Texas incurring on the costs, we don't have a clear answer to that yet. This may take a couple of days. (bear this in mind since South Texas is an operating unit)
	Alan @ Japan: INPO will be receiving a call soon to work out logistics thru DART team?
	Next Item Conduct of simulation: Action with DOE
	(b)(5)

(b)(5)

Use of Germanium conductor to see the: DOE is delivering 2 detectors April 5 and other later

DOE: Still current status

Use of monitoring equipment: ground monitor devices

DOE: DOE and DOD is looking to see if this is what is needed.

Tokyo: additional point DOE MMS team having discussion of the ground monitoring devices; and discussion of having EPA's RADNET type equipment installed. EPA and food agency

Should we get EPA on the calls? Tokyo: # of EPA players in the embassy that should be in the call. Interagency discussion will occur @ Tokyo @ 11:15.

Bigger question should be brought up about the rest of the players should be included. Issue before was participants working on other initiatives of the DART teams was a concern. Dynamics may change as we move for next week and the one after.

Item #21 Use of robotic devices: DOE and DOD lead; there will be conversations on whether or not to send experts

Hand held monitoring devices ' requests

If Japan wants additional devices, it is understood that INPO has already canvas the nuclear industry. Suggestion about removing hand held monitoring devices' request from the actions plan. The only part that would stay are UAV and the robotics.

Item: Bectel Pumps: one train that is installed, and no need for further trains.

Facility:

(b)(5)

Rick Neelson: verified that the other trains are not necessary. Don't see any further actions.

ET will mark it closed on our list

Item: use of an extinguisher/ coolant: NRC's action

Alan: in the process to have a government to government meeting to gain insight and understand what exactly is Japan asking for.

Item: Temporary holding Tanks: DOE & DOD (developing recommendations and proposals for removal of water; obtaining storage devices after water is removed)

Still open and still waiting for an agreement on where to move the water to.

One of the options being evaluated is use Unit 4 drywell, if it is intact.

DOE- There is a paper that was provided last week with what we could provide. This is where the 6 tanks requested from TEPCO came from, but this request has not been validated by the Japan government. Water management issue is a large issue.

7pm meeting tonight would be the perfect time to ask the (b)(5) TEPCO's request. Then, have we thought thru the mechanics of actually being able to deliver the equipment?

Item #33: Japan asked NRC expertise on temporary shielding options.

Alan needs to get more details as to what Japan needs./ can't be closed out

Item: requests of 2100 rad meters, personal dosimeters, iodide shielding masks

INPO: missing some costs line items

Item: use robotic devices to remove rubble. DOE & DOD (remote control project team)

Thought is the commercial side has this figured out and will carry on.

ET: On April 1, a deputies meeting with situation room. Wondering whether we need to incorporate this actions into our actions list?

There is an agreement that DOE will maintain a list of private industry requests and actions. Want to avoid duplication of information and initiative. DOE commits to look

(b)(5)

into it.

Next call is tomorrow night at 8pm.

Source: ET- call

Address/Location:

Attachment:

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Date/Time: 04/03/2011 19:55:34 (ET)

DOE will list and maintain a list of the monitoring and stabilizing status of private plants.

Position: EST Chronology Officer

Name: Carolyn Faria

Record: 2153

Facility:

Source: LT

Address/Location:

Attachment:

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Date/Time: 04/03/2011 15:21:52 (ET)

M Virgilio here for Chairman call. M Weber on the bridge line.

Position: EST Chronology Officer

Chairman is not answering the phone numbers, assuming he is already at the airport.

Name: Carolyn Faria

Record: 2146

Global Assessment discussion.

The compartment above the drywall of Unit 1 is said to have water.

(b)(5)

(b)(5)

DOE science council, NRC is participating in every phone call.

Facility:

Need clarity on pressure discussion

(b)(5)

Unit 1 has safety related equipment in the turbine building, which means lots of penetrations from reactor building to the turbine building.

Need to continue to work: where is the water issue? Where is it coming from? And where is it going?

Question for PMT about NOA...

Source: ET

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/03/2011 15:21:52 (ET)

Marty here for Chairman call. Michael on the bridge line.

Position: EST Chronology Officer

Chairman is not answering the phone numbers, assuming he is already at the airport.

Name: Carolyn Faria

Record: 2152

Global Assessment discussion.

The compartment above the drywall of Unit 1 is said to have water.

(b)(5)

(b)(5)

DOE science council, NRC is participating in every phone call.

Facility:

Need clarity on pressure discussion

Unit 1 has safety related equipment in the turbine building, which means lots of penetrations from reactor building to the turbine building.

Need to continue to work: where is the water issue? Where is it coming from? And where is it going?

(b)(5)

Question for PMT about NOA...

Source: ET

Address/Location:

Attachment:

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Date/Time: 04/03/2011 15:21:52 (ET)

Marty here for Chairman call. Michael on the bridge line.

Position: EST Chronology Officer

Chairman is not answering the phone numbers, assuming he is already at the airport.

Name: Carolyn Faria

Record: 2151

Global Assessment discussion.

Facility:

The compartment above the drywall of Unit 1 is said to have water.

(b)(5)

(b)(5)

DOE science council, NRC is participating in every phone call.

Source: ET

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/03/2011 15:37:19 (ET)

Chairmans brief

Position: EST Chronology Officer

Name: Carolyn Faria

Unit 1 Containment Pressure going down. Speculation of O ring maybe leaking.

Record: 2147

Team is looking at alternative means to introduce Nitrogen for Unit 1.

Working with industry on Elmos questions.

-Japanese news talk about their perspective on finding what amount of water injection is just right-

(b)(5)

Facility:	<p>TEPCO trying to use polymer absorber...</p> <p>Jaczko asks about the source of water in turbine: Tsunami water vs not... please clarify.</p> <p>-no worker had received more than 25rem.</p> <p>-only restriction on water consumption is for children in Litata</p> <p>Jaczko asks if general levels are decreasing or not?- downward trend verified</p>
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Source: ET	
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Address/Location:	
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Attachment:	
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~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 04/03/2011 15:37:19 (ET)	Charimans brief
Position: EST Chronology Officer	
Name: Carolyn Faria	Unit 1 Containment Pressure going down. Speculation of O ring maybe leaking.
Record: 2149	

Facility:	<p>Team is looking at alternative means to introduce Nitrogen for Unit 1.</p> <p>Working with industry on Elmos questions.</p> <p>-Japanese news talk about their perspective on finding what amount of water injection is just right-</p> <p>TEPCO trying to use polymer absorber...</p> <p>Jaczko asks about the source of water in turbine: Tsunami water vs not... please clarify.</p> <p>-no worker had received more than 25rem.</p> <p>-only restriction on water consumption is for children in Litata</p> <p>Jaczko asks if general levels are decreasing or not?- downward trend verified</p>
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(b)(5)

Source:	ET
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Address/Location:	
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~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	04/03/2011 15:37:19 (ET)	Charimans brief
Position:	EST Chronology Officer	
Name:	Carolyn Faria	Unit 1 Containment Pressure going down. Speculation of O ring maybe leaking.
Record:	2148	
Facility:		<p>Team is looking at alternative means to introduce Nitrogen for Unit 1.</p> <p>Working with industry on Elmos questions.</p> <p>-Japanese news talk about their perspective on finding what amount of water injection is just right-</p> <p>TEPCO trying to use polymer absorber...</p> <p>Jaczko asks about the source of water: Tsunami water vs not... please clarify.</p> <p>-no worker had received more than 25rem.</p> <p>-only restriction on water consumption</p> <p>Jaczko asks if general levels are decreasing or not?- downward trend verified</p>
Source:	ET	

Address/Location:	
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Attachment:	
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Date/Time:	04/03/2011 15:21:52 (ET)	Marty here for Chairman call. Michael on the bridge line.
Position:	EST Chronology Officer	Chairman is not answering the phone numbers, assuming he is already at the airport.
Name:	Carolyn Faria	
Record:	2150	

(b)(5)

Facility:	
Source: ET	

Address/Location:	
Attachment:	

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Date/Time:	04/03/2011 14:52:18 (ET)
Position:	EST Chronology Officer
Name:	T Rowe
Record:	2144

RST

New input from INPO representative at the TEPCO ERC, they believe the source of the leak may be the Unit 1 drywell O-Ring

Response to Elmo Questions:

The Team is working on alternate methods for introducing Nitrogen into the system based on requests for assessment by TEPCO.

PMT

TEPCO confirmed dose rates of 10 R/hr from cable storage pit located next to Unit 2 discharge point, with a crack of approximately 20 cm on the sidewall and leaking directly to the sea. News reports indicate the flow of this water is approximately 2 L/sec. News reports indicated TEPCO used a polymer absorbent high pressure inject that was not successful for 106,095 people at Fukushima prefecture; among them 102 people indicated levels above 100,000 values went down to a level lower than 100,000 cpm, there were no cases that may influence health.

Facility:

On March 31, NISA also reported that among the workers at the Fukushima Daiichi plant, 21 workers have received doses exceeding 100mSv (10 rem). No worker has received a dose above Japan's guidance value of 250 mSv (25 rem) for restricting the exposure of emergency workers.

As of April 1st, all restrictions on the consumption of drinking water by adults in the Fukushima prefecture have been lifted. The only remaining restriction on water consumption is for children in Litate.

(b)(5)

(b)(5)

LT

All meeting participants will receive matrix.

Matrix sent to IAEA

Embassy added column to Matrix that will be used to cross reference NRC with Embassy List.

Source: ET

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 04/03/2011 14:52:18 (ET)

RST

Position: EST Chronology Officer

Name: T Rowe

Record: 2145

New input from INPO representative at the TEPCO ERC, they believe the source of the leak may be the Unit 1 drywell O-Ring

Response to Elmo Questions:

The Team is working on alternate methods for introducing Nitrogen into the system based on requests for assessment by TEPCO.

PMT

TEPCO confirmed dose rates of 10 R/hr from cable storage pit located next to Unit 2 discharge point, with a crack of approximately 20 cm on the sidewall and leaking directly to the sea. News reports indicate the flow of this water is approximately 2 L/sec. News reports indicated TEPCO used a polymer absorbent high pressure inject that was not successful for 106,095 people at Fukushima prefecture; among them 102 people

(b)(5)

Facility:

indicated levels above 100,000 values went down to a level lower than 100,000 cpm, there were no cases that may influence health.

On March 31, NISA also reported that among the workers at the Fukushima Daiichi plant, 21 workers have received doses exceeding 100mSv (10 rem). No worker has received a dose above Japan's guidance value of 250 mSv (25 rem) for restricting the exposure of emergency workers.

As of April 1st, all restrictions on the consumption of drinking water by adults in the Fukushima prefecture have been lifted. The only remaining restriction on water consumption is for children in Litae.

(b)(5)

LT

All meeting participants will receive matrix.

Matrix sent to IAEA

Embassy added column to Matrix that will be used to cross reference NRC with Embassy List.

Source: ET

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/03/2011 08:45:32 (ET)

TA Phone Call - 22 participants on Phone.

Position: EST Chronology Officer

Name: T Rowe

ET: Michele Evans facilitated meeting

Record: 2140

- No changes in Plant status in last 24 hours.

(b)(5)

- Continue to work on activities coming into Ops Center

- Next call 10am Tomorrow

PMT

[Redacted] (b)(5)

- Deployment of certain EPA RADNET Monitors will be discussed on Monday, April 4, 2011 at Deputies/principals meeting

[Redacted] (b)(5)

RST

- Working spent fuel pool assessment paper on Monday

- The supplemental paper on venting was provided to the site team, to discuss with the Japanese, within the last 24 hours

- We are looking at questions from the site team, regarding other options and considerations if the operators continue to use feed and bleed

Facility:

LT

- Will continue to facilitate daily consortium calls each evening

Questions & Comments:

PHONE:

[Redacted] (b)(5)

Why is TEPCO using April 9th for the earliest they would be able to inert with Nitrogen?

ANSWER:

RST: More time to figure out how to introduce Nitrogen into the system. Note that pressure has decreased in containment for Unit 1, however, the hydrogen and oxygen mixture is still a concern as part of NRCs recommendations.

PHONE COMMENT:

- Heard 2 bodies were found from News source

ANSWER:

ET - Killed from Tsunami (missing since March 11)

Source:

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/03/2011 08:45:32 (ET)

TA Phone Call -- 22 participants on Phone.

Position: EST Chronology Officer

Name: T Rowe

ET: Michele Evans facilitated meeting

Record: 2143

-- No changes in Plant status in last 24 hours.

-- Quiet weekend continuum of work on activities coming into Ops Center

-- Next call 10am Tomorrow

PMT

(b)(5)

-- Deployment of certain EPA RADNET Monitors will be discussed on Monday, April 4, 2011

(b)(5)

(b)(5)

(b)(5)

RST

- Status Paper - Rev 1 - Reference document (Flood Containment/ Vent to Unit 1)
- 5-6 paper (Venting supplemental paper) (send out for concurrence) Drywall pressure 8psi - Hydro/Oxygen (primary containment, control concentrations)
- Sandia is in Japan

Facility:

LT

- Two Concrete trucks going to Japan from U.S. by way of Russian transport planes
- Japan is pursuing Pacific Northwest Labs additional information
- Will still facilitate meeting for Consortium @ 2100
- Minutes from last meeting matrix comments sent out

Questions & Comments:

PHONE:

Why is TEPCO using April 9th for the venting?

ANSWER:

RST: More time to figure out Nitrogen system (27r/per hour). Not quick to vent & use NRC containment recommendations

PHONE COMMENT:

- Heard 2 bodies were found from News source

(b)(5)

170707

ANSWER:
ET -- Killed from Tsunami (missing since March 11)

Source:

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information~~

Date/Time: 04/03/2011 08:45:32 (ET)

TA Phone Call -- 22 participants on Phone.

Position: EST Chronology Officer

Name: T Rowe

ET: Michele Evans facilitated meeting

Record: 2142

-- No changes in Plant status in last 24 hours.

-- Quiet weekend continuum of work on activities coming into Ops Center

-- Next call 10am Tomorrow

PMT

(b)(5)

-- Deployment of certain EPA RADNET Monitors will be discussed on Monday, April 4, 2011

(b)(5)

RST

-- Status Paper - Rev 1 - Reference document (Flood Containment/ Vent to Unit 1)

-- 5-6 paper (Venting supplemental paper) (send out for concurrence) Drywall pressure 8psi - Hydro/Oxygen (primary containment, control concentrations)

-- Sandia is in Japan

(b)(5)

Facility:

LT

- Two Concrete trucks going to Japan from U.S. by way of Russian transport planes
- Japan is pursuing Pacific Northwest Labs additional information
- Will still facilitate meeting for Consortium @ 2100
- Minutes from last meeting matrix comments sent out

Questions & Comments:

PHONE:

Why is TEPCO using April 9th for the venting?

ANSWER:

RST: More time to figure out Nitrogen system (27r/per hour). Not quick to vent & use NRC containment recommendations

PHONE COMMENT:

-- Heard 2 bodies were found from News source

ANSWER:

ET -- Killed from Tsunami (missing since March 11)

Source:

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information~~

Date/Time: 04/03/2011 08:45:32 (ET)

TA Phone Call -- 22 participants on Phone.

Position: EST Chronology Officer

Name: T Rowe

ET: Michele Evans facilitated meeting

(b)(5)

Record: 2141

- No changes in Plant status in last 24 hours.
- Quiet weekend continuum of work on activities coming into Ops Center
- Next call 10am Tomorrow

PMT

[Redacted] (b)(5)

- EPA will deploy RADNET Monitors on Monday, April 4, 2011

[Redacted] (b)(5)

RST

- Status Paper - Rev 1 - Reference document (Flood Containment/ Vent to Unit 1)
- 5-6 paper (Venting supplemental paper) (send out for concurrence) Drywall pressure 8psi - Hydro/Oxygen (primary containment, control concentrations)
- Sandia is in Japan

LT

Facility:

- Two Concrete trucks going to Japan from U.S. by way of Russian transport planes
- Japan is pursuing Pacific Northwest Labs additional information
- Will still facilitate meeting for Consortium @ 2100
- Minutes from last meeting matrix comments sent out

[Redacted] (b)(5)

Questions & Comments:

PHONE:

Why is TEPCO using April 9th for the venting?

ANSWER:

RST: More time to figure out Nitrogen system (27r/per hour). Not quick to vent & use NRC containment recommendations

PHONE COMMENT:

-- Heard 2 bodies were found from News source

ANSWER:

ET -- Killed from Tsunami (missing since March 11)

Source:

Address/Location:

Attachment:

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Date/Time: 04/03/2011 07:17:58 (ET)

Chairman Jaczko will be briefed by ET Director @ 3:15pm today.

Position: EST Chronology Officer

Name: T Rowe

While Chairman Jaczko is on travel in Vienna there will be Briefings, Monday-Wednesday @ 8:00am

Record: 2139

Facility:

Source: ET

Address/Location:

Attachment:

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Date/Time: 04/03/2011 06:03:10 (ET)

06:00 Briefing

Position: EST Chronology Officer

Name: Nick Ballam

RST - Quiet shift. No status update from Japan team. They didnt meet with the Japanese. They were promised some readings, but didnt receive them. Focused on the

Record: 2138

(b)(5)

"Option B" question which is what we will be calling the Elmo question. We had 3 sets of comments that we put into the new consolidated document and left it with industry. Due date is 10:00 today. The site team gave us comments as well.

The spent fuel pool analysis is out with the industry consortium to work. The swing shift put together a straw man for them to work with.

Navy PACOM folks sent an email to Mike Scott with some questions. After Mike responded, he got a page and a half of questions. Mike sent it to RST, we forwarded it to NR. Need some filtering with all these questions. We ought to let Vince Holohan interact with them to help with this.

Cleaned up some of the minor tasker items.

Question on the possibility of an "Energetic Release"... was this given to RES to work on? We need to follow up with the status on this. If these other three items are important, we need to separate them and give them each their own task. They want this Elmo Question (Option B) to go through full concurrence.

Need clarification on these other three items that have been asked. We aren't working on them yet but need to know if they are really important or where they came from.

Facility:

(b)(5)

Trying to build continuity in the major players by using the turnover logs. These can be customized as needed.

The site team is gathering available computational information and fuel monitoring information in order to produce an integrated document. They are including previous

(b)(5)

assessments in this analysis as well. This will produce a document to support high level briefings.

Source: ET

Address/Location:

Attachment:

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Date/Time: 04/03/2011 05:30:35 (ET)

Position: EST Chronology Officer

Name: Nick Ballam

Record: 2137

Facility:

Source: RST

Mike presents update in paper-form. They are really working on item #1, the Elmo question. Nobody is working on items 2-4. The site team is not asking for items 2-4. We need to pass this information on to the next shift(s).

Address/Location:

Attachment:

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Date/Time: 04/03/2011 04:04:31 (ET)

Position: EST Chronology Officer

Name: Nick Ballam

Record: 2136

Facility:

Source: PMT

Protective action: The military evacuation is still out to 20km. Before it was voluntary between 20-30km. They have not changed this recommendation, but they are now "encouraging" the residents in those 10km to evacuate with shelter in place. Our recommendation is to evacuate out to 80km (50 miles).

The site team is having problems opening PDF files, especially ones coming from TEPCO. Coordinate with Eric Stahl to resolve this issue.

Address/Location:

Attachment:

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Date/Time: 04/02/2011 23:57:23 (ET)

Position: EST Chronology Officer

Name: Nick Ballam

Record: 2135

Midnight Briefing

RST - Status is virtually the same as when we left it. Big accomplishment is the venting document has officially made it out as Rev. 6. Dont have a lot of urgent tasks. Going to focus on the Spent Fuel Pool analysis. Two questions from site team: 1 - The Elmo Question, 2 - "When will there be no chance of an energetic release?". There is a draft out to the site team. We will try to make a revision by the time of the site team call to present to them. Second priority is to try to clean up all of the tasking mechanisms.

(b)(5)

PMT - Transitioning to fuel monitoring information. Expanding from land out into waterway information. The contact has been made with EPA. We are trying to find out if there is a need to send any more resources. Why is EPA involved instead of just DOE? Not exactly sure at this point, but it was brought up earlier this week. Monday meeting will help decide if these additional resources will be needed.

(b)(5)

We will have a 0300 call with the site team to determine next steps.

Facility:

Japan team has asked us to start working with NOAA to start looking at the oceanic status. We need to find a contact there to help with this. There is a need to do plume modeling for the oceanic pathway. We have done several different runs. Now we are focusing on monitoring the dose levels.

(b)(5)

Any analysis on why Unit 1 has been decreasing in pressure? One possibility is that the pump seals are leaking water, reducing the pressure, or that the water is cooling things and reducing pressure.

Oregon and Washington have detected iodine in the milk. EPA is doing a lot of work on this front, but has shown that we should not be concerned about what is being detected.

Lessons learned should be entered into the "Comments and Issues" board.

Source: ET

Address/Location:

Attachment:

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Date/Time: 04/02/2011 22:03:17 (ET) Ready to send document to site team. Bulk of info came from NRC. Industry didnt have

(b)(5)

Position:	EST Chronology Officer	much input. Some saw it - feedback gotten is not much more input from them. Will send to site team as draft, then get their feedback.
Name:	Rebecca Karas	
Record:	2134	
Facility:		
Source:	RST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	04/02/2011 21:36:56 (ET)	Have embassy hydrogeologist working on groundwater at the site. They already looked at the site - they are pulling something together on that. Were also going to look at the ocean plume, even though not in our zone, but to make document on the current and future state comprehensive (Navy is interested in particular). Understand NOAA might be able to help with ocean plume - they have models [redacted]
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2133	
Facility:		[redacted] (b)(5) Made contact with EPA on Radnet also. Elmo - think there is a need here for a principal Federal official - probably DOE. If not DOE, then NR. Lyons coming out next week, will talk with him.
Source:	Chuck/Elmo	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	04/02/2011 21:22:46 (ET)	RST has prepared document under discussion with Mike Scott. Document lays out supplement on what we previously provided on merits of venting, concentrating on assumptions made by GE on what combustible gases would look like in containment. Then proceeds with what to take into consideration in preparation for venting. However, indications are that [redacted] (b)(5) Thought we were working on other strategies - if feed and bleed - are there other mitigating strategies..etc. Chuck - Hydrogen part especially would be helpful. We heard yesterday for first time that their calculations relative to Unit 1 dw pressure - leaking 10-30% of volume per day out. Hiland - we have that info. Consortium was working on document of assumptions made by GEH on hydrogen generation per day. They assumed a certain leak rate also - basically intact containment. Thought Japan team could show to TEPCO and they could both look at assumptions and see what is reasonable and what is not. Consortium has worked on hydrogen paper, and other was lower priority. Well work on that next with
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2132	
Facility:		

[redacted] (b)(5)

help of consortium. Elmo - (b)(5) Since dw is now leaking, they are already effectively venting....Question is is feed and bleed a viable strategy if they wont vent and flood? How do we anticipate situation playing out?

Source: Chuck/Elmo

Address/Location:

Attachment:

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Date/Time: 04/02/2011 20:00:24 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2131

Weber - understanding is work continues towards identifying another lead other than NRC - in interim, NRC continues to lead.

US Industry support structure and roles - no update.

INPO report on status of requests:

Item 1: Bruce will be ready to ship on Thursday. 20 hand and foot monitors. STP and San Onofre are ready to ship at any point. San Onofres items not contaminated. STP has 2 parcels - 1 cleared, other has low-level contamination. Bruce - some of shipment is pressurized bottles, and possible contamination.

(b)(5)

Blamey - embassy in transition - trying to get logistics people here - will go a lot smoother then, not sure on ETA for those people. Mercer - embassy working to consolidate a master list that will be presented at 1900 tomorrow to Japan by Mr. Howard - he will validate requests. If non-military transport, will be handled by USAID - DART, otherwise by Mr. Howard for military transport.

2 - PACOM transport - is this an item? No, is general guidance. Commercial is preferred. Military is a backup transport.

(b)(5)

(b)(5)

(b)(5)

#20 + 22: Rad monitoring devices on ground: Mobile ground monitoring occurring. Stationary monitoring devices still open.

18 - conduct of simulation - have we shared NARAC runs with GOJ? On April 4 technical cooperation will be discussed. Still open.

19 - Germanium semiconductor detectors - DOE - NNSA hand-carrying 2 to Japan and they will arrive April 5. 2-4 more shipped same week. Open.

Use of robotic devices - 21 - DOE has lead on ground robotics and hardened cameras. DOD and USFJ working on others. Talon robot and cameras sched to ship 5th. DOE looking into sending robotics expert and expert for cameras. That is to be finalized. On Dr. Murphy - sent note and havent received response. INEL has also been in contact with Dr. Murphy. Hochivar - Dr. Murphy contracted with Westinghouse on UAV effort here. Can close Dr. Murphy aspect.

UAVs - Blamey - KMAX - 23 - NRC team does not see need for KMAX but want to validate with embassy on Monday.

22 - item is vague - Blamey - NISA requested meeting to go over in more detail. Need to firm up if item needed. Leave open.

24 - Bechtel trains - based on discussion yesterday with RST, view is to continue with planned course - GOJ did not request additional trains, believe DOD is in process of deobligating some of the pumps. INPO will follow up with Bechtel on this. Based on discussions with RST, GOJ using fire trucks as backup, so no reason to change

Facility:

(b)(5)

180707

direction laid out last week was that military was moving to deobligate additional trains and keep the one train and 2 barges in place.

25 - cut out

27 - KI - closed

28 - Blamey - nitrogen item - meeting with GOJ/NISA to understand if more needs to be done.

29 - closed

30 - temporary holding tanks - DOE - think status is current - believe Sal attempted to contact Admiral Gregory, need better contact info for her. Info to be emailed. Weber - any rad effects to bladder? Believe white paper will describe use, not intended for long-term storage.

31/30 - Hochivar - industry team working on this. #30-32 status will be provided offline.

#33: temporary shielding options - NRC completed our analysis, but not sufficiently detailed to hang shielding. NRC plans no more action, but want to confirm with NISA before closing.

34 - rad survey meters - Nielsen - shortly after tsunami, request came to INPO - think through RST - broke down each thing, and sourced them, and provided list with prices to GOJ. Didn't hear back from them. Didn't include lead time, though, so we are determining that now and will resubmit list. Should have tomorrow. Will work back through Hochivar. Will need authentication if they want to do anything with list. Blamey will bring up in discussion to find out what equipment and how many.

Rest of items closed

Ron Cherry - on robotics for debris removal, at meeting last week, Japanese indicated that at time being, withdrawing request for equipment - now just want to know how to

(b)(5)

shield heavy equipment that the Japanese would provide themselves.

Weber - press reporting on concrete pumper trucks - understand worked directly between GOJ to manufacturer, and NNSA consented to release of pumper from Savannah River site.

32 - GOJ reps requested info on treatment equip at Savannah River - have team looking at possible delivery of some equipment.

34 - need to do whatever we can to have lots of info to support meeting on Monday - these are small and they are clearly needed.

Ron Cherry - we were checking in embassy, and got info yesterday that indicates that DART and OPTA? working dosimeter issues, and have found donor to cover cost of shipping 2000 from Berkeley nucleonics, and they are following up with NISA to confirm the official request.

Should have someone from USAID/DART on this call. Blamey - will try and talk to DART today.

23 - US Military has taken KMAX off the table - told through our channels it is not needed. Close item.

Source: Consortium call

Address/Location:

Attachment:

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Date/Time:	04/02/2011 19:56:16 (ET)	Discusses Rev 6. We believe assumptions are reasonable. Idea is for TEPCO to compare GE analysis to theirs. When GE did analysis, thought there was no containment leakage - now with that possible, TEPCO can compare to their analysis. Weber will review prior to sending to site team.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2130	
Facility:		
Source:	RST	

Address/Location:

Attachment:

(b)(5)

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	04/02/2011 18:33:38 (ET)	Chuck - Unit 1 containment, TEPCO believes they have a 20% air leak - losing pressure - last heard at 9#. TEPCO believes they have 1-9% hydrogen in containment (b)(5) Goal today is to give GE analysis to TEPCO. Many vendors here now. Not clear who is working on what. Going to try and have meeting with all vendors and corporations. Chm: any indication of releases from U1? Chuck: not that we know of. Have been asking questions. Everything trending down (rad, temperature, etc). They are effectively continuously venting. They were trying to reduce injection to increase reactor pressure and temperature to try and see if there is really a leak. Other thought is they are losing decay heat, condensing steam, etc. Thought is we have enough NARAC runs to bound various situations. Weber - Feed and bleed analysis - think we have all concurrences on - RST should brief soon, and then we can send over. This is mitigating strategies document.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2129	
Facility:		
Source:	Chuck/Chairman call	

Address/Location:

Attachment:

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Date/Time:	04/02/2011 18:28:26 (ET)	Blamey/Scott were given status of Rev. 6 (just got NR concurrence) of hydrogen control document. Sent out redline/strikeout - cleaning up now and then will run it through ET prior to emailing out. Elmo had question he sent over on what to do to minimize energetic release if they dont follow our suggestions - also asked what defn of good stable condition is. Working those 2 questions. Working on second question first, then on the alternatives question. Also working on SFP writeup. Focus was on Rev. 6, so not as much progress on SFP writeup yet.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2128	
Facility:		
Source:	RST	

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	04/02/2011 15:17:59 (ET)	Weber - Unit 1 containment pressure appears to be decreasing from 25-9psig in last 2 days. Speculation could be minor venting, but not really sure. Dont think its catastrophic. Continue to get rad readings, but keep declining. Havent seen anything confirming large release. Had discussions with Chuck and Elmo - they were helpful sharing context in Japan and challenges they face. Looking at if you had to discharge, could do in controlled way that would result in near-field effects instead of transport? If
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2127	
Facility:		

(b)(5)

continue with Feed and Bleed w/o flooding, how can cope with best? What are repercussions and what actions should be taken to mitigate large-scale releases? chuck and Elmo will send back questions. Have worked on Pros and Cons for different approaches

Facility:

(b)(5)

Chm: We might want to focus on assisting with rad monitoring. Weber: working on updating RST consensus rev 1 to reflect spent fuel strategies. Structural integrity of SFP 4 continues as a concern. PMT - working with EPA on erad monitors. (b)(5)

(b)(5) Been media reporting on concrete pumpers from US - 1 in CA, one at Savannah River. Pursuing on consortium call. Chm: interested to know any more info on U1 pressure drop. Weber: call at 1800 with Chuck. Will send update at 2200. Chm: From principles meeting - (b)(5)

Source: Chairman call

Address/Location:

Attachment:

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Date/Time: 04/02/2011 13:47:02 (ET)

Prep for shift turnover:

Position: EST Chronology Officer

RST - Brian H. - working the paper on venting for a 1430 hr. EST conference call to finalize and get concurrence with GE, Naval Reactors, and INPO.

Name: Mark Resner

Record: 2126

SFP assessment paper is underway and will be a mult-day effort. Additional considerations in light of TEPCOs reliance on feed and bleed.

(b)(5)

Unit 1 dry well has 3820 rem per hour but it may be 4850 per hour according to reading

(b)(5)

from DOE. Need to determine what would cause this change.

The call with the Site Team has been moved from 1800 hours to 1700 hrs.

PMT - Randy Sullivan

Facility:

[Redacted] (b)(5)

Source terms are no longer being developed by NARAC.

LT - John Adams:

Matrix for incoming team being developed.

There are three items - 2 medium and 1 low priority for discussion with consortium. Item 1 - DOE deployment of in-field monitors. Item 2 - transportation of concrete trucks to Japan. This is being done outside the consortium. Item 3 - e-mail from Navy Lt. Commander Mercer concerning logistics of incoming materials for use by Japanese. This needs to be cleared through the Embassy.

Source:

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 04/02/2011 08:31:51 (ET)

Conference call with Commissioner Assistants.

Position: EST Chronology Officer

ET - Unit 1 inerting effort postponed and it may not happen at all. Radiation levels causing delay.

Name: Mark Resner

Record: 2125

Pressure in Unit 1 decreasing. One Bechtel pumping train at site along with fresh water barges.

RST overview - 3 items, Supplemental paper on venting, Working on SFP assessment paper - it is a companion paper to yesterdays paper. Last item is what are the marginal differences between long-term feed and bleed vs. flooding and venting of unit 1.

[Redacted] (b)(5)

[Redacted] (b)(5)

(b)(5)

Liaison Team - continues to coordinate daily consortium meeting and will send notes to all participants for the 4 p.m call. Continues to coordinate with other federal partners.

Question from Pat Castleman about source term:

Randy Sullivan responded that the current source term at NARAC is a looking forward source term for Ambassadors information. ET advised that Commission will be provided with information on source term.

Question: How many NRC team members in Japan, and how are they holding up?

Response that everyone seems to be ok.

Mike Franovich question:

(b)(5)

Facility:

Mike F. asked about whether ET knows about concrete trucks coming from Savannah River. ET response was that they had nothing other than the media reports.

Pat C - Are we leading the consortium? Eric L. responded that we are not leading the consortium. We are anxious to have NRR or another entity do that. ET wants to remain focused on its duties.

Mike M. - Do we have any estimate of the water levels in Units 1 and 3? Brian H.- RST responded that we do get some information from Japanese, .We have tried to estimate levels but have no instrumentation in place for verification.

Pat Castleman - Do we know if the pressure on Unit 1 is controlled? Brian H.- RST responded that it appears to be uncontrolled.

(b)(5)

Eric Leeds summarized call stating that the take away for ET is letting the Commission know about source terms.

Call ended ~ 0900 EST.

Source:

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/02/2011 08:11:32 (ET)

ET discussion to prioritize action items based on bridge call with C. Casto as well as items for discussion on 0830 EST call later this morning.

Position: EST Chronology Officer

Name: Mark Resner

Record: 2124

Facility:

Source:

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/02/2011 07:40:08 (ET)

Chuck Casto on bridge call with ET. Mentions 3 ELMO questions. One question is what is the marginal difference between feed and bleed and flooding? What do those trends look like with the feed and bleed and do those ever intersect? RST discussed fact that pressure on Unit 1 is dropping and is there self-venting. RST is working a separate venting paper expected to be completed for 10 a.m. Chuck Casto asked when is the release measured in meters and not kilometers? Big picture in summary, is what effect will feed and bleed have over the coming days? ET asked whether they have any information on air or water sampling. Casto said not at the moment. Randy Sullivan offered that we think 50 miles away from stie is adequate protection from radiation. Were are now asking EPA to deploy rad net.

Position: EST Chronology Officer

Name: Mark Resner

Record: 2123

Facility:

(b)(5)

Casto would like both qualitative and quantitative assessment from PMT and RST by end of this week regarding feed and bleed and what protective measures are needed, i.e. extending or relaxing the 50 mile zone. Eric Leeds summarized what Casto was requested. Call ended ~8:07 a.m. EST.

(b)(5)

Source:

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/02/2011 05:57:23 (ET) 06:00 Briefing.

Position: EST Chronology Officer

Name: Nick Ballam Passing on the message of appreciation from Ambassador Roos.

Record: 2122

Facility: LT - Chairman briefing will be Mon, Tues, Wed at 8:00 a.m. Eastern Time. Closed task tracker on request from Richard Green. How would we respond to a similar event in this country? We sent the SRM, press release and charter for the task force.

PMT - Worked with RST on the venting document. Added some clarifications. It seems like it is pretty quiet over in Japan as well. They will have a skeleton crew over the weekend. Staffing just one or two people, but will be available via blackberry.

RST - Update from Japan team. Throttled unit 1 injection flow from 133 liters per minute to 117 LPM. Cooling is causing dry well pressure to decrease. They reported the 10-30% volume decrease in unit 1 per day. They think its leaking penetrations from being above design pressure. TEPCO believes oxygen levels are 1-3%. Hydrogen is 1-12%. They dont see as large of a hydrogen problem as we do. We think its up around 30% hydrogen. Added 180 tons of water to the unit 4 spent fuel pool. They didnt see any change in skimmer tank. The team doesnt seem to believe that they ever had unit 4 full. Most of the partners are OK with the venting paper. The team has seen drafts of it and they like it. They want us to use a more formal concurrence process. We are shooting for day shift today for completion.

Spent fuel pool assessment. Worked a little on that, but it needs some work still. Did a little bit of work on the Elmo question. Given the path that Japan is currently following, what suggestions could we give them to give them a good chance of success. Get it back by 18:00 today with feedback from the partners. One train pump is on site. The other three trains are not needed.

Source: ET

Address/Location:

Attachment:

(b)(5)

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Date/Time: 04/02/2011 05:22:26 (ET)	RST trying to engage the Consortium. Theyve formulated the Elmo Collins question. "Under what conditions can the units be considered stable?"
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 2121	
Facility:	
Source: RST	

Address/Location:	
Attachment:	

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Date/Time: 04/02/2011 05:02:25 (ET)	Chuck Casto on the call. Passing on a message from Ambassador Roos to the whole team. He thinks we are doing a wonderful job. Hes gotten feedback from credible sources that believe that it has been the American Embassys finest hour since theyve been here. Hes very happy with the NRC. Should be conveyed in the status report, the SITREP. Maybe Bill Borchardt could do an update to the NRC with this information. Could get a quote from the Ambassador and send that to Borchardt. Chuck is not going to Vienna to give any sort of presentation. Conveyed information to Chuck about the daily phone call with the ET and Chairman. Chuck requests to shift the meeting to 8:00a.m. Eastern Time (9:00p.m. Japan Time). Printer problems... Chuck thinks that Marco is fixing it. No need as of right now.
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 2119	
Facility:	
Source: Phone Call	

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 04/02/2011 05:02:25 (ET)	Chuck Casto on the call. Passing on a message from Ambassador Ruse to the whole team. He thinks we are doing a wonderful job. Hes gotten feedback from credible sources that believe that it has been the American Embassys finest hour since theyve been here. Hes very happy
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 2120	
Facility:	

(b)(5)

with the NRC. Should be conveyed in the status report, the SITREP. Maybe Bill Borchardt could do an update to the NRC with this information. Could get a quote from the Ambassador and send that to Borchardt.

Facility: Chuck is not going to Vienna to give any sort of presentation.

Conveyed information to Chuck about the daily phone call with the ET and Chairman. Chuck requests to shift the meeting to 8:00a.m. Eastern Time (9:00p.m. Japan Time).

Printer problems... Chuck thinks that Marco is fixing it. No need as of right now.

Source: Phone Call

Address/Location:

Attachment:

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Date/Time: 04/02/2011 04:50:07 (ET) Unit 1 is losing between 10% and 30% of its volume of water per day.

Position: EST Chronology Officer

Name: Nick Ballam

Record: 2118

Facility:

Source: ET

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/02/2011 04:38:08 (ET) Mr. Bonai with NISA sent an email about Chuck Casto making a presentation to IAEA. ??

Position: EST Chronology Officer The Chairman and Bill Borchardt are both going, but we havent heard anything about Chuck leaving Japan.

Name: Nick Ballam

Record: 2117

Facility:

Source: LT

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/02/2011 03:48:53 (ET) The chairman was looking to have calls with staff while in Vienna. Since weve already been having a 7:15 a.m. briefing, we were thinking that would be a good time. It would

Position: EST Chronology Officer

(b)(5)

Name:	Nick Ballam	be 1:15 p.m. for the chairman. It would be 8:15 p.m. Japan time.
Record:	2116	
Facility:		
Source:	LT	

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	04/02/2011 03:20:42 (ET)	Washington State detected trace amounts of Xenon 133. A fission product gas.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	2115	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	04/02/2011 03:15:44 (ET)	Scott listened in on a call with Japan Site Team: Hydrogen concentrations are about 12%. They think the oxygen level is below 4%. Theyre still pushing for venting and also inerting.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	2114	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	04/02/2011 02:19:25 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	2113	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

(b)(5)

Date/Time: 04/01/2011 23:58:28 (ET)
Position: EST Chronology Officer
Name: Nick Ballam
Record: 2112

Midnight Briefing.

RST - Nothing very different in plant status from last night. Priorities: 1 - Spent fuel pool analysis. There are still some holes in this analysis. Its a request from the site team. We havent identified a structural person to work on that yet. Abdul Shiek is a good contact for this and he is in Japan.

2 - Venting assessment. The team wanted additional information to help them interact with the Japanese on our assessment. Bruce said that the Japanese made a decision that venting will not take place.

3 - If they dont vent, what are the next steps? The Elmo Collins question. What can we recommend that will help them along the path that Japan has chosen to avoid venting and slowly feed water into the buildings. This priority is still in its infancy.

Got a strange request from Elmo. The Sandia people have arrived. They want us to help them integrate the Sandia folks into the process. They had their phone call with PACCOM. We have follow up items with that.

PMT - Not working on anything actively. We are in a monitoring mode.

(b)(5)

Facility:

They may just be entry errors.

LT - PMT has a daily call with NEI. (b)(5) Talk to Randy Sullivan and find out who was in that call and follow up with them to see what the issue is.

Chairman is heading to Vienna. He wants to have daily calls with the ET and Chuck Casto while he is there. Our international folks will be setting this up in the next day. He wants Chuck involved if possible, so we will see what we can do. Wants the calls on Mon, Tues, Wed. Chairman should get briefed by the ET is first priority, and he wants Casto as well if possible. We will mention it to Chuck if he calls.

List of recurring meetings is updated. Weekend update: 8:30 instead of 10:00 for

(b)(5)

briefings.

Beth Hayden sent an email today with a lot of emails from the public with ideas on how to help in Japan. They wanted to send them all to us. We responded that we are focused on the reactors. We may have time to review some of them, but not all. We

(b)(5) RST says that working on this off-line would be advisable. Not here in the Ops Center.

Source: ET

Address/Location:

Attachment:

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Date/Time:	04/01/2011 19:46:42 (ET)	Went through Action List. Item 1 - INPO arranging logistics through USAID to move friskers from Canada to Japan. Commercial transport appears most likely. weight (850 lbs) and dimensions (26"x56"x29") of cargo (20 each hand and foot friskers). Military will take action to prepare step by step guide for doing this kind of thing going forward. INPO will take action to ID POCs at utilities (STP and SONGS) for paying for shipment of cargo from sites. NRC-Japan will work on getting cargo from Ontario to Japan. Item 15 - Ambassador looking for source term. NRC provided source term to DOE. DOE says (b)(5) DOE will follow up. Item 20 will get more info on what the actionable request is. Item 18 sharing raw data and results of AMS runs. engage Japanese modelers and begin process of comparing models. hasnt been any NARAC models shared yet. Item 19 Germanium detector loaned to Japanese and they are being trained. Request from 3 Japanese ministries for detectors for screening drinking water (MHLW) and soil samples (agriculture dept). TEPCO requested detectors but declined because not sure where will be used. Samples sent out of Japan for Sr-90 analysis. Item 21 - Robotic devices for monitoring shipment to go out on April 5. Have destination and which ministry will take title. Item 22 there is ongoing discussion on UAV support and specific need (i.e., ability to determine status of SFP). Need list from US technical side on what their needs are. Japanese want visual surveillance of SFP and looking at multiple pathways to do that. Next step belongs to DOE, NRC at Embassy. Item 23 KMAX no longer needed (but need to verify with Embassy). Westinghouse is trying to bring in some unmanned vehicles to provide visual observation capabilities. Item 24 first train is installed (pump and piping) Japan does not see need for additional pumps. Military deobligating pumps slated for redundancy. Bechtel has second train of pump in Australia. Will confirm whether its
Position:	EST Chronology Officer	
Name:	Margie Kotzalas	
Record:	2111	

Facility:	(b)(5)
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((b)(5))

needed or not. Item 25 - covered by Item 1. Item 27 Request for KI. Industry had tablets available. US Health and Human Services had liquid form in surplus and will provide it. In logistics chain now. Will close this item. Item 28 not sure what request is. Will discuss this further with Japan to determine actionable request. NRC Japan will follow up. Item 29 being tracked through Embassy so will close item. Item 30, 31, 32 provided white paper outlining strategy. Japanese are interested in system available at Savannah River Site. Looking at logistics for shipment. Item 33 Do not have sufficient info to determine if SFP can handle significant shielding loads. Do not plan on doing detailed evaluation of providing shielding. Item 34 trying to run down resolution. have source for 2000 dosimeters. need to identify US source for other equipment. will get info to USAID to move forward on next step.

Plan to have next call tomorrow at same time.

Source: Consortium Call

Address/Location:

Attachment:

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Date/Time: 04/01/2011 18:34:10 (ET)

Position: EST Chronology Officer

Name: Margie Kotzalas

Record: 2110

Facility:

Source: LT

(b)(5)

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 04/01/2011 16:55:32 (ET)

Position: EST Chronology Officer

Name: Margie Kotzalas

Record: 2109

Facility:

Source: LT

Will sit in on call with Governors and consortium call at 8:00.

Address/Location:

Attachment:

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(b)(5)

Date/Time:	04/01/2011 16:49:35 (ET)	Continuing to update trending on data sets. Have on-the-ground data from DOE (b)(5) Will participate in PAYCOM call and the call with the Japan team. Activity is continuing to trend downward.
Position:	EST Chronology Officer	
Name:	Margie Kotzalas	
Record:	2108	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information	

Date/Time:	04/01/2011 16:46:25 (ET)	New tasker - each team to look at "draft accident management strategies" document and identify comments. Look for fatal flaws, contrary statements. Mark Thaggard to pull comments together. Timeframe - comments by end of shift, 10pm.
Position:	EST Chronology Officer	
Name:	Margie Kotzalas	
Record:	2107	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information	

Date/Time:	04/01/2011 16:22:45 (ET)	Had call with (technical) Consortium to bolster justification for actions for TEPCO to do containment venting. April 5 or 7 is earliest they would have N2 on site to vent U1 containment. Consensus position is better to vent without N2 than to not vent at all. TEPCO is not convinced. Also working on SFP assessment. Three areas: structural, thermal, and criticality. Generally staff view that having a criticality in the SFP is not that big a deal. Most important is keeping it cool. Have call with PACCOM at 1700. Trying to reschedule site team call. INPO and staff looking at effects of adding "goop" on outside areas. Working on energetic release question.
Position:	EST Chronology Officer	
Name:	Margie Kotzalas	
Record:	2106	
Facility:		
Source:	RST briefing	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information	

Date/Time:	04/01/2011 12:50:36 (ET)	RST is developing additional technical information to support their drywell flooding recommendation. There were some discussions regarding flammable substances that might be in the containments. The RST is thinking to suggest TEPCO to look for other options that may be available. RST is also reviewing a CMG document that was created
Position:	EST Chronology Officer	
Name:	Sandra Valencia	
		(b)(5)

Record: 2101	many years ago by NRC staff. This document contains tabulation tables showing the damage that can be caused depending on the radiation level. The table starts by using 50% of radiation level. RST needs current units' structural allocation. An assessment of the units' structural integrity is necessary to perform a more accurate assessment and consider other alternatives. There were also some assumptions that if the units are abandoned right now, there will be a failure to all units. RST believes that the containments are already punctured EST Chronology Officer - Margie Kotzalas at 16:03:59 on 4/1/2011
Facility:	
Source: RST Briefing	

Address/Location:	
Attachment:	

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Date/Time: 04/01/2011 12:50:36 (ET)	RST is developing additional technical information to support their drywell flooding recommendation. There were some discussions regarding flammable substances that might be in the containments. The RST is thinking to suggest TEPCO to look for other options that may be available. RST is also reviewing a CMG document that was created many years ago by NRC staff. This document contains tabulation tables showing the damage that can be caused depending on the radiation level. The table starts by using 50% of radiation level. RST needs current units' structural allocation. An assessment of the units' structural integrity is necessary to perform a more accurate assessment and consider other alternatives. There were also some assumptions that if the units are abandoned right now, there will be a failure to all units. RST believes that the containments are already punctured
Position: EST Chronology Officer	
Name: Sandra Valencia	
Record: 2105	
Facility:	
Source: RST Briefing	

Address/Location:	
Attachment:	

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Date/Time: 04/01/2011 14:57:08 (ET)	Margie Kotzalas relieves Sandra Valencia as EST Chronology Officer.
Position: EST Chronology Officer	
Name: Margie Kotzalas	
Record: 2103	
Facility:	
Source:	

(b)(5)

Address/Location:	
Attachment:	
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Date/Time:	04/01/2011 14:26:25 (ET)	LT continues to incorporate comments from the consortiums
Position:	EST Chronology Officer	
Name:	Sandra Valencia	
Record:	2102	
Facility:		
Source:	LT Briefing	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	04/01/2011 12:50:36 (ET)	RST is developing additional technical information to support their dry wall flooded recommendation. There were some discussions regarding flammable substances that might be in the containments. The RST is thinking to suggest TEPCO to look for other options that may be available. RST is also reviewing a CMG document that was created many years ago by NRC staff. This document contains tabulation tables showing the damage that can be caused depending on the radiation level. The table starts by using 50% of radiation level. RST needs current units' structural allocation. An assessment of the units' structural integrity is necessary to perform a more accurate assessment and consider other alternatives. There were also some assumptions that if the units are abandoned right now, there will be a failure to all units. RST believes that the containments are already punctured
Position:	EST Chronology Officer	
Name:	Sandra Valencia	
Record:	2104	
Facility:		
Source:	RST Briefing	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	04/01/2011 11:40:28 (ET)	Mike Weber led the Commissioner Assistant Call. Commissioner is looking for high quality information of what NRC is doing rather than focusing too much on status or planning activities. The PMT is reviewing their recommendation document to ensure there are no discrepancies. RST completed their work with all agency partners. A final deliverable of this join effort is the "Coordinated Recommendation Document." RST also developed an Investigation Strategy Document and have made updates. RST is also working in a similar document that focuses on Fuel spend pools. These two
Position:	EST Chronology Officer	
Name:	Sandra Valencia	
Record:	2097	
Facility:		

(b)(5)

documents will be combined. The result will be Reg 2.
 DOE sent NRC collective data about the surrounded area that is contaminated. They suggest that the contamination is within 50 miles of the plants. NRC uses RASCAL to capture radiation at the beginning of the radiation exposure. RASCAL can no longer represent good data therefore NRC will be using other tools. U.S Ambassador in Japan would like to know the situation before the end of April. NRC HOC continues to staff. Other government agencies continue to send staff member to support event. On April 1st, an email was received from Naval Reactors, Schaefer, having a different take of the power plants status (b)(5)

Facility:

(b)(5) Department of State is coordinating efforts in providing awareness of all the assistance that have been provided worldwide. The brief ended and participants shared the following. There was an article regarding a past event that happened between 1981-1982. This scenario will be reviewed to learn whether or not this can provide any valuable information that can be used as lessons learned for the current event in Japan. There was a question about energetic explosion. NRC RES is evaluating energetic explosion to determine what will be the expected results. There was a press release from Department of State discussing certain contamination levels on the grounds. They suggest relocation of that area if appropriate. It was suggested to find out what criteria are they using for containment integrity. Learn about a better definition or level of nitrogen level. The strategy was to add nitrogen to a point and then release pressure until the concentration reach an acceptable level.

Source: Commissioner Assistance Call

Address/Location:

Attachment:

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Date/Time: 04/01/2011 11:50:31 (ET)
 Position: EST Chronology Officer
 Name: Sandra Valencia
 Record: 2099

(b)(5)

(b)(5)

Facility:	(b)(5)
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Source:	Call with DOD, Mr. Schieffer.
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Address/Location:	
Attachment:	

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Date/Time:	04/01/2011 11:40:28 (ET)	<p>Mike Weber led the Commissioner Assistant Call. Commissioner is looking for high quality information of what NRC is doing rather than focusing too much on status or planning activities. The PMT is reviewing their recommendation document to ensure there are no discrepancies. RST completed their work with all agency partners. A final deliverable of this join effort is the "Coordinated Recommendation Document." RST also developed an Investigation Strategy Document and have made updates. RST is also working in a similar document that focuses on Fuel spend pools. These two documents will be combined. The result will be Reg 2.</p> <p>DOE sent NRC collective data about the surrounded area that is contaminated. They suggest that the contamination is within 50 miles of the plants. NRC uses RASCO to capture radiation at the beginning of the radiation exposure. RASCO can no longer represent good data therefore NRC will be using other tools. U.S Ambassador in Japan would like to know the situation before the end of April. NRC HOC continues to staff. Other government agencies continue to send staff member to support event. On April 1st, an email was received from Naval Reactors, Schaefer, having a different take of the power plants status. His email states that the Japanese decided not to flood the containments. Department of State is coordinating efforts in providing awareness of all the assistance that have been provided worldwide. The brief ended and participants shared the following. There was an article regarding a past event that happened between 1981-1982. This scenario will be reviewed to learn whether or not this can provide any valuable information that can be used as lessons learned for the current event in Japan. There was a question about energetic explosion. NRC RES is evaluating energetic explosion to determine what will be the expected results. There was a press</p>
Position:	EST Chronology Officer	
Name:	Sandra Valencia	
Record:	2100	
Facility:		

(b)(5)

release from Department of State discussing certain contamination levels on the grounds. They suggest relocation of that area if appropriate. It was suggested to find out what criteria are they using for containment integrity. Learn about a better definition or level of nitrogen level. The strategy was to add nitrogen to a point and then release pressure until the concentration reach an acceptable level.

Source: Commissioner Assistance Call

Address/Location:

Attachment:

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Date/Time: 04/01/2011 11:40:28 (ET)
Position: EST Chronology Officer
Name: Sandra Valencia
Record: 2098

Mike Weber led the Commissioner Assistant Call. Commissioner is looking for high quality information of what NRC is doing rather than focusing too much on status or planning activities. The PMT is reviewing their recommendation document to ensure there are no discrepancies. RST completed their work with all agency partners. A final deliverable of this join effort is the "Coordinated Recommendation Document." RST also developed an Investigation Strategy Document and have made updates. RST is also working in a similar document that focuses on Fuel spend pools. These two documents will be combined. The result will be Reg 2.
DOE sent NRC collective data about the surrounded area that is contaminated. They suggest that the contamination is within 50 miles of the plants. DOE has a web site where their post JAPAN reactors related information and this will be sent to the ET so that it can be share with all the interested parties. NRC uses RASCO to capture radiation at the beginning of the radiation exposure. RASCO can no longer represent good data therefore NRC will be using other tools. U.S Ambassador in Japan would like to know the situation before the end of April. NRC HOC continues to staff. Other government agencies continue to send staff member to support event. On April 1st, an email was received from Naval Reactors, Schaefer, having a different take of the power plants status. His email states that the Japanese decided not to flood the containments. Department of State is coordinating efforts in providing awareness of all the assistance that have been provided worldwide. The brief ended and participants shared the following. There was an article regarding a past event that happened between 1981-1982. This scenario will be reviewed to learn whether or not this can provide any valuable information that can be used as lessons learned for the current event in Japan.

Facility:

(b)(5)

There was a question about energetic explosion. NRC RES is evaluating energetic explosion to determine what will be the expected results. There was a press release from Department of State discussing certain contamination levels on the grounds. They suggest relocation of that area if appropriate. It was suggested to find out what criteria are they using for containment integrity. Learn about a better definition or level of nitrogen level. The strategy was to add nitrogen to a point and then release pressure until the concentration reach an acceptable level.

Source: Commissioner Assistance Call

Address/Location:

Attachment:

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Date/Time: 04/01/2011 07:27:29 (ET)

Position: EST Chronology Officer

Name: Sandra Valencia

Record: 2095

Facility:

(b)(5)

Source: Tom Vovosa

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 04/01/2011 07:27:29 (ET)

Position: EST Chronology Officer

Name: Sandra Valencia

Record: 2096

(b)(5)

(b)(5)

Facility:	(b)(5)
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Source:	Tom Vovosa
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Address/Location:	
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Attachment:	
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Date/Time:	04/01/2011 07:02:46 (ET)	No basis for deviating from our regulation requirements for bringing materials into the united states. We are in line with DOT on this issue. Should arm the chairman with talking points on why we would not recommend waivering from our regulations.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	2094	
Facility:		
Source:	ET	

Address/Location:	
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Attachment:	
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Date/Time:	04/01/2011 06:38:41 (ET)	John Monninger in Japan on phone. Gentle reminder with regards to the RST flooding up memo. Reminder to let the chairman know. Mike informs John about the straw man. The chairman appears to be content with the way things are for now. Sending out 4 more people on Saturday. There will be some overlap. Marie Miller and Todd Jackson may stay longer. We will defer to Johns judgment in Japan to create a possible straw man. Gave the chairman 3 options for near-term options for the site team and there are also longer term options in the paper Michelle prepared. Elmo has been an integral part of the team. Has been heavily involved in the meetings thus far. John thinks that the team mainly feels that 2 and 3 are ex-vessel, but that theres a chance that 1 is not yet. One question: "What are the long term implications for a feed and bleed strategy". They are focusing on unit 1 inerting. April 5th will be the earliest date for that to happen. Trying to balance the pros and cons of inerting vs other options. They have our "rev 1" document and have discussed it with them.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	2093	
Facility:		
Source:	Phone	

Address/Location:	
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Attachment:	
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~~This information is Official Use Only - Sensitive Internal Information.~~

(b)(5)

Date/Time: 04/01/2011 06:36:03 (ET)	Turnover briefing: Mike Webber says that Michelle has already completed a strawman for the future of the site team in Japan. He believes this has already been communicated directly with Chuck. US AID will no longer be working 24x7.
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 2092	
Facility:	
Source: ET	

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 04/01/2011 05:59:17 (ET)	PMT - Waiting for additional guidance from Mike on talking points document. Chairman recommended that we engage EPA to employ rednet monitors. PMT will follow up with the EPA contact to ensure that the data is monitored overseas. Got a request from Lieutenant Commander in Japan. She was informed that all source terms were coming from NRC. She was interested in getting data to help an oceanographer. We informed her that we produce source term for air release, but dont do anything for what she was looking for. Referred her to IAEA reports and a website with more information. Significant level of interest on the NARAC calculations in Japan. RES has returned the pessimistic source term, and we turned it over to NARAC. Also shared it with Marie in Japan. The realistic plausible scenario request is not completed yet. Probably wont get to that until early next week. (b)(5)
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 2091	
Facility:	(b)(5) IAEA sent us a draft report on the sample they have collected. They have not specified which material led to the conclusion. Still reviewing the documentation that they sent us. RST - Japan Team reports no change in injection flow rates for 1,2, or 3. Added water to unit 3 spent fuel. Plan to add 210 tons of water to Unit 4 spent fill. Got an interesting graph from the site team plotting all the adds to the unit 4 spent fuel pool. It showed that they had received indication that the spent fuel pool was full. We are still monitoring this... there are concerns about the structural conditions of the spent fuel pool. Mike reported that they handed off the RST assessment to NISA. They understand our recommendation to flood up the containment. They have concerns about further

(b)(5)

Facility:

releases to the public, and this is why they are going at a lower rate than we recommend. We received some feedback from TEPCO concerning the minimum fill rates. They would like to know why the numbers are different. We would like to use this as an opportunity to reassert some reasons on why we feel they should fill the containment. The "goop" wont be used until mid April. We owe them information on understanding how this goop might react in the spent fuel pools. The inerting effort on Unit was was delayed due to high RAD level readings. They expect to do testing on the nitrogen addition station on April 5th. Bechtel pumping device - status... one unit is on site. Dont know the status of the other three units. Spent fuel pool assessment is the #1 priority for the team. Minimum flow rates is next priority.

(b)(5)

Check back with the site team to

ask this of PEPCO.

(b)(5)

LT - Was able to track down the subject of how a CDC addition was entertained. They approached us twice on this issue, and so the second time we agreed to it. Jeff will follow up with Jeff Temple on this issue. We dont know what role this CDC person will have.

Source: ET

Address/Location:

Attachment:

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Date/Time: 04/01/2011 05:16:40 (ET)

Position: EST Chronology Officer

Name: Nick Ballam

Record: 2090

Facility:

Source: Email

Mike Webber reviewed talking point document (bullets). Wants to cut back on the background text and focus on the issues. Also address our relationship with Japan. Cindy will work to modify the document.

Address/Location:

Attachment:

(b)(5)

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Date/Time:	04/01/2011 04:37:19 (ET)	Reviewing new Sit Rep Document... Rad Levels in Unit 4 Torus are much higher than in the other 3 Units... Scott says it looks good and lets Jim know.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	2089	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	04/01/2011 04:27:08 (ET)	Tried to make the chairman notes short and sweet. Looks good, we are forwarding it on to Mike Webber.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	2088	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	

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Date/Time:	04/01/2011 00:56:46 (ET)	Spent fuel pool 4 - TEPCO sent a packet of informatoin through our Japan team Chart shows water adds. 70 ton per day need to meet the heat removal goal. Reviewing the chart... At times water is getting into the skimmer (change of levels in skimmer) showing that the pool has been full in the past two days. Typically 23 feet of water over the top of the spent fuel. We still dont have information on pool or structure integrity
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	2087	
Facility:		(b)(5)
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	04/01/2011 00:03:19 (ET)	RST - Unit status has virtually no changes since yesterday. Noticed that the Unit 1 feed water nozzle has been rising consistently. RST will check into it. RST assessment is
Position:	EST Chronology Officer	

(b)(5)

Name:	Nick Ballam	<p>finally out and the consortium has agreed to it. The email that goes on top of that has some NR comments/warnings. Need to make sure when we send it that we send the whole package. Next activity is a spent fuel assessment similar to the RST assessment. Criticality, structural, and water in and water out analysis. We will have to guess the levels of the Unit 4 building. Yesterday they added 140 tons of water into the pool but the skimmer tank didnt change. Theres still steam coming out of the building. Theyre going to spray some fix-it all over the site (goop). There are two separate types of "goop"... one for radioactive areas and another for non-radioactive. Site team call at 0300.</p>
Record:	2086	
Facility:		<p>PMT - Preparing for the 0715 briefing. Talking points for the Chairman. We have two bullets that we need to be reviewed. Waiting for ET feedback. Will re-send it to Cindy via email. Need to make sure Mike Webber has a copy before he comes in. We keep getting questions from DOD wanting to have a 1-number indication on when to evacuate. We want to let them know that this is not possible. They talked to Vince earlier today and he is embedded there with DOD. We got a request to give a pessimistic scenario. working with RST and research to generate this potential source term</p>
		<p>(b)(5)</p> <p>DOE has the lead on everything beyond 50 miles. We need to understand what NARACs assumptions are before they start running a source term. NARAC is not working around the clock. We will follow up with them on the next phone call. Plausible realistic case for units 1,2,3 for Melcore source term. Due date is 17:00 today. Was to be done by the line organization. Email was sent to research to request runs, but we havent heard back. There is a village 40km away. IAEA is working to see whether they could share the actual measurements with regard to protective action. We dont know much information on this sample. We are following up with IAEA.</p>
		<p>(b)(5)</p> <p>LT - Heard that the embassy in Japan was willing to take on the lead in communicating with IAEA. There needs to be a link between what were doing in Japan to the IAEA. The consortium call tonight, we still have the matrix and we are updating it for comments for</p> <p>(b)(5)</p>

tomorrow's call. Maybe we are waiting for Dept. of State to give the green light for this to go to the embassy? RST has daily call with PACCOM. How is PMT involved? The

(b)(5)

CDC is sending somebody to embed with us. We are awaiting access clearance. We don't know their role yet. Will follow up with this... may be coming from old notes

(b)(5)

N.R. - Re-confirmed with his HQ team that the NRC shouldn't be in the middle of low level discussions of providing data. Need to follow the chain of command. The fleet already has tools available, and should not be calling us directly for data. The admiral has decided to pull back the 24/7 coverage here at the Ops Center. Will be here daily from 2-9pm.

Scott - Reminder to start putting in any lessons learned. Best practices, things that didn't go well, and opportunities for improvement. Put it into WebEOC. Can also email it to Jeff or Jane Marshall.

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/31/2011 23:57:46 (ET) John Mullinger - Wanted to let us know that the product on flooding that RST and the

Position: EST Chronology Officer Consortium has been working on has arrived (b)(5)

Name: Nick Ballam (b)(5) Just a heads up. Its the one we shipped out this morning. Were

Record: 2085 putting together some talking points for the chairman including containers coming into the U.S. with trace amounts of radiation.

Facility: Weve been asked if we know the water level in Unit 4. We dont know the level at this point. RSTs next assessment is for the spent fuel pools.

Randy Gant arrived yesterday. Focused on Unit 1 scenarios, flooding up or not... Has there been any discussion for the future of the team here in Japan? There has been some discussions, but no decisions made. We will be in the same configuration at HQ for at least another week, but we havent heard about the site team. John is developing a strawman for discussion on what the team could evolve to and why it would evolve to

(b)(5)

that state.

Source: Phone Call

Address/Location:

Attachment:

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Date/Time: 03/31/2011 23:18:57 (ET)

Mike Webber sent an action. We responded to three bullets, and added a 4th bullet.

Position: EST Chronology Officer

Talking points/

Name: Nick Ballam

(b)(5)

Record: 2084

Had a request from Patty Pace

Facility:

issue on transportation clearance levels for things coming back into the country. We condensed the 7 page paper down to one paragraph. The states had a lot of questions about this. Tonight was the first time we were involved on this call. Referred a lot of the questions to Dept of Transportation. Mike Webber needs this in the morning. We want to mail it out tonight so he will have it ready in the morning.

We dont have a LT Director tonight, just an LT Coordinator.

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/31/2011 22:33:00 (ET)

Admiral Donald, etc, decided after tonight, we will stop 24/7 coverage, and have someone stop by on a daily basis, probably 2-9pm. NR team embedded here has been strong part of continuity on information. Observation is that shift turnover could be improved at NRC. New people on shift are redoing work done earlier, or are unaware of status.

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2083

Facility:

Source: NR

Address/Location:

Attachment:

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Date/Time: 03/31/2011 19:56:42 (ET)

Sheron - Any questions on roles or leads? No. List of needs from Japan - current is 7:30pm today. Nielsen - did not get updated list. Sent in marked up copy. Sheron - looks like many items were closed. Request for PNL for water decontam and storage issues: Believe 1-2 individuals on way to Japan from PNL. Dr. Onishi and Barry Reed should

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2082

(b)(5)

have arrived yesterday in Japan - working directly with GOJ - can close. (Item 12).

PACOM water barge item: Mercer: first barge arrived at 1542 Japan time yesterday. They would start pumping freshwater to storage tank last night - dont have confirmation they did that. Barge 2 is Onohama, projected to leave during the day today. Issues with transfer pump.

Request for commercial carrier. Mercer - if embassy generates request and sends formally, then we can push up through chain to get transport set up. Heavy items probably cant be sent commercial. At USFJ we can parallel path and try and get transport requirement established. Need to know if INPO has had movement on commercial carrier? INPO - right now, commercial would be appropriate for some of items - 4 boxes in S. CA/San Diego. S. TX - Houston - 1/2 pallet and drum. Could also be commercial. Material in Ontario is substantial weight and volume - whatever is best way should be used. Probably military might be best. INPO doesnt have preference - whichever is fastest. Just need to know how paid for if commercial. Mercer - will continue to work with logistics staff. San Onofre and STP can ship immediately. At Bruce, need about 5 days to box up. PACOM has been given authority by Sec of Def to pay for things going into Japan. Needs to be coordinated by J4 staff. Nielsen - we have no preference in how it is shipped. Vivoso - How gets resolved? Alan - who is INPO POC? Nielsen. Yesterday there was large push from embassy to get more efficient with coordination on logistics. Will have embassy staff contact Nielsen.

DOE items (15-21): Sal: 15 -

(b)(5)

Nothing to report on 16-18. On 19, there was 2 hour meeting yesterday dealing with robotics. Been a lot of detailed info provided on particular equipment available and when could be provided. Just waiting for GOJ to respond back. Tilden - looking optimistic - tactic is commercial air. Trying to work through issues, like how do we get it off the books for property control, and how do they accept it. They havent told us where to deliver it. Hope to have shipment out by April 5. Right now under Secretarys authority, would use our \$\$\$ to ship. We would just allocate money to replace devices. We will wait for larger national policy to see if we ask for reimbursement, or get supplemental budget, etc. Also looking at larger devices, like remote bulldozers, etc. Lots of good commercial equipment available. If lead time puts

(b)(5)

safety in jeopardy, then we will provide it. On larger items, may need military lift. Also providing advice on shielding. May be able to buy commercial systems and then automate them.

Use of Kmax helicopter: needed? Vivoso - was offered as means of putting water or sand on SFPs - probably needs to be revalidated from tech needs standpoint. Hochivar - assets were originally asked for to ascertain what SFP levels are. Mercer - was for removal of debris on roofs if we needed. (b)(5)

Bechtel FW supply pumps - First train delivered - question is whether need remaining 3 trains. Blamey - will try and determine if they need trains 2-4 at site. Mercer - for 2nd barge, TEPCO has own pump for it. Larger of Bechtel pumps is being kept as contingency. First barge uses Bechtel booster pump. Mercer - freshwater pumping capability is important next weeks and months, so need to check if they want other trains. Blamey will check on needs.

24 - rad survey meters - duplicate of 1

25 - ;protective body armor - Nielsen - may have been something we had provided info on. Vague request for protective armor and we provided input on use of tungsten as lightweight shielding and also beta protection using raingear instead of anti-Cs.

Facility:

Provided that info/advice. Sheron - (b)(5)
(b)(5)

Blamey - ask NISA/TEPCO to clarify request. Havent heard if they still want or not - also military got same request - may have been fulfilled. NISA and MOD requested body armor. Sheron - need clarification of exactly what they want. Blamey - can have our PMT interface with their PMT on what the body armor is they want. And, do they still need it? Nielsen -on item 3.5: gave extensive list of possibilities on what is available. Can mention this when discussing with them.

27 - use of extinguishant/coolant - what is? - possibly the nitrogen to purge containment? Needs to be clarified with NISA - Blamey will follow up.

28 - plastic bottles for drinking water for infant/baby use - USAID - we will have our

(b)(5)

liaison team check - some of early requests like this one may have been fulfilled, or decided not needed.

29 - determine if temp radwaste processing skids are avail or would be good idea - Randy Tripato has lead - we sent to Hochivar list of options along with contact names, numbers, emails for their use. - item closed. (b)(5)

Tanks for holding contaminated water - developed list of what is available, established (b)(5) At some point, will probably be waiting for request for specific equipment. Rear admiral also trying to resolve this. Suggest both parties get together and combine efforts. Leads for this are DOE and DOD.

Item 32 - DOE - related to how going to treat contaminated water - provided list of technologies - (b)(5) - also came up with additional ones that will be transmitted today - leave open.

NRC - temp shielding options - DOE also helping with - Robotics would be needed to get shielding in place. Determine if buildings can hold up to shielding weight - RST also working on, as well as Japan Team.

Request for 2100 rad survey meters, 2500 dosimeters, 1500 iodine sheilding masks - looks like repeat of 24. Blamey will check with DOE embassy people. Vivoso - this sounds like real need - J Village very short on dosimeters. Should fix quickly.

Sheron - new actions?

Nielsen - have one we will send - source Sr-90 gamma spectrometers. We have sent information to Japan - Hochivar - to present to GOJ. Received and completed today.

Will ship list 0700/0800 in am, then people can comment, and then we can resend around 1800 so everyone has it for 2000 call. Updates should be in by 1300, then NRC will update and get back out by 1800. Alan - suggest plan will be OK for Japan, and try for now, but may change. USFJ has 24h watch, so no problem.

(b)(5)

211/707

Hochivar - yesterday was desire to consolidate embassy and other list - not sure where that effort stands. Blamey - working on that in embassy.

Sheron - when should next call be? Blamey - thought is still do tomorrow, especially given high priority item. INPO - agree.

Source: Consortium call

Address/Location:

Attachment:

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Date/Time: 03/31/2011 18:37:56 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2081

(b)(5)

Facility:

Or, because pressures equal between vessel and containment, probably already in PC. So it is still giving off heat. Drywell is probably full of water. Melt would heat up. Whether it would go molten again and attack concrete? What would be symptoms - noncondensable gas. Could we detect?

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/31/2011 17:53:58 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2080

Facility:

PACOM had asked that we give us their questions, and they can find out what they can do. Need to feed that to Jim Whitney, and he will get to PACOM.

Source: Weber

Address/Location:

Attachment:

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Date/Time:

Sheron: RST finished severe accident recommendations. Have not been issued yet.

(b)(5)

Date/Time:	03/31/2011 17:39:39 (ET)	Awaiting ET approval. OK with them now. RST is checking concurrences - ambassador wanted to know what person in each org was OK with them. RST - adding info on each person who concurred and what their role in the org is.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2079	
Facility:		
Source:	Weber/ET	

Address/Location:	
Attachment:	

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Date/Time:	03/31/2011 17:24:17 (ET)	Still do not have lead agency for consortium. In absence of decision, it is NRC. Think someone has been tentatively identified, but hasnt been formalized/announced. &It;ET watches fuel burn video from Sandia>.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2078	
Facility:		
Source:	Weber	

Address/Location:	
Attachment:	

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Date/Time:	03/31/2011 17:01:48 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2077	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	

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Date/Time:	03/31/2011 16:05:00 (ET)	Brian: would our recommendations change if U1 RPV were breached? RST: But RPV is holding pressure - somewhat above PC pressure. U2 lost cooling - hose cracked. Containment failed on that unit also. Brian - if molten core is at bottom of drywell, have pool of water on top, so have some time. RST - if we talk to site team, should get some clarification on that. Sitrep will go out, and we will get questions about lack of water on U2.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2076	
Facility:		
Source:	RST/ET	

(b)(5)

Address/Location:	
Attachment:	
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Date/Time:	03/31/2011 15:47:26 (ET)	11:30 tomorrow am is principals meeting. Chairmans turnover brief is 7:15. Can check at that time and see if he needs anything else for 11:30 principals meeting.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2075	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/31/2011 15:42:47 (ET)	Brian	(b)(6)	And if so what cause hydrogen explosion? RST - hydrogen explosion from when venting U1 Rx.
Position:	EST Chronology Officer			
Name:	Rebecca Karas			
Record:	2074			
Facility:				
Source:	RST			

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/31/2011 15:18:27 (ET)	RES working on Melcor input. 70% fuel melt unit 1, some ex-vessel, drywell venting, Unit 4 damage. DOE is asking if it is supposed to go all way to Tokyo. We said DOE had lead, and up to them how far to go down. Getting question of when we should relax 50m zone. Getting asked to run additional runs with various scenarios. Keep giving re-entry criteria we had decided on. Runs wouldnt show 50m should be relaxed. need to know units stable first. Have call scheduled at 7pm with Vince to talk about POCs and what info he needs. There is sitrep report from DOE with information on worker exposures in Japan - trying to get copy. Will be putting in sitrep regarding IAEA statement saying they found hot spot outside 30km zone. We called IAEA for information - immediate evac, or based on 1 year dose? They just say info is in press release, but we cant find. We think
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2073	
Facility:		
Source:	PMT	

(b)(5)

(b)(5)

AREVA sending cleanup equip;
POC for questions/communication: contact status officer;
Should these calls be continued over the weekends?

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/31/2011 10:52:48 (ET)

Bruce B and team leaders: discussed previous phone conf issues.

Position: EST Chronology Officer

Name: Vanice Perin

Record: 2070

Facility:

Source: ET

Address/Location:

Attachment:

-This information is Official Use Only - Sensitive Internal Information-

Date/Time: 03/31/2011 10:30:19 (ET)

10:00 phone conference: OGC, Chairman Jaczko staff, Magwood staff, SECY, Svinicki staff, Ostendorff staff, FSME, NMSS: Bruce B as ET director - update - SFP situation is same.

Position: EST Chronology Officer

Name: Vanice Perin

Record: 2071

Today activities:

- working GE, EPRI, Nav Rx ;
- companion doc for SFP strategies;
- looking into cooling and nough loss for energetic release;

(b)(5)

- crack on lower head;

Questions:

SFP - what is status today?

(b)(5)

Request for final version - send copy;

Discussing status on flow rates/temp decrease/inflow;

How about unit 3: source term?

Facility:

(b)(5)

press release? We

are responding to Ambassador's request;

(b)(5)

Hard data on site doses to be provided to Commission staff. How about occupational

(b)(5)

hazards?
 Unit 1: today would start purging, but it has been delayed;
 Update on fresh water barges: yes – one off shore;
 AREVA sending cleanup equip;
 POC for questions/communication: contact status officer;
 Should these calls be continued over the weekends?

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/31/2011 09:15:48 (ET) (b)(5)
 Position: EST Chronology Officer

Name: Vanice Perin
 Record: 2067 (b)(5)

Facility: EST Chronology Officer - Vanice Perin at 09:20:41 on 3/31/2011

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/31/2011 09:15:48 (ET) (b)(5)
 Position: EST Chronology Officer

Name: Vanice Perin
 Record: 2068

Facility:
 Source: ET

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/31/2011 08:05:24 (ET) Teams reporting to Bruce B: RST, LT.
 Position: EST Chronology Officer
 Name: Vanice Perin
 Record: 2066

(b)(5)

SFP evaluation. Working on questions from NRC Site Team, including resin (EPRI and INPO will also review). Working on question of when plant will be "out of the woods." RST indicated current staffing of 4 people works well.

Source: ET Briefing

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/31/2011 05:27:59 (ET)

LT reports that they had followed-up with State Dept and responded to their questions.

Position: EST Chronology Officer

Name: Thomas Scarbrough

Record: 2062

Facility:

Source: LT

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/31/2011 05:14:41 (ET)

ET indicates that RST may provide updated accident response white paper to NRC Site Team. Site Team can determine who is appropriate to receive paper in Japan.

Position: EST Chronology Officer

Name: Thomas Scarbrough

Record: 2061

Facility:

Source: RST

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/31/2011 04:45:27 (ET)

LT called State Dept POC to respond to inquiry. State Dept asked about IAEA rad measurement and impact on 50-mile evacuation zone. ET indicates 50-mile evacuation zone based on projection of possible release scenario using plant conditions understood a week ago. Field data will be used to assess adequacy of release projection and is a factor in considering adjustments to the evacuation zone. State Dept also asked for information on possibility of scrapping Fukushima units. LT indicated that recovery operation still underway and that decision will be made later by Japan. LT will call State Dept to provide additional information.

Position: EST Chronology Officer

Name: Thomas Scarbrough

Record: 2060

Facility:

(b)(5)

Source:	LT
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Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/31/2011 04:17:14 (ET)	NRC Site Team informs ET that State Department called team to ask for information to support morning briefing for Secretary of State. Requested information includes plant status, TEPCO plans to scrap the plants, and IAEA rad measurement outside the evacuation zone.
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	
Record:	2059	
Facility:		NRC Site Team had not received such a State Dept request in the past. ET states this is a new request. Site Team reports that POC is Claire Smolik at State Dept Ops 202-647-1512. ET informs NRC Site Team that ET will respond. ET directs LT to work with RST and PMT to respond to State Dept inquiry.
Source:	NRC Site Team (Mike Scott)	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/31/2011 00:00:34 (ET)	PMT: (b)(5)	PMT believes use of
Position:	EST Chronology Officer	RASCAL to calculate source term for this next task not preferred because of its	
Name:	Thomas Scarbrough	limitations. RES is working on more credible source term (b)(5)	
Record:	2058	(b)(5)	PMT expecting questions from Vince at PaCom, such as military personnel taking KI.
			LT: Receiving requests from military about contamination on aircraft. Discussing with PMT.
			ET: Tell Vince that we are getting rad questions from various military levels. Need statement from PaCom about how to handle these calls.
			ET: (b)(5)
			(b)(5) We will rely on RST in evaluating TEPCO actions to determine if US actions needed.
			RST: Priority is finalizing assessment document. Working with NR on final review. RST will close loop with Brian Sheron and DOE to let them know assessment is final.
			ET discussion with NR: Venting Unit 1 became greater priority than inerting because
		(b)(5)	

Facility:

time frame needed to achieve inerting. Explosive range might exist so need to vent ASAP. White Paper revised to emphasize venting and filling containment. Site call at 0300. Evaluating SFPs in Units 3 and 4.

LT: Action matrix being merged with Embassy list. Embassy will take over list.

EST: WebEoc has input location for lessons learned on Japan emergency team response. Response Team members requested to include lessons learned and recommendations. ET encourages all levels of recommendations.

ET: Operations Center will remain active for another week or so and then will reassess. Team Directors requested to evaluate mid-shift needs. NRC evaluating Japan emergency response needs if government shuts down. Commission SRM directs that staff evaluate programs to determine if any changes necessary based on Japan event. Program review underway. NSIR will evaluate lessons learned from this event. Support Chuck Castos team as much as possible and recognize their difficult working conditions. All e-mails must be sent to appropriate FOIA e-mail addresses. Team Directors should provide recommendations on mid-shift staffing levels at 0600.

Source: All Hands Briefing


Address/Location:

Attachment:

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Date/Time: 03/30/2011 22:35:25 (ET)	<p>Final assessment attached. Email from Fred Brown (RST Director) to Brian Sheron as follows:</p> <p>Brian,</p> <p>Attached is the final draft on the first revision of the assessment document. DOE/NE has provided their concurrence.</p> <p>We plan on getting the final concurrence (Naval Reactors) tomorrow morning.</p> <p>Not sure if you want to share with the higher echelons of DOE before we hit send?</p> <p>Thanks, Fred RST on-shift Director</p>
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 2057	
Facility:	

(b)(5)

Source:	RST
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/30/2011 19:57:32 (ET)	<p>Roy - identify attendees on call: Marissa Bailey, Brian McDermott, Alan Blamey, Eric Stahl, Dan Dorman may join, Bill Webster (INPO SVP Atlanta), Bob Eddy & Kevin Mullin (INPO), ?? (INPO), Randy Tripasto, industry support team, ???, industry support team, xx Lyons, INPO VP, Al Hochivar, TEPCO bldg industry support team, several from GENE and Westinghouse Japan, Rob Mercer USFJ (Navy).</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2056	

Roy: We believe progress being made in Japan to establish infrastructure to coordinate US support. Embassy in Tokyo developing list of needs. Will consolidate several efforts operating in parallel. We see benefit of consolidated list. Federal Government will be holding high-level principals meeting Friday. Typically US support is for humanitarian through US Aid. (b)(5) Questions? None. Goal for discussion, recognizing we are working to blend our list with the list of other aid to Japan, want to make sure our information is as accurate, understandable to needs, and if we have updates, this is opportunity to do that. Also, if individuals are not clear on next steps, those questions should be asked on this call. We have put together status of items on list - please provide updates on status, as well as questions or comments. Bill Webster: List is 34 item list dated 4:12pm, 3/30/11? Yes, that list. Lot of effort to get list made up, would like to go item by item. OK. Rick Nielsen, working with assistants group at INPO, working with material support: item 1 on rad monitors, survey meters, etc. Have 2 US and 1 Canadian utility providing, ready to ship. Roadblock is we need transportation. Cant go further until decision made on who provides transport or funding. Alan - will pursue in-country. DOS has lead on this one. But can someone on the phone take the issue and move forward? If not will move forward with embassy. Mercer: can chase down on logistics side with Joint Task Force. Is preferred ship method military? 2 locations in US: 1 S. CA (4 boxes), 1 S. Tx (1 pallet), 1 Ontario (20 x 150 pounds). USFJ: Have to run everything through PACOM for military shipments. J4 would have to validate - we dont know if that has happened. McDermott: Just had conference call with DART and various military elements. In this case, do not have

(b)(5)

infrastructure you would have in domestic disaster - no FEMA to take lead. Discussed need for technical validation of requirement, but also export controls, etc. Nielsen: This request came from Mr. Hosono in cabinet staff of govt of Japan. Hochivar: Gave govt of Japan list of what was available. List was given directly from special assist of PM directly to Casto and then to Hochivar. Roy: Still have issue with PACOM. J3: Just had J4 guy here, aware of needs, awaiting validation from USFJ. We have pushed issue to Gen. Baker (J4). Vivosa: One example of several that we need to understand how this goes. What is it going to take to make it happen? PACOM: We are just trying to make sure on military side that everyone is aware it is going on. Other concern is that INPO donated items will continue over long period of time, and funding implications if DOD is transportation solution. INPO: how get resolved? We have pushed up to flag level both sides. Roy: role for ambassador in who is paying? Yes. Alan: embassy staff also has logistical people. Would recommend that we status these and if on INPO items if they can convey roadblocks, can present them at the meeting, and we can discuss logistics and funding issues.

Item 2: gamma camera: Information on item provided to GOJ.

Item 3: hydraulic hoses. Initial request cancelled before action taken.

Item X: Anti-Cs, respirators, etc: Provided list and costs to GOJ.

Item 4: commercial heat exchanger systems to cool sfp. Due date of 4/2/11, working through industry support team

Item 5: tools and methods for moving damaged fuel, plus people with knowledge. Completed and sent to Hochivar

Item 6: shielding, completed yesterday to Hochivar.

Item 7: contact info for people experienced handling open trenches of high dose rate water: out tomorrow am

Item 8: no further action. W working independently. Helped broker expert for them to

Facility:

(b)(5)

223707

consult with. Dr. Murphy, Texas A&M.

Item 5: list provided to TEPCO and NISA. Also info on removal tools, TMI experience, document also provided from NRC to GOJ.

Item 9: SAMG technical document. Have reviewed - ongoing project. Provided requested reviews through RST. Same as Item 14.

Item 10: GEH providing recommendations for nitrogen purge - provided comments to GEH. Action is completed.

Item 11: Shielding options - duplicate item

Item 12: working with RST on assessing RPV integrity and location of core. Tech review discussed ongoing on phone calls

Roy: on shielding request - they are asking for physical shielding, though? No, action was list of options. Roy: Tells Alan make sure they understand we are waiting for them to decide on what shielding they need.

Hochivar: at 1 meeting, Japan provided 3 projects. One personnel shielding (tungsten vests), vehicle shielding, sarcophagus to enclose structures.

Items 12-14 are similar to what discussed.

Hochivar - on robotics, W has contracted with Dr. Murphy to get her in-country to help with robotics.

Those are all items INPO is working on.

Bailey: INPO will update list? Yes. Hochivar - will discuss more with embassy and combine everything on 1 list, including protocol on updating. Alan, will have DOE and DOD people at meeting to status their own items.

(b)(5)

224707

Saul: (DOE):

(b)(5)

Should have items statused later. Roy:

how often should have this call? Brian: heard once per day to make sure all US is aligned on support. Marissa: wait and see after list is blended and then revisit frequency of call. Will have call at 8:00pm EST.

Have barges arrived? Barge #1 left Onohama at 1700, supposed to arrive 1400 this pm. Barge 2 at yonohama, trying to get additional transfer pump on it. Supposed to leave sometime today.

Item 23 can be closed. Pumps in Japan and we installed them on barges. No, dont close, there are 4 trains of equipment.

Item 24 is duplicate of Item 1? Yes.

Item 25 is also duplicate.

Source: Consortium call

Address/Location:

Attachment:

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Date/Time: 03/30/2011 19:56:22 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2055

Facility:

Source: PMT

Cannot communicate with Vince via blackberry except non-working hours - not allowed in building. Hes in meetings about 75% of the time. He does have a desk and phone there.

Address/Location:

Attachment:

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Date/Time: 03/30/2011 18:43:16 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2054

Call summary continued: Very few funding sources for aid beyond humanitarian. LiaT: Blamey did not yet circulate list - was going to consolidate with DOS list. Embassy is getting various requests, some from military, some from different parts of the Japanese govt. Brian: trying to get requests into a process. they acknowledged noone is playing the FEMA-type role like would be if this happened in US. They talked about a validation

(b)(5)

Facility: process - export controls, etc. Have 8:00 consortium call. Blamey: Have seen US embassy list. INPO team lead here - scheduled to get together early am Japan time. List have now is a lot of INPO support - will work into embassys list. DOD items are included in embassys list for the most part. In some cases, INPO needs military help to move both purchased and donated items. List does not differentiate right now, but needs to, whether something is purchased or donated. In some cases there are export controls on the things requested. There is a thought of setting up a joint field office. There is a 9:00 call on consortium from Japan side. All official requests from Gov of Japan are supposed to come through cabinet-level meeting. Team in Japan can add value by identifying things that are really critical to the plant and prioritize those higher in terms of things like military assistance moving them. USAID does have clause that allows things to be provided to friendly countries on reimbursible basis. Need to work out funding authority for that. Alan - should have simple charter for team in Japan. Really think embassy will have clear role in screening the things and vetting them, then get them to the right people to work. For the consortium, if we can get clear tasks to the agencies, they dont really need charter. Roy: is any equipment on list making its way to Japan? Alan: Have not checked recently - DOD moving on barge/pumping. Robotics - no current update. DOE and DOD were working. Embassy should really status that info.

Source: ET/Blamey

Address/Location:

Attachment:

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Date/Time: 03/30/2011 18:27:59 (ET)
Position: EST Chronology Officer
Name: Rebecca Karas
Record: 2053
Facility:
Source: ET

Summary of call with USAID, multiple other agencies dealing with foreign consequence management, ODACA (?), military, DOS, DART, DOE, OSD, Yokoda, J5: They are mustering and looking at a structure similar to what we have in the US with a joint field office.

Address/Location:

Attachment:

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Date/Time: 03/30/2011 17:14:03 (ET)
Position: EST Chronology Officer

4 continuous hours of meetings so far. Trying to set up liaison relationships at PACOM. First is on NRC consortium call at 2000 EST. Have Navy Captain from J9 office - can he

(b)(5)

Name:	Rebecca Karas	call in? J9 is responsible for coordinating transfer of equipment and movement of supplies. Want to make sure that JSDF requests are parallel with civilian side. Roy - yes, fine. Vince - just finished talking to intel - J2 - going to try and set up daily call with RST. Info they are getting now is coming out of NRC summary, but they should be able to ask questions of RST. Admiral asking lots of questions. Roy - RST very busy, so just keep in mind fielding many similar requests from WH. Vince - they may also want call with PMT. They might be interested in 1700 EST. Weber - we dont have one parameter to use as indication that things are going south - know PACOM wants. Vince - they are looking at all detailed status info. They are ones who would provide bladders if they need for water transfer. They may use barges to hold contaminated water also. && discussion of imaging capabilities&& Weber - would like to know when J4 logistics team will be in Tokyo. Vince will find out.
Record:	2052	
Facility:		
Source:	Vince	

Address/Location:

Attachment:

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Date/Time:	03/30/2011 17:05:25 (ET)	Right now requests for assistance coming through multiple channels. Industry is asking NRC to authenticate requests. We are attempting to channel the requests now.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2051	
Facility:		
Source:	ET	

Address/Location:

Attachment:

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Date/Time:	03/30/2011 16:56:57 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2050	
Facility:		
Source:	ET	

Address/Location:

Attachment:

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(b)(5)

Date/Time:	03/30/2011 16:47:46 (ET)	Still looking for other agency to step forward and take lead. USAID may pull out - they are only for short-term need.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2049	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/30/2011 16:26:57 (ET)	1715 call with USAID. Liaison Team will cover. PMT - Taiwan interested in event. Liaison Team will follow up with. EDOs testimony indicated 100,000x less than normal background is what readings are in US - asked to verify (EPA website shows). Marty or Eric will also testify on April 6, so need to verify #. RST - update is being worked. Also have call with site team at 6:00. Will work on fixing sitrep for SFP info.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2048	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/30/2011 16:25:09 (ET)	Still waiting to hear from DHS on the one individual who has expertise on molten fuel.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2047	
Facility:		
Source:	Liaison Team	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/30/2011 16:12:45 (ET)	Roy - Made contact with Vince in Pearl Harbor. Getting arrangements for logistics with him. Feedback from deputies meeting was that PACOM is looking for decay heat loading associated with when energetic release not an issue. (b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2046	
Facility:		(b)(5) Chm: taskforce looking at next steps for PA planning, and PMT hooked in. There are planning tools being used to guide what might develop that could cause us to do additional things with US citizens. Most severe things appear to be linked to SFP fire. Would need some triggering event,

(b)(5)

like a reactor having more significant event that would prevent you from supplying water to pools. Then would have some amount of time before losing all inventory. Roy - discusses weir wall and indication being erroneous. Scenarios from SFPs rather dire.

(b)(5) They want to remove SFPs, but at same time say they are filled with water

(b)(5)

Consortium call at 8. Trying to understand what is success for consortium call. NRC people come and go from call depending on who is ET director on shift. (b)(5)

(b)(5) Working on rev 1 of severe accident approach. Call at 7. Rad conditions about the same at the site

(b)(5)

Roy - barges on their way. Also turned off 8:00 CA briefings - they are now 10am in the morning.

Source: Chairman

Address/Location:

Attachment:

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Date/Time: 03/30/2011 16:09:53 (ET) **RST working Rev 1 of severe accident approach - 5:00 call with external groups. Rad conditions about the same. Interagency policy meeting on temp rad standards for cross-border shipments. EPA has lead. Unconfirmed media report of contaminated milk in WA state. EPA trying to find out.**

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2045

Facility:

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/30/2011 15:52:26 (ET) **Chairman got feeling in Japan that pools are full due to skimmer indication. RST: skimmer surge tank does not give indication of pool level. When the pool is full, water goes over weir and into cleanup system - if SFPCU is running, there is surge tank and as long as water comes over weir, surge tank lines up with level in pool. Right now level is below weir, so does not show pool level. Site team on SFP4 - structural people think**

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2044

(b)(5)

	Luccioni
Record:	2042
Facility:	
Source:	EST
Address/Location:	
Attachment:	
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Date/Time:	03/30/2011 13:43:53 (ET)	Working on the request list from Japan. We need to figure out who is going to provide it, who is going to pay for it and the logistic to get it to Japan.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	2039	
Facility:		
Source:	LT	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/30/2011 13:43:53 (ET)	Working on the request list from Japan. We need to figure out who is going to provide it, who is going to pay it and the logistic to get it to Japan.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	2041	
Facility:		
Source:	LT	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/30/2011 13:43:53 (ET)	Working on the request list from Japan. We need to figure out who is going to provide it, who is going to pay it and the logistic to get it to Japan.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	2040	
Facility:		
Source:	LT	

(b)(5)

Address/Location:	
Attachment:	

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Date/Time:	03/30/2011 12:39:05 (ET)	Everybody that is needed for the pessimistic case model requested by the Ambassador is on board. RES personal is coming from Church Street to the OPS center.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	2037	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/30/2011 12:39:05 (ET)	Everybody that is needed for the pessimistic case model requested from by the Ambassador is on board. RES personal is coming from Church Street to the OPS center.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	2038	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	

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Date/Time:	03/30/2011 12:04:05 (ET)	At 1600 we will send the assessment paper. We think they will have to vent anyway. They might get to a Hydrogen explosion in a few days, this is why the recommendation will not change much. The big concerned is about the corrosion due to salt.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	2036	
Facility:		
Source:	RST	

Address/Location:	
Attachment:	

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Date/Time:	03/30/2011 10:01:08 (ET)	RST - We have been looking at the red line strike out of our assessment paper. We will have a call at 11:00 am to discuss it. One of the recommendations to Unit 1 is to fill with
Position:	EST Chronology Officer	

(b)(5)

Name:	Hector Rodriguez-Luccioni	<p>water and to inert with nitrogen. DOE has a paper coming up of corrosion. We need to know if the instrumentations that the Japanese have is enough to know the level of water as the reactor is fill in with water on Unit 1, since it is not desire to fill it up completely that will cover the vent system. SFPs is another issue we need to discuss and clarify the status of water level. RST contact RES to help with the worst case of Unit 1 about the possible energy release. RST will look at what is the value of the seal leakage flow rate.</p>
Record:	2035	
Facility:		<p>PMT - The water in the trench radiation level is the same of the turbine building radiation level. Vincent Holahan will be calling around 8:30 pm for update. PMT started working on the pessimistic scenarios the ambassador asked for. PMT is working together with RES and RST to accomplish this scenario model. We have not seen any change in radiological data we have been receiving.</p> <p>LT - We are working on the communication with Vincent Holahan. The consortium call changes have to be communicated to everybody.</p> <p>RST - It seems that Japan has more instrumentation available that we think they have, based on a data we received from NRC team in Japan.</p> <p>EST - Briefing on the Deputy meeting: The Prime Minister was very grateful to the President on the cooperation we are giving. The Chairman talked about his visit, he felt that they have similar issues and concerned that we have. The Japanese have modeling runs that came with similar results than ours.</p> <p>LT - will have a call at night to discuss the list of the Japanese request.</p> <p>EST - Deputy meeting briefing: They were asking about the capability of filtering the water and clean up. They want to know how long this case will last about decay heat removal.</p> <p>RST - During the weekend there was a concerned of getting criticality because of the salt.</p> <p>PMT - there was no isotope present that indicates there was a criticality.</p>

(b)(5)

Source:	EST
Address/Location:	
Attachment:	

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Date/Time:	03/30/2011 07:43:38 (ET)	He heard that DOD is taking the lead for the consortium, but hes not sure about that. We need to give a follow up to this by contacting Josh.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	2031	
Facility:		
Source:	Call from Marty	

Address/Location:	
Attachment:	

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Date/Time:	03/30/2011 07:29:26 (ET)	Radiological condition in the plants are the same. Vince Hollahan was sent to Hawaii. The consortium call has been re-establish and it has been moved to 8:00 pm.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	2030	(b)(5)

Facility:	<p>There is a concerned in Unit 1 if the bottom head can fail in a way to cause a steam explosion that produce an energy release. All the salt in the bottom of the vessel is impeding the cooling of the area. RST is working on this.</p> <p>LT-There is a power point slides that outline the organization that are involve in the consortium. Is undefined who is the lead organization and what is the scope of the organizations. This will be send to the commission office.</p>
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Source:	TAs Morning Briefing Call
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Address/Location:	
Attachment:	

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Date/Time:	03/30/2011 07:43:38 (ET)	He heard that DOD is taking the lead for the consortium, but hes not sure about that. We need to give a follow up to this by contacting Josh.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	

(b)(5)

Record:	2034
Facility:	
Source:	Call from Marty
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/30/2011 07:43:38 (ET)	He heard that DOD is taking the lead for the consortium, but hes not sure about that. We need to give a follow up to this.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	2032	
Facility:		
Source:	Call from Marty	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		

Date/Time:	03/30/2011 07:29:26 (ET)	Radiological condition in the plants are the same. Vince Hollahan was sent to Hawaii. The consortium call has been re-establish and it has been moved to 8:00 pm
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	2033	
Facility:	<p>There is a concerned in Unit 1 if the bottom head can fail in a way to cause a steam explosion that produce an energy release. All the salt in the bottom of the vessel in impeding the cooling of the area. RST is working on this.</p> <p>LT-There is a power point slides that outline the organization that are involve in the consortium. Is undefined who is the lead organization and what is the scope of the organizations.</p>	
Source:	TAs Morning Briefing Call	

Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		

Date/Time:	03/30/2011 07:15:37 (ET)	The plant radiological condition is the same. We are considering the damage in Unit 2
(b)(5)		

Position:	EST Chronology Officer	and 3 and support the next step
Name:	Hector Rodriguez-Luccioni	(b)(5)
Record:	2028	
Facility:		Is probably a good think to flood the containment to the bottom of the vessel.
Source:	Briefing Call to the Chairman	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/30/2011 07:15:37 (ET)	The plant radiological condition is the same. We are considering the damage in Unit 2
Position:	EST Chronology Officer	and 3 and support the next step
Name:	Hector Rodriguez-Luccioni	(b)(5)
Record:	2029	
Facility:		Is probably a good think to flood the containment to the bottom of the vessel.
Source:	Briefing Call to the Chairman	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/30/2011 07:04:55 (ET)	Plant conditions maintain the same in concerned of radiological conditions, decay is our friend.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	(b)(5)
Record:	2027	
Facility:		
Source:	PMT	

(b)(5)

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/30/2011 06:47:08 (ET)	Staff turnover updates.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	2026	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/30/2011 06:16:58 (ET)	RST - GE doesnt think that inerting is a priority. They will give reasoning to us on that. We will give a recommendation to our 15:00 crew. TEPCO now plans to increase the flow until it reaches the surge tank. The structural people didnt know if that was a good idea. The NRC team and Japan are discussing it back and forth. We are technical advisers at this point. We give them our best advice and they can take it or leave it. RST assessment reevaluating based on conditions on the ground - Still working on this item.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	2025	
Facility:		<p>PMT - 16:00 Japan team call, we had a question on recommendation for shipping to use their evaporators offshore. We reminded them of the notice to shipping with the 50 mile EPZ. Gave them some IAEA information. Request came from Marie on the Japan team. Initial request was from the military. Closed three tasker items tonight.</p> <p>LT - Consortium meeting - We should put this to the line, NRR or RES, and let them run the meeting. Jim sent an email up to the EDO requesting this. Probably needs to be an SES manager type person. We are awaiting the EDOs blessing on the idea. Quick writeup for VP on deputies meeting. Send it up to Bruce and Jim. He will email it up to the chairman for his 8 oclock meeting.</p> <p>Scott - Ready to send a 1-pager. Will add a line that Chuck is working to resolve some roles and responsibilities issues from some new arrivals from N.R. and DOE (SANDIA).</p>
Source:	ET	

Address/Location:	
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(b)(5)

Attachment:

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Date/Time: 03/30/2011 05:57:53 (ET)
 Position: EST Chronology Officer
 Name: Nick Ballam
 Record: 2024

Jim - Priorities: RST is still pushing dry well filling in unit one.

Nitrogen purge is going to be through the 3rd to initiate it.

Been answering questions through the night. Vince Holohan is embedded in PACOM. Operating in a SCIF.

(b)(5)

Chuck - The admiral Rogan in Japan has been pushing Chuck all day on these dose questions. Couldnt help him much from the site team. They are using assumptions that are ten days old on some of their plans.

Jim - There will be another inter-government council IPC to support customs and border patrol concerning radiological clearance for things/people coming from Japan. Giving it to FSME as part of the Line Organization. Status of the staffing stand-down? No updates. We need to pass some of these ideas through him.

Facility:

Chuck - Spent most of the day trying to get the information and Chuck spends his days putting out fires. DOE called in people from SANDIA and theyll work for the site team. Chuck didnt ask for it and doesnt know why they are there.

(b)(5)

Inter-Agency call at 9:30 this could be addressed. N.R. is here, and we could use that to help as well.

(b)(5)

We dont want the burden of tracking down shielding. Other departments should handle these types of logistical issues.

Source: Phone w/Chuck

Address/Location:

Attachment:

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Date/Time: 03/30/2011 03:59:59 (ET)

Position: EST Chronology Officer

Name: Nick Ballam

Record: 2023

Facility:

Source: ET

Vince is in one huge SCIF, cant get cell phone access, etc. He has the potential to become a middle man between Admiral Willard and us. Vince will start calling in routinely. You can reach him by calling his cell phone and leaving messages. We dont have any real time contact with him. Get a number at the SCIF where we could give him a classified phone call.

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/30/2011 03:56:17 (ET)

Position: EST Chronology Officer

Name: Nick Ballam

Record: 2022

Facility:

Source: ET

Getting a lot of questions about NLE planning positions. Are we going to address that? No answer yet. We hope to hear back within a week with more information on this issue.

Address/Location:

Attachment:

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Date/Time: 03/30/2011 03:40:41 (ET)

Position: EST Chronology Officer

Name: Nick Ballam

Record: 2021

Management of turnover discussion -
Team leaders come in to give the ET an update, but the other teams dont know what the other teams are doing. Possibly creating a turnover board in WebEOC.

- Status of facility
- Dose Assessments
- Current Priorities
- What will we get done this shift?
- Whats the plan?
- What are the challenges?

(b)(5)

Facility:

(b)(5)

(b)(5)

(b)(5)

Source: PMT

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/30/2011 01:41:10 (ET)

Position: EST Chronology Officer

Name: Nick Ballam

Record: 2018

LT - Need to give the Chairman a document for an upcoming meeting. Would have to be more high level than what we gave to Roy. We need to summarize what was given to Roy. He needs a one page paper with sound bytes that would help him.

Thoughts:

TEPCO continues to inject freshwater into the plants that have fuel in them (1,2,3), and continues to spray water into fuel pools. They are working on water management at the facility. Consortium is in place. The radiation levels are trending down. Currently no basis to adjust the 50 mile evacuation. Working with OSTP, DOE, EPA on overall dose assessment process.

Tell him that there will be an IPC meeting that will address the issue of release criteria.

Facility:

We have been asked for release criteria for materials in the country or to work with interagencies for release criteria for commodities coming here from Japan. We answered that last night with some DOE criteria. The emergency is in Japan. Would we want to adopt an adjusted release criteria here in the U.S. because of this? There could be consequences at airports with TSA (people losing luggage, clothing, etc.)

(b)(5)

NEI made their protected website available to DOE and EPA.

(b)(5)

Pass it by RST and PMT for review.

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/29/2011 23:58:01 (ET) (All Staff Meeting Shift Brief)

Position: EST Chronology Officer RST (Dave) - No real status issues from status sheet. Call with NRC Japan team at 1500,

Name: Nick Ballam still concerned with U4 pool. Should we still be filling it up with water? Integrity of pool

Record: 2017 needs to be considered when addressing this issue. Evening shift put together a

scenario on why the U2 system might be breached. Sending it to GE and INPO to let them know our thoughts on that. Fred Brown sent email out of RES and NRR to think about scenarios of potential outcomes for spent fuel pools and damaged cores, to develop a worst case scenario. Is there any question about whether or not there will be some sort of energetic release

(b)(5)

Want to move this issue to the normal line organizations. Will provide a technical document

PMT - Catching up on some of the NARAC runs that have been run and released but havent yet circled back to us. We have now reviewed all of them.

(b)(5)

We responded to a question from chairman last week on this issue. Its in the record system. PMT12. Need to contact Vince Holohan in Hawaii. Weve sent a message to his blackberry and were looking for his number. We will set up what he needs from us and what we need from him.

LT - The Consortium meeting tomorrow at 20:00. Still need to put together background book for Roy so he can be prepared. We need to brainstorm, is it the best thing to have the ET director sit in as the HQ rep for that meeting or is this something that we could

(b)(5)

Facility:

assign somewhere else (Line org.). NRR or NRO? If you let the Ops Center watch do it, then the person changes for each meeting (depending on shift). Need to determine an "owner" for this item. FOIA emails, a reminder to get them all in, and to complete the action items.

Jim - Need to better track the papers we have issued and the policy decisions that have been made. Teams need to focus on policy issues or be sensitive to major policy decisions. Overall priorities are to continue to assess the rad conditions (we still think that the 50 miles is the right answer for US Citizens) and coordination with other departments and industry. Status on recommendation of filling the dry wells or not? Still waiting on some feedback from GE. The Japanese are concerned with where the water is going. We put a document together with potential leak paths, but without more information we couldnt narrow it down too well. Concluded that there is enough salt in those vessels to fill the bottom of the vessel. Discussion on how crusted salt may be insulating the vessel. We have about 12 people in Japan. Chuck will probably be over there for at least another 2 weeks. Chairman came back, which may allow us to start discussing staffing decisions. Chairman leaves again on Saturday.

Are our priorities based on the highest risk or the easiest/quickest things to fix? Our view is that Unit 1 is the greatest risk. Priorities are based on radiological risk. TEPCO is continuing to put water on the spent fuel pools. They give us reports every day. Rad levels seems to be trending down.

Staff should starts capturing our lessons learned in WebEOC. Capture anything (nothings too trivial at this point). The commission issues an SRM to stand up a task force to look at lessons learned from this event. The task force has been formed, and will be led by Charlie Miller, Gary Holohan, and others. They have a draft charter ready. Would look at emergency planning zones, 10 miles vs 50 miles etc. Seismic review GSI-199 is a separate issue from this task force.

(b)(5)

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/29/2011 21:19:51 (ET)

Japanese asked US for experts on melted fuel. INPO provided list back to site team - on list with all industry experts, there is a DHS employee. Team understands there is a

Position: EST Chronology Officer

(b)(5)

Name:	Rebecca Karas	protocol for providing US govt employee names. Thought is should run this back through DHS.
Record:	2016	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/29/2011 21:03:48 (ET)	TEPCO believes highly likely that water in TB and U2 underground tunnel came from same source - partially melted fuel. Tepco says water in U1 underground tunnel may have only been from tsunami waves. If U1 tujnnel water safe, will release to sea. More nuclear experts dispatched from Areva in France. Will help with removing water from TBs. Science ministry says seawater rad levels still high but on decline. Samples collected 30km offshore. 1.5 - 3.9 Bq/l found in samples. Current levels 1/5 - 1/10 of those collected earlier.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2015	
Facility:		
Source:	NHK Media	

Address/Location:	
Attachment:	

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Date/Time:	03/29/2011 20:39:40 (ET)	RST working on assembling experts on whether energetic release still possible. They are trying to set up. (b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2014	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/29/2011 20:13:09 (ET)	<<audio system difficulties - TA questions not heard>>. GE does believe recirc seals are failed, but this does not drive their strategy. Decision on whether want briefings once or twice a day - does take time to prep for these. Snodderly: once a day would work, with an extra brief scheduled if significant change. Orders: Unit 1 RPV and d/w are intact and were thinking of flooding? Yes. Have trench full of water and highly
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2013	

(b)(5)

radioactive, maybe use that to flood. Castleman: Do we have more rad level info? Nothing beyond what we had yesterday. More RASCAL runs? No. NARAC gave us recent run as of Saturday. Trying to see if they have more runs

(b)(5)

Facility:

Have included info from 1pm today. Well look at. Are Japanese considering any PAG changes? No. Right now we understand they arent. 50 mile rec for US still stands. U1: Reported they were talking about inerting with N. Still on table? yes, but they have 1 day delay. The sitrep on white smoke from SFP - what is? No, no elaboration on that. Know when they put water in, they get large steam reaction - dont know if continued plume is steaming residual water - assume is steam, but not definitive. Japanese asked for shielding - developments? Not aware of any. Regarding AC restoration - where stand? Last heard got CR lighting back on U4. Dont know about temp 4kV switchgear. Havent heard HVAC back in CR. Did hear FW injection was transferred to temp elec pumps, but heard powered by portable generators. They were trying to string elec cables - know where they stand with dewatering 2+3 TBs? Heard looking for place to dewater to. Weber mentioned Chu recommended fresh water should be deaerated - RST was supposed to evaluate

(b)(5)

On SVTS call, indicated path we were taking. Did not talk about Chus thoughts. Belief was that was right place to be. Will get back with preferable time for this call tomorrow. Still on for 7:30 until make change.

Source: TA questions

Address/Location:

Attachment:

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Date/Time: 03/29/2011 19:57:15 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 2012

Freshwater injection to Units 1-3. Conclude some degree of fuel damage to 1-3. Vetted recommendation on core cooling and planning to avoid hydrogen explosions, particularly Unit 1. Recommended approach to maintain cooling with fresh water, flood torus and flood d/w without impacting venting capability. Provided to Japan team. Trench outside at Unit 2 filled with water reading 100R/hr and only a few inches from top of trench. Considering or putting sandbags there to keep water from ocean. Freshwater barges supposed to arrive today. Japan expressed interest in pumps that separate contaminants and evaporate water. PNNL sent 2 people to Japan. Bechtel pumping station in J Village, people still being trained. Hear they are likely to use different pieces

(b)(5)

Facility: in different ways. NEI has provided password-protected website information on US sampling to EPA and DOE. Industry consortium had call - saw value in having 1 list of requests from Japan. Thought was site team could be clearinghouse to avoid duplication. Pu on ground been reported in media: 2 of 5 samples been taken, and tests indicate 0.1 mR/hr. Shaw group entered into agreement with W, B&W and Toshiba to provide help to TEPCO. We are not privy to that program and goals, but will try and get info. Tepco oceanwater samples - guess not too far offshore. Show I readings about 34x Japan limit. For Cs is 110x Japanese limit. We have concerns with regards to U1 drywell and issues associated with maintaining integrity of drywell (believed lost for 2 and 3). In terms of flooding, other strategies, Japanese likely focused on that, but seem to have strong focus on SFP 3+4 where there is very little water or they are dry, and they are interested in assistance to move the SNF and get rid of that source term. Thought is there may be hole in 1 or more of SFPs, and thought that just the weight of the water with EQ damage could be enough to cause structural damage and failure of SFPs. Tomorrow Chairman is in deputies call. [redacted] (b)(5) [redacted] DOE set to provide robots to Japan - arriving April 5. Believe Vince is in Pearl Harbor. Will be advising Admiral Willard. TEPCO is considering spraying zeolite on outside and interior of RBs to fix contamination - difficult to accomplish. Idea they had on their own.

Source: TA Brief

Address/Location:

Attachment:

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Date/Time: 03/29/2011 18:29:52 (ET)	Calls in for phone call with Chairman.
Position: EST Chronology Officer	
Name: Rebecca Karas	Brian: Reentry paper was sent to team to be shared with embassy. Establishing POC on site team in Japan to work with consortium group and idea that there needs to be consolidated list of technical issues - Lia team is working. Chuck: J4 team should be turned back on for logistical support. Kmax is a dead issue - they and we have backed off of remote helicopter. Doesnt have the capabilities we thought. Chuck: if we get J4 team turned back on, they will take care of all of this - track equipment and get it from A to B. Japans primary focus right now is to remove SNF. We would prefer they get reactors stabilized. Need to reduce source term in plant - think that removing SNF will
Record: 2011	
Facility:	

[redacted] (b)(5)

	reduce source term.
Source:	Chuck

Address/Location:	
Attachment:	

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Date/Time:	03/29/2011 17:17:51 (ET)	Discusses whether we still think we could get energetic release or not - are we past this point? If had hydrogen explosion again, would maybe be only significant local event? Possibly a path to exit.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2010	
Facility:		
Source:	ET/RST	

Address/Location:	
Attachment:	

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Date/Time:	03/29/2011 16:12:52 (ET)	Nothing difinitive on ex-vessel, but if you look at how long they were without water - would be amazing if didnt go ex-vessel. Fred: all work to date is based on core being in vessel. If not case, then recommendations may be different. Can we tell from rad fields? Only data we have are 2 CAMs. If they have other monitors, have not shared. Providing aid has been challenge - they turned fire truck away early on. They want a Japanese solution - will use all Japanese fire trucks before using US one. Decisionmaking is all at the top, running up multiple channels of government.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2009	
Facility:		
Source:	ET/Trapp	

Address/Location:	
Attachment:	

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Date/Time:	03/29/2011 15:38:44 (ET)	Unit 2 - the panel that was off was actually blown off in the Unit 3 explosion. Unit 2 had RCIC running for a while, then failed. Best guess was due to NPSH. They were getting some battery power. Good 36 hours or more with no injection on Unit 2. Cont pressures were double design pressure. Then got explosion on Unit 2, which could be in-containment steam explosion. they did torus inspection and thought they saw some damage. We thought was ex-vessel then. Amazing hasnt had hydrogen explosion - probably because steam is coming out pretty fast - probably pushing out hydrogen. Unit 1 actually has RPV pressure, so does containment. Probably in best shape. Isocondenser boiled dry in about 1/2 hour. Significant core damage in U1, but RCS may
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2008	

(b)(5)

be intact. Unit 3: looks like locks on top of containment fell in - significant steam coming out of cont dome and also sfp. Think fuel pool was empty on Unit 3. When put water on first time, steamed significantly. Cont probably not intact on U3. Fuel pool mostly empty. Debate whether fuel pool or reactor was cause of hydrogen on Unit 3. Fuel pool may have ruptured early due to seismic event, like Unit 4. Appeared 3 might have had small zirc fire at some point. 4 is obscured by debris - looks like bridge might have collapsed into pool. Wall in 4 was damaged, got blown out below fuel pool. 3 less damage - was higher up.

Facility:

(b)(5)

Everyone exhausted first week at NISA and TEPCO. They indicated they contracted a lot of maintenance at site - they didnt show back up, so very challenged to get people to site. Then MOD got engaged. The area is devastated. Roads in poor shape. Switchgear was damaged - couldnt get diesels back. Also no fuel supply. Had 600 earthquakes while there in Tokyo. They still dont really know now if there is water in SFP4 or not. Talked about flying over drone so pilots wouldnt get dosed. MOD said all drones down now because changing out software. They said send our drone (Think they didnt really

(b)(5)

They had pretty quick hookups to get from fire truck to reactor.

They never did tell us exact flowpath. Unit 1 is probably only one with vessel integrity. No pressure in 2 or 3 vessel for significant amount of time. Doses are really high. Getting 6-8k R/hr. Good assumption is gone through vessel. Readings may not be completely accurate. Believe from CAM monitor just outside containment wall, but not sure. Not clear that the monitor would be properly functioning, though.

Source:	Trapp (returned from Tokyo)		
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Address/Location:

Attachment:

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Date/Time:	03/29/2011 15:20:16 (ET)	Roy: Situation continues to be dynamic. Continue to learn more. Have freshwater injection to all 3 units. Still looks like fuel damage to 1-3. Had migration of water with rad material that looks like came from the core into the TB basements. Not sure of flowpath. Trying to find a balance between amount of cooling water in and rad cleanup. They are
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	2007	

(b)(5)

not seeing TB flooding level increasing, so either is cascading to another location, or possibly something else. Attention on trench at Unit 2. Reading 100R/hr, only 10cm below burm where would have access to ocean. Putting sandbags out to contain water leaving trench. FW barges are expected to arrive Wed (today) in Japan. NEI database - web-protected - up and operational. DOE and EPA have password. Can track indications at US plants. Seeing some slight increases, but not close to health consequences.

(b)(5)

Facility:

Estimate is they would be venting and inerting as they flood up. Chu believes that hydrogen explosion potential is problem - preventing it is steam environment, and as fill up, will quench that. Weber - outgrowth of yesterdays science panel call. This was 1 of 2 recommendations got from call. Other was that water should be deoxygenated before being injected. Group discussed both, and decided neither one was acceptable to pass on to Japanese

(b)(5)

Chm: (b)(5) Roy: discussed spraying zeolite on RB to fix contamination, but difficult maneuver considering logistics - may not happen. Vince in HI, have not heard from. IAEA meeting being convened next Mon. NRC consortium had another call - compiling list of needs expressed by Japan. NRC would be org that would keep one consolidated list.

Source: Chairman

Address/Location:

Attachment:

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Date/Time:	03/29/2011 14:39:02 (ET)	1430: Transitioning Briefing - Roy Zimmerman, Brian McDermott.
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	2006	
Facility:		
Source:	ET	

Address/Location:

Attachment:

(b)(5)

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Date/Time: 03/29/2011 13:16:40 (ET)	Mike Weber call with Josh Batkin.
Position: EST Chronology Officer	
Name: Vanice Perin	
Record: 2005	
Facility:	
Source: ET	

Address/Location:	
Attachment:	

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Date/Time: 03/29/2011 10:38:28 (ET)	(Cont phone call):
Position: EST Chronology Officer	Who has lead and who pays: INPO – donations received; issue with transportation;
Name: Vanice Perin	Chem and bio instant response team(?); detection decontamination;
Record: 2004	UAV options – high priority mission military haz mat issues/procedures;
Facility:	Action for NRC: get POC at team in Japan; Request for consolidated action list of all orgs/agencies involved, including team in Japan. Next call tomorrow: 900 or 1000
Source: ET	

Address/Location:	
Attachment:	

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Date/Time: 03/29/2011 10:26:16 (ET)	10:00 phone call: summarize yesterday:
Position: EST Chronology Officer	- Participants: NRC HQ, INPO, RII, Naval Reactors; INPO; DOE/NE.
Name: Vanice Perin	NRC summary:
Record: 2003	- Calls may be discontinued; but will continue daily; discussion at higher level: coordination/cooperation
	- Call at 9:00 today with our team in Japan; chairman in Japan last weekend: high level mtg (INPO, TEPCO);
	- Borchardt at the Hill to support Pete Lyons;
	- Discussion on who is taking lead for US in Japan; J4 Group
	- discussion of creating a protocol to handle Call to request info and get solution (UAB support several requests)
	INPO discussing:

(b)(5)

Facility:

- List of 3 tech items: request for rad monitor, survey meters;; 2) anti contamination clothes, respirators; 3) gamma cameras (req for info); 4) question from NRC on status of several issues; 5) request for heat exchanger for sfp; cameras for helicopters to monitor SFPs.
- Mitigation/stabilization phases: portable instruments; tool for moving fuel; shielding options to be provide tomorrow (hi level items);
- Tech group: tech doc advise: people from severe accidents; leaving document; a@ 1100 phone discussion to discuss actual conditions; 3) Nitrogen issue;

Other group working (Shaw) on
Japan request PNL support SFP and waste issues; need for shielding assistance(industry support team - on going, personnel shielding - done)

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/29/2011 09:03:32 (ET)
Position: EST Chronology Officer
Name: Vanice Perin
Record: 2002

Facility: Chuck calling from embassy in Japan: status on SFP; lights on in control room; Un 2, 3 fresh water (suppression pool); Un 1 trench connection is severed earthquake(?!) Of the 5 plutonium samples 2 are from reactor (based on ratios) and 3 legacy (recirc system); shielding and structural discussion, SFP but not much. Cooling systems: external condensers. Mtgs every other day at 20:00
 Japan asked for 2 people from PNL ; spray coat (zeolite) (b)(5)

NRC working on DOE and OSTP recommendation for mtg tomorrow for decision by PM. Equipment and logistics (Laptops, internet connections, etc).

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/29/2011 07:33:13 (ET)
Position: EST Chronology Officer
Name: Vanice Perin

Phone call with NRC phone participants: Mike W is leading ET; status summary. No detailed info: trying to reduce water in basement, removing water to the ocean. NRC and INPO, GE, Naval Reactors working together. Japanese gov asked for additional assistance. Coordinating efforts for response to Japan. TEPCO press release on (b)(5)

Record:	2001	detected plutonium. Phone call with industry this morning.
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/29/2011 07:19:23 (ET)	Don Cool discussing doses/status with Mike Weber.
Position:	EST Chronology Officer	
Name:	Vanice Perin	Don Cool discussing doses/status/activities with Mike Weber. EST Chronology Officer - Vanice Perin at 07:26:16 on 3/29/2011
Record:	1999	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/29/2011 07:19:23 (ET)	Don Cool discussing doses/status with Mike Weber.
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	2000	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/29/2011 06:34:13 (ET)	Shift change briefings (review).
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1998	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/29/2011 06:06:19 (ET)	LT - Mark Shaeffers request from Ambassador over at AEA. Were putting together an
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(b)(5)

Position: EST Chronology Officer	item. Were looking for options right now, but we dont have anything as of this point.
Name: Nick Ballam	There is a 10:00 consortium meeting. No one has asked us for any ideas up to this point.
Record: 1997	
Facility:	<p>PMT - We will be turning over the draft paper this afternoon. Have distributed KI to people within 50 kilometers of the reactor. 1.5 million. They have 6 million doses in reserve. Dont need any extra. Ambassador is looking for performance indicators to track. They want to track trending on dosage rates.</p> <p>RST - We have verbal information on industry perspectives to incorporate more movement into dry storage. Added it on as a talking point for Bill Borchardt. Will send it directly to Bill electronically. Had a good call with NRC Japan team. Had a very productive meeting with TEPCO. We are aligned on the recommendations with the RST document that we sent over. They were pleased that we sent that. They still dont believe that the spent fuel pool in Unit 4 was damaged. They wanted our thoughts to see why we thought it was damaged. Still working on the response. By March 31st they will have a purging system ready to go for unit 1. Question for units 2 and 3 for purging nitrogen. Working with industry for answer on that.</p> <p>PMT has the lead for the Roy paper. By 14:00 we will bundle the RST and PMT reports together.</p>

Source: ET	
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Address/Location:	
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Date/Time: 03/29/2011 05:51:22 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Nick Ballam	No plans have been developed yet to get the plant water removed from the basements.
Record: 1996	We could start looking at options. We could assign it as a task. How proactive do we want to be? We have brainstorming ideas already but they arent fully developed yet.
Facility:	Need to follow up with IAEA once we have some news.
Source: ET	

Address/Location:	
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Date/Time:	03/29/2011 05:39:20 (ET)	Email from Mark Shaeffer. Ambassador is looking for any information on removal of water from 1, 2, and 3. The only information they have is that Japan is working on it. Ask the RST about any plans that may have been developed until now.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1995	
Facility:		
Source:	LT	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/29/2011 05:02:08 (ET)	Working on 1-pager. Status of whats going on at the units. Quickly touch on the status at the 6 units. Will use the status summary power point as a starting point. Need protective measures piece. Jim suggests to turn it over to the day shift to review and keep it up to date. Shoot for 14:00 to have it available for Roy. Send it electronically.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1994	
Facility:		
Source:	RST	
Address/Location:		
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<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/29/2011 04:27:17 (ET)	Team reviewing graphs and data showing declining trends. These were prepared for Roys 15:00 meeting. Ocean water samples on the last page. Sites are venting. 1.5 million people living within 50 kilometers of the reactors. Trying to give K.I. to all of them. Turn it over to the next shift, let them review it and have it ready by 3:00.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1993	
Facility:		
Source:	PMT	
Address/Location:		
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<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/29/2011 04:19:24 (ET)	Mike Scott had meeting with Japanese. They want help to access the damaged cores. TMI 2... Looking to figure out a long term plan. (b)(5) to deal with this. They dont have an in-tact building which is problematic. Can you build a coffer dam around the building? Then flood it before you remove the vessel head...
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1992	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
		(b)(5)

Facility:	The answer may be the consortium. Each unit will be unique depending on several variables.
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Source: RST	
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Address/Location:	
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Date/Time: 03/29/2011 03:13:55 (ET)	Scott reviewing a document with the following information: Puddle of water found in a trench outside of turbine 2 1000 msv per hour. Concrete trench 3 meters wide. Located in compound of the plant outside of the radiation control area. Extends 76 meters towards the sea but does not reach the sea. Contaminated water was not flowing into the sea. 16 tons of water is being injected into reactor every hour. Want to reduce it to 7 tons. 4000 gallons injected every hour. They want to reduce to 1500 gallons per hour. This would reduce the input to the amount that is steaming off.
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 1991	
Facility:	

Source: ET	
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Address/Location:	
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Date/Time: 03/29/2011 02:44:35 (ET)	NR - PMT discussion US Forces in Japan requesting a US Standard for release limits for radioactivity. Our answer was that we do not establish that policy. Pacific Fleet is coordinating this effort. Have received good feedback about NRC reps in Japan and elsewhere.
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 1990	
Facility:	RST - First draft of answers for Borchardt submitted to Jim Wiggins. Need to consider dry cask production and certification capabilities. Ask INPO if they foresee any issues in moving to dry cask storage, giving them some examples of possibilities. Casks may have to be modified to withstand more heat if the spent fuel were to be moved out at an earlier state (after 1 year).

Source: ET	
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Address/Location:	
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This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/29/2011 00:00:34 (ET)	RST - Japan team has concerns about spent fuel pools. They believe there may be cracks in there. 150 tons of spray per day. They are worried they may not be above the
Position: EST Chronology Officer	

(b)(5)

Name:	Nick Ballam
Record:	1989
Facility:	

level of active fuel. They can still see steam coming out. They want to know if we recommend putting more water in there. One theory is to fill it up to the top of the wear wall. Would have to spray quite a bit. Shared the potential leak paths from the reactor buildings into the turbin buildings. 1,2,3 may all have leaks. Shipped it out to GE folks. Japan has been throttling water for fear of leaks. Is it better to fill up the dry well regardless of leaks? The deliverable will be a recommendation to TEPCO. Will look at the pros and cons of each approach, fairly with no bias. There may be enough salt in the vessel to fill up to the lower core plates. Now the water may just be cooling around the outside instead of the inside of the core. We have people looking at the cracking rate per day. Estimates of 1/10 of an inch a day. CRDMs - would be good to push freshwater through there, may help clean out some of the salt. Look at other types of water solutions that may help. Boron status - not sure at this point. Freshwater with boron = first choice, freshwater = second choice, seawater = third choice.

PMT - Roy has a meeting at 15:00 will present some information about radiological trending and a discussion on the reactor status. Action item for a 1-pager. NRCs assessment of conditions at the plant. Also want a "threshold and planning update". PMT will take the lead and RST will help with it. Day shift will update and peer review it. NEI working on password protected website. It will be available to Federal Family. Already had some detection in the U.S. There were detections in Pennsylvania. Naval reactors made observations of radiological practices at the plant. There were recommendations on what they could do to enhance their practices.

LT - Request to check emails and Task Tracker to keep up. Trying to set up a call tomorrow between (b)(6) and someone in Japan. Reentry proceedures were sent (b)(5) Waiting for comments on those. Can close the action. EPA commented on it and they were helpful. Mid shift is the FOIA. Putting emails into the FOIA response file. Social Media - do we put out any information on these sites?

NR - RST mentioned revision to the whitepaper. Addressing changes in the white paper due to the changing conditions and data that we are receiving.

Action Item 3183 upgraded to high. By 0700. how many US Reactors are of the same model as Fukushima. How many of them are scheduled for relicensing? RST will take

(b)(5)

lead on this. Can use information digest. License renewal stats. BWRs with Mark 1 containments.

Source: ET

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/28/2011 23:28:13 (ET) Making sure that region 1 was aware of a march 28 press release from State of

Position: EST Chronology Officer Pennsylvania regarding drinking water. Sampling for Iodine 131 in drinking water, etc.

Name: Nick Ballam

Record: 1988

Facility: (b)(5) The levels are low, and they're making sure nothing gets into drinking water. They are mentioning other states as well now. EPA and DOE are in charge of the contamination issues.

Source: Phone w/Bill Dean

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/28/2011 22:12:52 (ET) Chairman left this am. He got good perspective of what we are dealing with - worth effort

Position: EST Chronology Officer to bring him out.

Name: Rebecca Karas (b)(5)

Record: 1987

(b)(5) And one person said it changes every day. TB flooding is problematic. Don't know technical answer. They believe they will pump into tanker. DOE has offered a concentrator. Not sure what solution is. Afraid will end up with plume in sea - not sure there is a zero release solution. Feed and bleed is airborne vent. Flooding is exacerbating situation in TB. If continue feed and bleed, not helping reduce salt in reactor with accelerated corrosion occurring. No easy solutions. Some will be very difficult to implement and in consequences to workers and environment. TB is not leak-tight. Told us last night U1 TB is within 10 cm of overflowing. Not sure to where. Talked about sandbagging and using wells to pull water away from building - they said they had thought of. Right now they are crisis managing day by day. U2 they said dose rates on surface are 100R/hr. We are not hearing they are making progress on shielding. They are asking for sheets of lead and tungsten. INPO is working on high quality, high pressure hose, but haven't heard answer. They are trying to get PNNL to show up here to deal with SNF removal. Want them to work with their working groups. Not sure who is

(b)(5)

Facility:

working on that process. Promised them some feedback at 8:00 tonight. Will check with DOE here. They believe they have to reduce source term onsite - they think removing the SNF will reduce source term/doses onsite. They are also dealing with public acceptance of the fuel remaining there. Problems with laptops/CITRIX? Problem is they put in micro-LAN in here - just internet connections - sized for 5, but really 3. Free connection from local internet provider. To upsize that would be thousands of dollars a day. Got bad when had twice as many people. With a dozen computers, was a problem. Had embassy IT people working on problem. With fewer people, will monitor and see if need to do anything. Also had no scanner. Today they think the scanner is working. Asked OIS to give access to attachments in webmail. Have someone looking into that. Have email from Michelle on next wave of people. Sending list on email to get idea. They have to make choice: feed and bleed and vent to atmosphere awaiting external cooling and tent for buildings - or flood up, deal with hydrogen, deal with more water in TB, and deal with growing plume in sea. Large dilution factor. Currents go into Tokyo Bay, though. Good reason to flood up, though, would also be to flood out salt. NR provided insights on crack growth rate. Could be eating through bottom penetrations. RST sent email from us to INPO. Had discussion with GEH and INPO on this question - have task to re-examine this in terms of priorities. Very important we get this answer. Right now industry working towards 11am tomorrow deliverable. Cannot overemphasize urgency of that, and message up to now has been flooding is best option. Their thought is to do feed and bleed and throttle flow. We do not believe they are injecting enough to flood up. Were told they were minimizing input rate due to TB issue. On Unit 1, until inert, minimizing injection is right answer. For 2 and 3, they are trying to prevent more water to TB, but run risk of losing vessel in that process. There is also discussion here that they may have already lost vessel. Heard there was some equipment in Narita - maybe masks and dosimeters, not sure.

Source: Chuck

Address/Location:

Attachment:

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Date/Time: 03/28/2011 21:25:22 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Pressure in U1 RPV was continuing to rise. Now have heard U1 temp decreasing, but have not confirmed yet. SFP - concrete pumping truck was to inject water, but truck needs to be repaired. Continuing to pump water from U1 TB into condenser. U2: changed tanks for freshwater injection. freshwater injection to SFP also planned this

(b)(5)

Record:	1984	<p>afternoon via electric pump. TB #2 water: flooded water must be filled into condenser, but condenser is full, so water must be moved to storage tank. Water in CST will be moved to suppression pool tank, and water in condenser will be moved to suppression pool surge tank. Reactor 3: freshwater injection has been switched to temp elec pump from fire engines. spent fuel - concrete pumping tank being used to inject fresh water starting today. Water in TB basement floor for #3, we will try and use same route - put in condenser. Water right now in condenser will go to CST. CST water will go to suppression pool surge tank. DC - getting 125V board checked and cables laid. #4, no fuel in reactor, all in pool. Concrete pumping truck has been used and have switched to freshwater. Today want to light central control room. Trench water: At joint meeting have instructed TEPCO as follows: we have not confirmed water flowing out of shaft, but are asking TEPCO to make certain is not happening. Around #2 TB basement, agency recommended we need to monitor groundwater. Water in trench should also be examined. Trench is filled with water. It is not connected with ocean. Every half day visual monitoring being conducted - no overflow yet. Measures taken in case of overflow: Trench water is 10cm from ground level - U1 trench, so close to opening, door is damaged by tsunami, so using sandbags around opening to prevent overflow of water. For U2 and 3, water level has been stable, so measures not taken yet for those trenches.</p> <p>Correction - believe TEPCO translator misstated - for U2, flowpath is same as U3: CST water will go to suppression pool surge tank, Condenser water will go to CST, and then water in basement will go to condenser.</p> <p>EST Chronology Officer - Rebecca Karas at 21:49:00 on 3/28/2011</p>
Facility:		

Source: NHK/NISA

Address/Location:

Attachment:

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Date/Time:	03/28/2011 20:47:16 (ET)	<p>Announces drain in trench has been closed with concrete shielding and sandbags to prevent water from reaching ocean. Also announces flowrate to U2 decreased, and this resulted in a temp increase of 20 degrees C.</p> <p>The trench that has been sandbagged is the U1 trench.</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1983	
Facility:		

(b)(5)

EST Chronology Officer - Rebecca Karas at 21:44:47 on 3/28/2011

Source: NHK/TEPCO

Address/Location:

Attachment:

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Date/Time: 03/28/2011 21:25:22 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1986

Facility:

Pressure in U1 RPV was continuing to rise. Now have heard U1 temp decreasing, but have not confirmed yet. SFP - concrete pumping truck was to inject water, but truck needs to be repaired. Continuing to pump water from U1 TB into condenser. U2: changed tanks for freshwater injection. freshwater injection to SFP also planned this afternoon via electric pump. TB #2 water: flooded water must be filled into condenser, but condenser is full, so water must be moved to storage tank. Water in CST will be moved to suppression pool tank, and water in condenser will be moved to suppression pool surge tank. Reactor 3: freshwater injection has been switched to temp elec pump from fire engines. spent fuel - concrete pumping tank being used to inject fresh water starting today. Water in TB basement floor for #3, we will try and use same route - put in condenser. Water right now in condenser will go to CST. CST water will go to suppression pool surge tank. DC - getting 125V board checked and cables laid. #4, no fuel in reactor, all in pool. Concrete pumping truck has been used and have switched to freshwater. Today want to light central control room. Trench water: At joint meeting have instructed TEPCO as follows: we have not confirmed water flowing out of shaft, but are asking TEPCO to make certain is not happening. Around #2 TB basement, agency recommended we need to monitor groundwater. Water in trench should also be examined. Trench is filled with water. It is not connected with ocean. Every half day visual monitoring being conducted - no overflow yet. Measures taken in case of overflow: Trench water is 10cm from ground level - U1 trench, so close to opening, door is damaged by tsunami, so using sandbags around opening to prevent overflow of water. For U2 and 3, water level has been stable, so measures not taken yet for those trenches.

Source: NHK/NISA

Address/Location:

Attachment:

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Date/Time: 03/28/2011 20:47:16 (ET)

Announces drain in trench has been closed with concrete shielding and sandbags to

(b)(5)

Position: EST Chronology Officer	prevent water from reaching ocean. Also announces flowrate to U2 decreased, and this resulted in a temp increase of 20 degrees C.
Name: Rebecca Karas	
Record: 1985	
Facility:	
Source: NHK/TEPCO	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/28/2011 20:23:39 (ET)	Castleman: where are we with reentry recs? Went to DOE and OSTP, commented, we incorporated and sent back to (b)(6) around 3pm. We just got email indicating he received it. Can we get copy? Yes.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1982	
Source: TA questions	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/28/2011 20:13:58 (ET)	Orders: U1 and U2 indicates white smoke - is steam? Steam has been emitted from U3 for some time, also from U2 hole in secondary cont, and steam from SFPs in U3 and 4. U3 dw pressure was 97# and cont rating is 45#, so what doing about that? U3 cont is not holding pressure. Should be 0.97 psig. Will correct. Castleman: have more info on AMS flights? No, no further info as of 3pm. Have info on rad health effects to workers or public? Similar to last night. Was mostly beta skin dose to workers who waded through water - couple hundred rem. Released from hospital. Franovich: Is there charter for consortium? Think they do. They had some logistical issues today - call didnt happen. Tomorrow have call in am. On Severe Acc Strategy, got document, looked at and have question on notion that we believe there is a RR pump seal failure limiting height of water we can put over core - other than level instrumentation being basis for assumption - have any other indication to believe RR pump seals have failed? Basic math for injection rates with steamoff rate would indicate with intact vessel, would be filling it - GEHs assessment was that the (b)(5) Know if RR pumps could be isolated with power restored? Havent heard
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1981	
Facility:	

(b)(5)

they are operating equipment post-flooding. For Units 1-4, original plant equipment not being operated, we believe, but not sure.

Source: TA questions

Address/Location:

Attachment:

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Date/Time: 03/28/2011 19:58:23 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1980

Units 1-3 injecting freshwater to core through feed and bleed operation. SFPs are filled with modest heatup in a couple, but nothing warranting any dramatic action, but need to be watched - they are looking at adding seawater in a couple places. Unit 1 - TEPCO plans to inert by March 30. 1 train of pumping system at J Village. How it will be used is being worked out. Water in U1 TB pumped to condenser bay. Significant contamination levels in U2 and U3 TBs. Water not rising in TBs. Developing draft discussion paper on potential leak paths to TB - will be discussing with INPO, GE, NR. Trying to validate news reports of contamination outside TB, as well as Pu in soil. Trench may be electrical cabling trench. Freshwater barges - heard 1 was nearly there, also heard were 40 mi away conducting training for barges. NR is looking to supply 30k feet of flex piping to get water to reactors from trucks. 10:00 call with consortium to discuss progress they are making. Re-entry guidance sent to DOE and OSTP - they provided comments we incorporated and sent back to OSTP. Govt of Japan formally requested specialized pumping equip from DOE that separates contamination from water and rest is evaporated. Also agreed to provide hardened cameras and robotics. Chairmans visit - discussions at high level, went well. NRC and DOE met with NISA to discuss ag products, rad monitoring, etc. Japan also asked PNNL to help with moving SNF. They are continuing with their requests for shielding and robotics. Borchardt testifying tomorrow - Chairman and Weber testifying Wed. Heard IAEA setting up meeting to discuss Japan. Dorman will be returning, and Elmo will be replacing. NEI continuing to collect US plant monitoring data. NEI hopeful they will have protected website operating tomorrow. RST provided coordinated set of recommendations on severe accident strategies, also considering access constraints due to high rad. Press release from PA dealing with increased I levels. Indicates drinking glass of rainwater could potentially exceed some limits - will probably need to clarify. PMT: Press release from Gov of PA.

Facility:

(b)(5)

- Reads press release -

PMT working to compute dose to thyroid of drinking glass of rainwater at 100 pCi/l level and comparing to acceptable public dose to thyroid. Tests in PA and elsewhere of

(b)(5)

	drinking water showed no detectable I. Sent Vince Holahan to Hawaii to be embedded NRC asset to PACOM. Should arrive tomorrow am. Will set up communication channels so he can provide insight and context of dose info we are getting to inform their strategy and planning for evac if necessary.
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Source:	TA brief
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/28/2011 18:23:07 (ET)	3:00 call tomorrow - PACOM will want to know status of reactors, etc. Both EPA and DOE want the monitoring from the licensees. Think there may have been earlier request to send to OSTP also - need to check.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1979	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/28/2011 17:48:46 (ET)	Got 4 questions from Bingaman for hearing tomorrow. Will send to Roys email. Only need help with 2. Need a few talking points. Need something by 7am.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1978	
Facility:		
Source:	Borchardt	

Address/Location:	
Attachment:	
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Date/Time:	03/28/2011 17:09:34 (ET)	Getting PACOM advance notice is difficult with the limited information we have.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1977	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

(b)(5)

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Date/Time:	03/28/2011 17:02:05 (ET)	We really cant estimate what is going into ocean right now. Too many variables. Put task to check NRC teams dosimetry when they return.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1976	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	

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Date/Time:	03/28/2011 16:48:56 (ET)	3:30pm EPA conf call on Temporary reentry. We would like to be involved in call. Our PAGs include out to a certain distance, but then say expand beyond that as conditions warrant. In this case, conditions warranted it.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1975	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/28/2011 16:43:37 (ET)	They have water in TB, condenser bay, and outside trench. Is part of what Shaw doing to help with outside filter system? Unknown.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1974	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	

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Date/Time:	03/28/2011 16:33:32 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1973	
Facility:		
Source:	PMT	

(b)(5)

Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/28/2011 16:08:56 (ET)	1000 mSv/hr water detected in water in trench outside turbine building. Spraying smaller amount of water to try and avoid further leakage. Balancing need to keep temperatures down with need to reduce leakage.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1972	
Facility:		
Source:	NHK TV - TEPCO	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/28/2011 15:30:26 (ET)	Spiros got request from Markeys office. Asking what failed recirc pump seals means. Would like revised answer that is easier to understand. Have drafted revision - Weber approved. Good to go to Congressman.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1971	
Facility:		
Source:	ET	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/28/2011 15:05:39 (ET)	Getting queries whether we are being asked for extra assistance after Jaczko visit. Weber: Told we will probably get more requests, but they are likely not to be for NRC - removing SNF, shielding, etc.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1970	
Facility:		
Source:	Brenner	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/28/2011 14:13:13 (ET)	The LT contact Bill Webster and he agrees that we need to continue with the consortium call. Its going to be re-establish for 10:00 am.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	

(b)(5)

265707

Record:	1968
Facility:	
Source:	LT

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/28/2011 14:13:13 (ET)	The LT contact Bill Webster and He agrees that we need to continue with the consortium call. Its going to be re-establish for 10:00 am.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1969	
Facility:		
Source:	LT	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/28/2011 10:43:58 (ET)	NR information was that 30,000 feet of flexible piping is going to be used to get fresh water to the reactors from trucks. The barges are 40 miles away from site and they are testing their pumps. The barges are not together as Chuck mention this morning.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1964	
Facility:		
Source:	RST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/28/2011 10:10:58 (ET)	EST and LT connected to the bridge for a call with the Consortium but nobody was connected on the bridge. LT is going to contact Bill Webster to see what is the status of the Consortium.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1961	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	

(b)(5)

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Date/Time:	03/28/2011 10:43:58 (ET)	NR information was that 30,000 feet of flexible piping is going to be used to get fresh water to the reactors from trucks. The barges are 40 miles away from site and they are testing their pumps. The barges are not together as Chuck mention this morning.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1967	
Facility:		
Source:	RST	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/28/2011 10:43:58 (ET)	NR information was that 30,000 feet of flexible piping is going to be used to get fresh water to the reactors from trucks. The barges are 40 miles away from site and they are testing their pumps. They barges are not together as Chuck mention this morning.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1965	
Facility:		
Source:	RST	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/28/2011 10:10:58 (ET)	EST and LT connected to the bridge for a call with the Consortium but no body was connected on the bridge. LT is going to contact Bill Webster to see what is the status of the Consortium.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1966	
Facility:		
Source:	EST	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/28/2011 09:45:59 (ET)	The Chairman got in contact with the top leaders. The chairman thinks the recommendations from RST are still good. The turbine building water level is not increasing. The concerned is the decrease in flow on the vessels.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	

(b)(5)

267707

Record: 1959	One problem is that no body knows what the salt is doing.
Facility:	We dont know the flow path of the water getting in the turbine building. The Bechtel pumping system in J Village. They are using the medium pressure pump for the barges and havent start using the high pressure pumps. They are going to use it in a different configuration. One of the sources of fresh water is the dam and other is the barge. The second barge is used as a shuttle to bring water to the other barge. Chairman is leaving first thing in the morning.
Source: Team Japan Call (Chuck Casto)	

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 03/28/2011 10:10:58 (ET)	EST and LT connected to the bridge for a call with the Consortium but no body was connected on the bridge. LT is going to contact Bill Webster to see what is the status of the Consortium.
Position: EST Chronology Officer	
Name: Hector Rodriguez-Luccioni	
Record: 1963	
Facility:	
Source: EST	

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 03/28/2011 09:45:59 (ET)	The Chairman got in contact with the top leaders. The chairman thinks the recommendations from RST are still good. The turbine building water level is not increasing. The concerned is the decrease in flow on the vessels. One problem is that no body knows what the salt is doing. We dont know the flow path of the water getting in the turbine building. The Bechtel pumping system in J Village. They are using the medium pressure pump for the barges and havent start using the high pressure pumps. They are going to use it in a different configuration. One of the sources of fresh water is the dam and other is the barge. Chairman is leaving first thing in the morning.
Position: EST Chronology Officer	
Name: Hector Rodriguez-Luccioni	
Record: 1962	
Facility:	

(b)(5)

Source:	Team Japan Call (Chuck Casto)		
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Address/Location:			
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Attachment:			
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This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/28/2011 09:45:59 (ET)	<p>The Chairman got in contact with the top leaders. The chairman thinks the recommendations from RST are still good.</p> <p>The turbine building water level is not increasing. The concerned is the decrease in flow on the vessels.</p> <p>One problem is that no body knows what the salt is doing.</p> <p>We dont know what is the flow path of the water getting in the turbine building. The Bechtel pumping system in J Village. They are using the medium pressure pump for the barges and havent start using the high pressure pumps. They are going to use it in a different configuration. One of the sources of fresh water is the dam and other is the barge.</p> <p>Chairman is leaving first thing in the morning.</p>
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1960	
Facility:		

Source:	Team Japan Call (Chuck Casto)		
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Address/Location:			
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Attachment:			
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Date/Time:	03/28/2011 08:46:54 (ET)	<p>The state of Illinois senate is getting a hearing on Thursday and the regional administrator of Region III, Mark Satorius, is going to be part of it.</p>
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1958	
Facility:		
Source:		

Address/Location:			
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Attachment:			
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This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/28/2011 08:10:30 (ET)	Unit 1 have a reduction in flow that is causing an increase in temperature. RST doesnt
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(b)(5)

Position: EST Chronology Officer	believe there is a leakage from containment. There is a call at 9:00 to talk about some possible considerations if unit 2 and 3 have a bridge. Potential of salt causing corrosion to the vessel.
Name: Hector Rodriguez-Luccioni	
Record: 1955	
Facility:	
Source: RST	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/28/2011 08:10:30 (ET)	Unit 1 have a reduction in flow, that is causing an increase in temperature. RST doesnt believe there is a leakage from containment. There is a call at 9:00 to talk about some possible considerations if unit 2 and 3 have a bridge. Potential of salt causing corrosion to the vessel.
Position: EST Chronology Officer	
Name: Hector Rodriguez-Luccioni	
Record: 1957	
Facility:	
Source: RST	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/28/2011 08:10:30 (ET)	Unit 1 have a reduction in flow, that is causing the an increase in temperature. RST doesnt believe there is a leakage from containment. There is a call at 9:00 to talk about some possible considerations if unit 2 and 3 have a bridge. Potential of salt causing corrosion to the vessel.
Position: EST Chronology Officer	
Name: Hector Rodriguez-Luccioni	
Record: 1956	
Facility:	
Source: RST	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/28/2011 07:44:49 (ET)	US utility monitoring measurements were given to NEI and they are creating a web based server that is going to be available for other agencies.
Position: EST Chronology Officer	
Name: Hector Rodriguez-Luccioni	
Record: 1954	

(b)(5)

Facility:		
Source: PMT		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/28/2011 07:30:09 (ET)	Position: EST Chronology Officer	Fresh water injection continue to Unit 1,2 and 3. There is water accumulation in turbine building 1, 2 and 3. Water in Unit 1 was pump to a condenser. Containment U1 may be intact. We are working on implementing mitigating actions with the Japanese counterparts. PMT is working on the comments on the re-entry data for the evacuation actions, also working on the comments from EPA on the criteria briefing paper. Chairman is meeting with the cabinet in japan. Unit 1 is our number 1 priority and we are suggesting additional venting. There is a suspicion that the injection is contributing to the flooding in the turbine buildings.
Name: Hector Rodriguez-Luccioni	Record: 1953	
Facility:		
Source: Morning Briefing Call		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/28/2011 06:16:15 (ET)	Position: EST Chronology Officer	Chairman has been interacting with many stakeholders in Japan. NRC site team looking at water leakage issue in turbine bldgs and outside trench. Radioactive water in basement of all 4 turbine bldgs, but most radioactive in Unit 2 turbine bldg. Chuck will be attending meeting with Chairman and Japan stakeholders in a few minutes. Site team provided Chairman with talking points for meeting tonight. TEPCO wants to feed and bleed until it can construct sarcophagus. Chuck believes feed and bleed not good long term solution. Chuck has discussed with Chairman that there are no zero risk approaches in this situation. Chuck considers our White Paper to provide the preferred solution for cooling. One possible method to minimize water release from cooling would be to recirculate water from turbine bldg back to containment. Isotopic content indicates that released water is coming from reactor.
Name: Thomas Scarbrough	Record: 1952	
Facility:		
Source: Chuck Casto		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/28/2011 06:07:51 (ET)	Position: EST Chronology Officer	NHK TV reporting radioactive water in buried trench with piping and cables outside of Unit 2 turbine bldg. Radiation level indicated as 1000 mSv/hr (100 rem/hr). Specific

(b)(5)

271/707

Name: Thomas Scarbrough	radionuclides not reported. Unit 2 condenser reported as nearly full.
Record: 1951	
Facility:	
Source: NHK TV	

Address/Location:
Attachment:

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Date/Time: 03/28/2011 05:00:26 (ET)	<p>RST: Results of 3 pm telecon with NRC site team include the following: Fresh water being used for cooling reactor cores in Units 1, 2 and 3. TEPCO reduced Unit 1 flow to minimize steaming. TEPCO monitoring temperature and pressure to determine necessary flow with temporary motor driven pumps. TEPCO planning to inert Unit 1 with equipment in place by March 30. RST evaluating potential water pathways to turbine bldgs. RST will review action recommendations considering radioactive water release into turbine bldgs. Site team reports that white paper on severe accident recommendations was well received by TEPCO. INPO is considering other methods of SFP level determination. TEPCO says no issues at Daiini.</p> <p>PMT: Guidelines for temporary reentry to retrieve personal items completed. NISA or TEPCO will be conducting mobile rad monitoring near plant. PMT working on Japanese questions on 50 mile evacuation recommendation. PMT evaluating NR observations on Japanese activities.</p>
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1950	
Facility:	
Source: ET Briefing	

(b)(5)

Address/Location:
Attachment:

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Date/Time: 03/28/2011 02:10:39 (ET)	<p>PMT prepared revised guidance for short-term reentry into evacuated areas to collect personal items. PMT revised the guidance based on comments from EPA. ET reviewed the revised guidance and directed that the revised guidance be sent to the national security staff..</p>
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1949	
Source: PMT	

Address/Location:
Attachment:

(b)(5)

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Date/Time:	03/28/2011 00:00:26 (ET)	RST: Monitoring Unit 1 pressures. Pressure trending down. TEPCO evaluating inerting capability with high rad levels. TEPCO is supplying water slowly. SAMG did not anticipate condition at Unit 1. SAMG assumed loss of RPV integrity prior to concern about primary containment integrity. All 3 units allowing water into turbine bldg. RST will discuss with GEH best approach for this situation. Unit 1 primary containment holding pressure but Units 2 and 3 containment near atmospheric pressure. Not clear if units have hardened vents based on TEPCO information. Telecon with NRC site team planned for 3 am. PMT: Working on Japanese Embassy question on 50 mile evacuation issue. LT: Waiting for Vince to contact us.
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	
Record:	1948	
Facility:		(b)(5),(b)(6)
		NR: Reactor core not homogeneous so could have local fuel melt that could raise bottom head integrity questions. ET asks that RST review bottom head design with GEH or other industry contacts, and NRC staff contacts with RPV vessel materials database. ET discusses salt removal and possibility of returning salt to solution.
Source:	ET Briefing	

Address/Location:	
Attachment:	

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Date/Time:	03/27/2011 21:53:35 (ET)	Chairman being picked up at airport now. Paper were using is discussion tool with counterparts - ambassador was looking for matrix for gaps between TEPCOs strategies and our strategies. Monninger working on key milestones towards stability to help ambassador with decisionmaking related to when dependents can come back.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1947	
Facility:		
Source:	Dorman	

Address/Location:	
Attachment:	

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Date/Time:	03/27/2011 21:38:42 (ET)	3 years is because we have at least one Cert. of Compl. we have certified with a minimum time of 3 years.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	

(b)(5)

Record:	1946
Facility:	
Source:	Bernie White

Address/Location:	
Attachment:	

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Date/Time:	03/27/2011 21:23:28 (ET)	(b)(5)
Position:	EST Chronology Officer	Rule of thumb seems to
Name:	Rebecca Karas	be 5 years. Where does 3 years come from? Blount: Original document said 1 year, and
Record:	1945	Jennifer was sure that it was 3 years, so that was put in paper. Hiland was RST director.
Facility:		
Source:	Blount	

Address/Location:	
Attachment:	

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Date/Time:	03/27/2011 20:27:31 (ET)	Pool indication at skimmer surge tank has weir between that and pool, so if numbers
Position:	EST Chronology Officer	trend up then it is OK, but otherwise is meaningless. Chu is concerned that pools need
Name:	Rebecca Karas	to be able to be topped off remotely and read remotely.
Record:	1944	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/27/2011 20:12:05 (ET)	Castleman: Can get copy of hypothetical source terms given to NARAC? Yes. Package
Position:	EST Chronology Officer	on short-term re-entry information made up. Is out for comment with site team. Is intent
Name:	Rebecca Karas	to use Bechtel apparatus to move from barges to complex? Thought originally was to
Record:	1943	go to SFPs. Original design was saltwater. Submersible pump will actually be used to
Facility:		pump from barge. Franovich: Asked for copy of prelim recommendations. Can we get
		copy? Josh has and will distribute. Potential leakage through RR pumps - if power
		becomes available to isovalves for pumps - can isolate and flood RPV instead of
		containment? May not affect decision on flooding containment - where they are in
		SAMGs, they would have you flood up either way. If U2 and U3 containment, floodup
		strategy would appear to exacerbate leakage. Are working on at what point protection

(b)(5)

of RPV has different priority than protection of containment - will be talking to GEH and INPO. Castleman: Have info on rad health effects? Reports of contamination and health effects. - Brian conveys IAEA detailed results. Castleman: Contamination of which sumps? TB basement.

Source:	TA Questions
Address/Location:	
Attachment:	

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Date/Time:	03/27/2011 19:56:03 (ET)	Freshwater injection Units 1-3. Believe that is helping flood containments. Think RR pump seals leaking into drywell. Portable EDGs onsite. Working on temp cabling to pumps. Have water in lower level of TB in 2 and 3. Water in U1 was pumped into tank in condensate building. Significant contamination in 2 and 3 sumps. Came from cores. 1 train of pumping system being deployed to site. May be additional training Japanese still need. 1 freshwater barge was delivered. On way to site still. Plan was to bring in, hook up to plant, then bring in additional barges to fill up first barge as needed. Japanese govt has requested help with shielding, robotics, removal of SNF. Hoping industry coordination team will work to provide that. TEPCO also contracted with Shaw to design and bring in debris and decay heat removal system. Had request to provide recommended mitigation strategies to Japan team. Information was provided to site team. But, in response to request from ambassador, wanted management levels to sign off. Got concurrences. Casto and Monninger went to J Village. They did not see need for NRC staff to relocate there. They will remain at embassy in Tokyo. WH requested white paper on safety of US spent fuel storage, wet and dry. Paper prepared by NRR and NMSS (b)(5) Copies will be sent to Cmsn offices (b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1942	
Facility:		Has been resolved. Chairman is travelling to Japan - should arrive at 9:30 Japan time. Casto and team put together agenda. Will meet with Ambassador and interagency team, visit NRC staff room and then go to meet with Cabinet office crisis management - special advisor to PM of Japan. Then leave to meet with MEDI minister, then go to NISA offices and meet with NISA administrator. Then meet with TEPCO chairman. Will return to hotel and depart for Cabinet Office crisis management meeting. Then returns Tuesday. Japan has confirmed they have located the 49 large sources, and are working on 620 smaller sources.

Source:	TA call
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(b)(5)

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/27/2011 19:10:43 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1941	
Facility:	
Source: ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/27/2011 19:02:45 (ET)	Interagency call with Chairman, Ambassador, Chuck, etc, later tonight.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1940	
Facility:	
Source: ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/27/2011 18:36:19 (ET)	Admiral wants daily briefing on rad levels, changes to PAGs, etc. Trying to find out if he wants to be part of 9:00 call with ground team in Japan. Have to decide if 9:00 call should still be internal only, then possibly a separate call with Admiral.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1939	
Facility:	
Source: ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/27/2011 18:05:05 (ET)	DOEs idea to reduce oxygen is to put an oxygen getter into the water rather than inerting.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1938	

(b)(5)

Facility:	
Source:	ET

Address/Location:	
Attachment:	
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Date/Time:	03/27/2011 16:45:40 (ET)	Various types of portable shielding. INPO has whole catalog of different types of shielding - depends on type of work they are doing. Can talk to Japanese team at 9:00 call and discuss with them.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1937	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	
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Date/Time:	03/27/2011 16:38:35 (ET)	Fuel pool level measurement not as important anymore. Have skimmer level indications for 1, 2 and 4. Show low, but above fuel. INPO took lead on getting Anti-Cs to Japan.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1936	
Facility:		
Source:	RST	

Address/Location:	
Attachment:	
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Date/Time:	03/27/2011 16:08:14 (ET)	Sheron: Meeting in Chus office Thursday. Have group of several academics trying to look at situation. There are daily phone calls. Larzelara sent email to group. Says it was decided that DOE would suggest 2 method for measuring level in SFP. Question whether DOE is going to send recommendations to Japan directly. Process is that RST here coordinates any recommendations, including among rest of consortium. Then would go to team in Japan.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1935	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
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Date/Time:		When doing surveys, they were finding pieces of fuel that are postulated to have ejected
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(b)(5)

Date/Time:	03/27/2011 15:18:51 (ET)	during one of the explosions. Very high contact doses. Some discussion of vent stacks communicating between units.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1934	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/27/2011 12:24:06 (ET)	Bill Borchardt think the White Paper draft is good as it is.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1929	
Facility:		
Source:	Call from Borchardt	

Address/Location:	
Attachment:	

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Date/Time:	03/27/2011 12:56:44 (ET)	There is no substitute changes to the Reactor Strategies Paper. We are going to send the Paper to Japan with the additional comments and consideration of GEH.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1932	
Facility:		
Source:	RST	

Address/Location:	
Attachment:	

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Date/Time:	03/27/2011 12:24:06 (ET)	Bill Borchardt think the White Paper draft is goos as it is.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1933	

(b)(5)

Facility:	
Source:	Call from Borchartd

Address/Location:	
Attachment:	

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Date/Time:	03/27/2011 11:56:11 (ET)	The EST communicate Bill that he needs to review the White Paper. EST is waiting on the staff to review the proposal. Josh did a line in line out recommendation, and CC the EDO in his comments email. Bill Borchartd will look at it and send any comments.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1928	
Facility:		
Source:	Call with Bill Borchartd	

Address/Location:	
Attachment:	

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Date/Time:	03/27/2011 12:24:06 (ET)	Bill Borshardt think the White Paper draft is goos as it is.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1931	
Facility:		
Source:	Call from Borshardt	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/27/2011 11:56:11 (ET)	The EST communicate Bill that he needs to review the White Paper. EST is waiting on the staff to review the proposal. Josh did a line in line out recommendation, and CC the EDO in his comments email. Bill Borshardt will look at it and send any comments.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1930	
Facility:		
Source:	Call with Bill Borshardt	

Address/Location:	
Attachment:	

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(b)(5)

Date/Time:	03/27/2011 11:37:32 (ET)	Doing some calculations we need 1.5 million gallons per containment to fill it up.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1927	
Facility:		
Source:	RST	

Address/Location:	
Attachment:	

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Date/Time:	03/27/2011 10:15:06 (ET)	The SFP draft paper is done. Is ready for concurrence. EST Chronology Officer - Hector Rodriguez-Luccioni at 10:16:28 on 3/27/2011
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1925	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	

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Date/Time:	03/27/2011 10:15:06 (ET)	The SFP draft paper is done.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1926	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	

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Date/Time:	03/27/2011 09:51:11 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1924	

(b)(5)

Facility:	
Source:	RST

Address/Location:	
Attachment:	

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Date/Time:	03/27/2011 09:47:11 (ET)	Unit 2 control room has 100 R/h.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1923	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	

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Date/Time:	03/27/2011 09:27:12 (ET)	The industry is going to get together and they have until 1200 to give us any input on the strategies paper.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1922	
Facility:		
Source:	RST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/27/2011 08:53:37 (ET)	The units have not change. U2 SFP change from sea water to fresh water. They are trying to change for all the units from fire trucks to normal pumping system in the next few days. The turbine building in all Units 1, 2, 3 and 4 high contamination level. The Japanese will need a lot of disposal of water. The Japanese are studying to pump the water out of the turbine buildings. The water radioactive level in Unit 2 turbine building is 100,00 time the RCS limits. Unit 2 has fuel damage and Unit 1 and 3 has fuel damage but in a lower amount than Unit 2. Turbine Building in Unit 1 is highly contaminated but there is no isotopic study on that. Shielding team gave 12 ideas on how to shield the buildings. They will decide tomorrow
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1921	

(b)(5)

Facility:	<p>what strategies to do. They talk about spent fuel handling.</p> <p>The reactor in Daiini are in good status, they only have a clean up issue, there is no reactor safety issue.</p> <p>There is no need to have NRC team on J-Village. Overall contamination control is not ideal for J-village. SDF is not doing the work on the site.</p> <p>The models that were given to the ambassador are going back to DOE to run them again with more realistic assumptions.</p> <p>The Reactor Strategy Paper will be send to Chuck during today day shift.</p> <p>Chuck is going to ask in the morning the capacity for re flood.</p> <p>Coca Cola is going to take care of the water needs.</p>
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Source: Call from Chuck	
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Address/Location:	
Attachment:	

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Date/Time: 03/27/2011 08:30:44 (ET)	Fresh water is injected in U1, U2 and U3. The water in turbine building in U1, 2 and 3.
Position: EST Chronology Officer	Power remain the same, the control rooms are running but the ventilation is not restore.
Name: Hector Rodriguez-Luccioni	The train is getting to site. The Japanese asked from a shielding robotics to encase the reactor building, is not a temporary shielding.
Record: 1919	RST is working on the reviews on the strategies and the Ambassador wants a high level manager sign off.
Facility:	<p>Chuck Casto travel to J-village and is a recovery site and is there is not need on having someone there.</p> <p>Mike Scott confirmed that Daiini units are in cold shutdown.</p> <p style="text-align: center;">(b)(5)</p> <p style="text-align: center;">(b)(5)</p> <p>The Chairman is flying to Japan. He delegate emergency power to EDO.</p>

Source: Morning Briefing Call	
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Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/27/2011 08:30:44 (ET)	Fresh water is injected in U1, U2 and U3. The water in turbine building in U1, 2 and 3.
Position: EST Chronology Officer	Power remain the same, the control rooms are running but the ventilation is not restore.
Name: Hector Rodriguez-	The train is getting to site. The Japanese asked from a shielding robotics to encase the
	(b)(5)

Name: Luccioni	reactor building, is not a temporary shielding.
Record: 1920	RST is working on the reviews on the strategies and the Ambassador wants a high level manager sign off.
Facility:	<p>Chuck Casto travel to J-village and is a recovery site and is there is not need on having someone there.</p> <p>Mike Scott confirmed that Daiini units are in cold shutdown.</p> <p>(b)(5)</p> <p>(b)(5)</p> <p>The Chairman is flying to Japan. He delegate energy power to EDO.</p>
Source: Morning Briefing Call	

Address/Location:	
Attachment:	
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Date/Time: 03/27/2011 08:06:47 (ET)	GEH wants to go over the recommendations and they are getting together at 0900 and
Position: EST Chronology Officer	hear what are the issues. (b)(5)
Name: Hector Rodriguez-Luccioni	
Record: 1918	
Facility:	
Source: RST	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/27/2011 07:27:27 (ET)	The recommendation paper we are making was finished last night. We are getting the
Position: EST Chronology Officer	managers of the entities approval. We already have NR, INPO and we are working to get
Name: Hector Rodriguez-Luccioni	DOE.
Record: 1915	Unit 2 and 3 torus are flooded.
Facility:	RST is going to send to Chuck a summary of the RST assessments, RST is working on a macro level summary for each unit.
	EST got an email from Mike saying they understand that all units in Daiini site are in shutdown.
Source: RST	

Address/Location:	
(b)(5)	

Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/27/2011 07:42:30 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1916	
Facility:		
Source:	LT	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/27/2011 07:27:27 (ET)	<p>The recommendation we are making paper was finished last night. We are getting the managers of the entities approval. We already have NR, INPO and we are working to get DOE.</p> <p>Unit 2 and 3 torus are flooded.</p> <p>RST is going to send to Chuck a summary of the RST assessments, RST is working on a macro level summary for each unit.</p> <p>EST got an email from Mike saying they understand that all units in Daiini site are in shutdown.</p>
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1917	
Facility:		
Source:	RST	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/27/2011 07:10:32 (ET)	<p>The conclusion on the RASCAI model is not a human error is doing what we are asking for. The assumption is that you have the problem on U3 but there is no release until 24 hours, so there is a delay of plate out. The conclusion is that the model is correct.</p> <p>The actions are to let know our team in Japan before they go to bed.</p> <p>EST Chronology Officer - Hector Rodriguez-Luccioni at 07:27:15 on 3/27/2011</p>
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1913	
Facility:		
Source:	PMT	
Address/Location:		
Attachment:		
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(b)(5)

Date/Time:	03/27/2011 07:10:32 (ET)	The conclusion on the RASCAI model is not a human error is doing what we are asking for. The assumption is that you have the problem on U3 but there is no release until 24 hours, so there is a delay of plate out. The conclusion is that the model is correct. The actions are to let know our team in Japan before they go to bed.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1914	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/27/2011 06:28:06 (ET)	ET will send e-mail to NRC site team to request any information on possible issues at the Fukushima Daiini units (separate from Fukushima Daiichi units).
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	
Record:	1912	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/27/2011 06:03:10 (ET)	Mike Scott in Japan asked RST if all stakeholders had concurred in the Severe Accident White Paper. Same issue as yesterday morning. In response, ET reported that Chairman had called Ambassador yesterday to discuss issue.
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	
Record:	1911	Mike Scott joins discussion.

Facility:		ET indicates that Chairman discussed this issue with Ambassador yesterday. Mike Scott indicates that Ambassador wants senior management of each stakeholder to concur in the White Paper recommendations. Written concurrence by Agency heads not considered necessary. ET indicates that Mike Scott should be sure that Japan recognizes the White Paper provides recommendations based on our understanding of unit conditions and that we are not assuming liability because we do not know exact unit conditions. Mike Scott said that he had not heard of any suggestion by Japan of liability shift. Japan appreciates the help and suggestions. Mike Scott said Japan is working on a way to inject nitrogen in light of high radiation levels. Mike Scott asked when ET can provide result of checking with stakeholders for their agreement with White Paper. ET will work on obtaining agreements. NRC Site Team will discuss with
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(b)(5)

Ambassador and indicate NRC is working on obtaining concurrences.

Source: RST

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/27/2011 06:01:04 (ET)

PMT talked to Dan Dorman in Japan to let them know we agree with DOE compilation of NARAC dose projection slides.

Position: EST Chronology Officer

Name: Thomas Scarbrough

Record: 1910

Facility:

Source: PMT

Address/Location:

Attachment:

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Date/Time: 03/27/2011 05:42:12 (ET)

PMT reviewed DOE compilation of dose projections using NARACs runs of three possible scenarios. PMT agrees with DOE conclusions. ET asked PMT to contact NRC site team to discuss evaluation.

Position: EST Chronology Officer

Name: Thomas Scarbrough

Record: 1909

Facility:

Source: PMT

Address/Location:

Attachment:

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Date/Time: 03/27/2011 04:21:06 (ET)

Chuck requested status of table providing conditions of each unit, our recommended strategies, Japan actions, and activities to close the gap. ET said table being finalized by RST. Chuck will indicate to Ambassador that document is still being prepared. Chucks visit to J-Village determined that it is not worthwhile placing anyone there. Essentially clothes changing station. Chuck obtained insights from discussions with Japanese personnel at J-Village. Chuck saw freshwater barge being towed to site. Admiral Roden joined trip to J-Village and, based on that visit, Navy might decide not to place someone at J-Village. NRC site team working on table of success milestones to provide to Ambassador. RST indicates that they have talked to Rob Johnson on Japan actions such as venting. Rob said TEPCO did not have current plans for venting. ET indicates TEPCO will need

Position: EST Chronology Officer

Name: Thomas Scarbrough

Record: 1908

Facility:

(b)(5)

to vent before inerting in order to make space for nitrogen. Chuck says visual briefings with a paper presentation are more effective than verbal briefings. Chuck needs milestone matrix for measures of success. TEPCO has contract with Shaw to build external cooling system. ET indicates that Severe Accident Table that RST is preparing could be used to help develop the Milestone Matrix. ET said RST can indicate to Rob Johnson that they can provide Severe Accident White Paper to TEPCO.

Source: Chuck Casto

Address/Location:

Attachment:

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Date/Time: 03/27/2011 03:37:54 (ET)

Japan has asked to work with NRC site team on comparison of dose projections for severe accident guidelines. NRC site team will e-mail information to ET for discussion.

Position: EST Chronology Officer

Name: Thomas Scarbrough

Record: 1907

Facility:

Source: NRC Site Team

Address/Location:

Attachment:

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Date/Time: 03/27/2011 02:36:40 (ET)

PMT does not consider RASCAL issue to be an error. RASCAL assumed Unit 3 fuel melt and 23 hours later H2 explosion.

Position: EST Chronology Officer

Name: Thomas Scarbrough

Record: 1906

One day delay allowed plate-out.

Time delay reduced Unit 3 source term from 3.2E7 Ci to 2.7E7 Ci. PMT does not believe that there was an operator error in running RASCAL because assumptions appear reasonable for this plant situation.

Facility:

(b)(5)

Source: PMT

Address/Location:

(b)(5)

Attachment:

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Date/Time:	03/27/2011 01:54:25 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	(b)(5)
Record:	1904	
Facility:		
Source:	LT	

Address/Location:

Attachment:

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Date/Time:	03/27/2011 01:54:25 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	(b)(5)
Record:	1905	
Facility:		
Source:	LT	

Address/Location:

Attachment:

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Date/Time:	03/27/2011 00:00:11 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	
Record:	1903	

(b)(5)

Midnight Shift priorities: (1) SFP/Dry storage paper and (2) RASCAL calculations.

(b)(5)

PMT transmitted reentry paper to Jack Foster two nights ago who gave it to Ambassador staff. PMT will check to see if paper was sent to national security staff.

[Redacted] (b)(5)

RST working on SFP/Dry Storage paper for Steve Jones. RST has latest severe accident white paper. RST will check with Chuck regarding completing table with TEPCO actions.

PMT working on error in source term sent to NARAC. NARAC developed dose projection and [Redacted] (b)(5) Error causes low output. PMT evaluating impact of error and will propose options. PMT had previously recommended that source term work be moved to line organization. ET had initiated effort to transfer source term work to line organization. PMT heard that Ambassador wanted to use this information in a few hours. PMT notes that there is actual data from Japan. PMT considers NARAC runs to address what had happened when the releases began. Actual data might be more useful. Source term was developed based on our understanding of the unit damage. PMT notes core already melted so why not use actual data. Last Monday, source term was intended to be predictive. Now have better understanding of source term, but still predictive to develop protective actions if things go wrong. PMT notes that best way to develop protective actions from rad data measurements or plume information. ET discusses helpful forward-looking source term for protective action development. Currently using OST meeting results for source term assumptions. Need to re-run analysis with those assumptions without the error. PMT can check will NARAC about dose rates beyond 50 miles (such as Tokyo, Guam, and Hawaii).

Facility:

Dave Hermann: NR will work with NRC staff on containment water capacity. RST will address available water space in containment.

NRC Team in Japan joins bridge:

ET asks about planned use of NARAC run by Ambassador. Dan Dorman in Japan knows Ambassador has upcoming meeting. ET informs Dan of dose projection error. ET does not believe that error impact would warrant immediate action based on current results. Error caused Unit 3 source term to be very low. Units 1 and 2 source terms not in error. Time delay error caused some Unit 3 release to be missed in the calculation. PMT asks if weather case should be reconsidered. ET indicates error should be corrected first and then subsequently look at other assumptions. Dan will tell

[Redacted] (b)(5)

Ambassador that there is an error, and NRC working to resolve but will not be available today. Dan asked for source term recalculation from RASCAL when available. Full NARAC run might not be available until Monday.

ET asked about shielding interest by Japan. Dan says shielding working group set up by Japan. Japan looking to construct confinement structure around the units. Rather than entombment, Japan looking at temporary lighter weight structure to encapsulate the units. ET understands this will be long term project. Japan assigned shielding as equal priority to cooling.

Chuck and John went to J-Village but not back yet.

PMT will try to contact NARAC for run tonight. PMT wants to determine impact on source term to understand extent of error on dose distances.

Source: ET Briefing

Address/Location:

Attachment:

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Date/Time:	03/26/2011 22:13:40 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1902	
Facility:		
Source:	PMT	

Address/Location:

Attachment:

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Date/Time:	03/26/2011 22:08:26 (ET)	Talked to INPO about making changes to document. They said yes. But got the document back with no changes. So were getting close to putting changes in now. But Mike said he was OK with doing the meeting with the Japanese without the document done. Got call from USFJ and he was asking for best case and worst case in the containment for water needs. But we dont even know if 2 containments are intact. Told him that 75gpm is going into the units now, combined. Will recommend keep those flowrates until get nitrogen onsite. Dont have information on total amount - have rate. He will send email and we can work with team onsite to bound the numbers. Marty - what
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1901	
Facility:		

(b)(5)

they are looking for on shielding? We dont know.

Source: RST

Address/Location:

Attachment:

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Date/Time: 03/26/2011 22:05:29 (ET) Working on getting both AC and DC power hooked up. Pumped water from U1 TB floor into condenser. Trying to confirm viability of cooling system. Reactor 3 using feedwater as injection from fire engines - switching this pm to power-driven equipment. will use concrete pumping truck to get water to SFP. In process of deciding how to deal with water in TB3. Unit 4: concrete pumper will be pumping seawater. Will switch from seawater to freshwater on Unit 4 soon.

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1900

Facility:

Source: Media report - TEPCO

Address/Location:

Attachment:

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Date/Time: 03/26/2011 20:13:57 (ET) How many people in-country right now? about a dozen. Update: 11 in-country, but others flying this week. New team flew out Monday and Wed, and not sure whether team they are replacing is on way back or not. Orders: Can forward spent fuel paper to Cmsrs offices? Sure. Franovich: Chairman gave rec on flooding containment? Can you discuss more the strategy? What is next step? Ruland: Was subject of recent phone call. Current rec is based on fact that all Rx flooding is leaking through RR pump seals into cont. Rec will say maintain status quo - do not increase floodup rates until nitrogen purge obtained. Do not want to squeeze containments with excess hydrogen there. Document being revised now. Japanese very concerned about hydrogen explosion - warranted. Envision floodup and purge eventually with vent through d/w? Yes, believe correct. Sheron: understand they are putting in enough water to keep core covered 1/2, so it is steaming off, going to torus/wetwell. It will eventually heatup, go to saturation, then have to vent off steam. Ruland: U1 containment appears intact, but question on 2-3 integrity. Does not change recommendations. Japanese interested in robotics - where are we with that effort? DOE in process of providing robotics to Japan. Japanese govt interested in robotics, shielding, removal of SNF. Did we recommend they restart RHR? Understand they have been interested in restarting, but have dose rate concerns. Have contracted with Shaw to install decay heat and debris removal systems. Chuck said priorities after flooding is shielding. Concern for Japanese because if cant access right

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1899

Facility:

(b)(5)

locations in plant, then equipment will not help if cant install. What assistance are Russians providing? (b)(5) Snodderly: Cmsr trying to access IAEA database, but password protected. Can someone help get contact for access?

Source:	TA questions
Address/Location:	
Attachment:	

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Date/Time:	03/26/2011 20:00:33 (ET)	<p>Have freshwater injection to U1-3. Borated in Unit 2. Water in TBs of all 3 units, but U1 pumped out. Working to pump out of U2-3. Elec power hooked up to all units. U1-4, in process of testing components. Some were submerged. Lights on in all control rooms, working to restore ventilation. Heard Japanese govt has recommended residents in 20-30km voluntarily evac, but not due to plant - due to infrastructure. NRC people in Japan - 1 day training on pumping system complete. SDF ready to move equipment to site today. USN is sending 2 freshwater barges to site. Question whether harbor had been damaged. Navy is checking soundings. Barges will probably get there tomorrow. RST in process of providing coordinated recommendations on severe accident strategies to Casto. Chairman forwarded some NRC conditional recommendations on containment flooding to Ambassador and others. Have started to receive environmental sampling data from USNPPs through NEI. Sharing the info with EPA. Casto and Monninger should be on way to J Village now. About 6 miles S of site. Staging area for response. Will have about 1.5 hours there, then will return to Tokyo. (b)(5)</p> <p>(b)(5) NRR and NMSS preparing draft documents that will be integrated. Should get to ET for review tonight. (b)(5)</p> <p>(b)(5) Also know that Navy admiral in charge of personnel in Japan stationed in Hawaii has requested assistance in terms of understanding doses and safety of military families - there are many US residents there. Vince Holahan will travel to Pearl Harbor, leaving Monday. He will be an advisor to USN. Ruland: Continuing to work on consensus assessment document. Have had 2 phone calls on day shift and a third this shift to sort out final recommendations. Recent one included site team. Purpose was to make sure the hydrogen recommendation was explicitly considered in the document. Think have figured out now. Need to get to Mike Scott - will meet with Japanese about 2 hrs from now. If dont meet time, Mike can speak to it based on listening in to phone call. Have literally hundreds of people involved in looking at</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1898	
Facility:		

(b)(5)

document. Cindy: DOE is reporting tens of R per hour around units 1-4 and hampering progress. IAEA reported about 17 workers had doses between 10-18 rem. 2 workers with possible beta injury have been transferred to medical university for evaluation.

(b)(5)

Source: TA Brief

Address/Location:

Attachment:

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Date/Time:	03/26/2011 19:47:03 (ET)	Some areas to consider: hydrogen igniters that require AC power, PWRs that do not have vent capability from containment, tsunami modeling capability, global warming/flooding, etc. Cindy has to respond on Xe question. Code has been peer reviewed, etc, and Xe should not contribute to dose, but we need to check.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1897	
Facility:		
Source:	ET	

Address/Location:

Attachment:

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Date/Time:	03/26/2011 19:23:08 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1896	
Facility:		
Source:	PMT	

Address/Location:

Attachment:

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Date/Time:	03/26/2011 18:33:59 (ET)	Chairman: likely coming to Tokyo via plane tonight. Itinerary would get there 9am next day. Would have to turn around soon and come back due to Congressional commitments. Chuck: plant status not changed for SFPs. Reactors: as of 1010am yesterday, all 3 on freshwater. At 4:46pm, lighted U2 control room. In TB, basement on U1 pumped water out. U2-3 reviewing plans to dewater TBs. Recovery: dam pipe is running to fill up CSTs and demin water tanks. Need 2800T/day of water to feed
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1895	

(b)(5)

reactors. Dam line is degraded, and getting about 1200T out of it. With barges also will have enough capacity. Estimate is tomorrow morning for barges. USFJ has offered line the Japanese can pump from. Chairman: is med-large release still possible? Yes. Some believe 2-3 containments already flooded. Real concern is Unit 1. They have 3 working groups. Concern is getting rad shielding. Having problems getting core cooling due to high rad. Had kickoff meeting yesterday to devise ideas. PNNL is linked in. Very interested in robotics, shielding. They will have 10,000 fuel bundles plus debris to remove. Still providing them with a lot of equipment, drinking water, KI, rad prot equipm, hoses. DOD is doing great job in getting that done. Water supply/bottled water is to limit hoarding in Tokyo. Believe if they show stable supply, will limit hoarding. Coke and Costco and Korea have provided supplies. Trying to work on milestones of recovery. Have dependents of military and embassy that are gone. Many people in shelters. Need to have some indication how long this will go on. John has lead on recovery

[Redacted]

(b)(5)

Facility:

Brian: Salt has been brought up.

Lots of concern over time of corrosion. Thought is that when they start with freshwater - at some point they may have to flush it out. Because radioactive, would need massive holding tanks. Chuck: Yes, they will need - they havent thought that far ahead. They are working on spent fuel transport, but dont know where it will go. Brian: should we have someone planning to find tanks that could be brought in and hooked up? chuck: will bring up to MOD. Maybe bladders like VY. Likely to be highly radioactive. They apparently pumped TB water to tank in condenser bay. At some point we need to decide when this is decomissioning site and not reactor safety issue. Brian: Marty and Bill were deciding on exit criteria. One was when reactors were stable. Second was when we didnt feel it was necessary to continue rad condition monitoring in terms of possibly changing PAGs. Third is when Ambassador says dont need anymore. John and Chuck heading to J Village in an hour. They were reluctant to let anyone up, but we only plan to spend a few hours. They will do a 30 minute briefing, then an hour of questions, then leave. Bill: working on recommendations paper. Consortia doesnt understand what they are doing - what role? Chuck: TEPCO has contracted with Shaw to build external decay heat removal systems and debris removal. That will take time, but once have systems going, concern for accident is diminished.

Source: Chairman/Casto

Address/Location:

[Redacted]

(b)(5)

Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/26/2011 18:29:29 (ET)	Bill - re-visiting flooding containment issue/hydrogen. Chuck: need sustainable water supply and 3 flooded containments. Brian: worried about air in flooded containments - may end up wiht detonable mixture. Chuck: understand - U2 and 3 are likely breached anyway.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1894	
Facility:	
Source: Casto	

Address/Location:	
Attachment:	
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Date/Time: 03/26/2011 18:25:49 (ET)	Chairman going to Japan tonight. Josh was unaware that Chairman was going to call Ambassador Roos tonight. Josh is going to find out if he is going to Japan and/or when he will speak to Ambassador. Chairmans fligh is at 10pm.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1893	
Facility:	
Source: ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/26/2011 18:11:20 (ET)	DOE, et al believe there has been a change in direction with respect to flooding containment. Their understanding is INPO is now saying shouldnt flood containment using all means available, because we expect is already being flooded through RR seals, and you basically want to flood above TAF, but not above vents. Some in DOE believe they havent had a chance to look at it, and dont understand change in direction. DOE is going to talk to their group. They are all concerned about presence of oxygen in drywell and possibility of explosion. The calcs they did and GE did show 1-2% oxygen. Theoretically that is too low. But, felt uncertainty too great, and margin not sufficient to give confidence. Lots of discussion about purging, and Japan does not appear to have capability. They talked about the decay heat and how long they would have to be in active removal before they could turn to passive cooling. For U1, was 230 days. If have core melt, could have corrosion via corium. They are concerned with CRD drive tubes and instrument penetrations. They also discussed steam explosions. Brian: Richard Lee just sent steam explosion analysis, and their conclusion is it wouldnt be very
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1892	
Facility:	

(b)(5)

energetic. We questioned how important composition of molten material is? We have salt mixed in. Also discussed using sprays to knock down source term during venting. Dana said really need fogging, not normal sprays. They agreed dose to workers would have been much higher if it was primary coolant in TB. Everyone agreed was diluted primary coolant. Discussed tanks for holding water they will have to remove. Fire water tanks - whether have enough shielding or capacity. Also discussed corrosion calculations. Dana said if they use sodium borate, it would make it pretty basic and they wouldnt have to worry about corrosion so much. They discussed muon tomography.

Source:	ET
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/26/2011 17:24:39 (ET)	Chairman considering going to Japan. Sheron: Will Chairman designate someone to act if he goes?
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1891	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/26/2011 16:33:05 (ET)	Wind was blowing out to sea, but supposed to switch. If they need to vent U1 containment, should probably do before wind shifts towards land. Will call site team when they wake up.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1890	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/26/2011 15:34:48 (ET)	Now believe know what is needed for assessment - getting ready to send out to INPO, etc, to get agreement. Have been working with NR, GEH, Bettis, KAPL, INPO, DOE, etc. Today, INPO no longer worried about liability, so this is very positive. Also updating status report. No idea how long freshwater will last. Have on Unit 2 now also. Heard
Position:	EST Chronology Officer	
Name:	Rebecca Karas	

(b)(5)

Record: 1889	Japan was trying to procure heat exchangers from Shaw? No idea. Sheron: we need to be thinking whether they need large tanks for all the radwaste? Yes.
Facility:	
Source: RST	

Address/Location:	
Attachment:	

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Date/Time: 03/26/2011 15:25:19 (ET)	Chu has set up science call. They discuss theories, etc. Gitter will cover call.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1888	
Facility:	
Source: ET	

Address/Location:	
Attachment:	

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Date/Time: 03/26/2011 15:17:31 (ET)	Sheron: Plants still injecting freshwater from reservoir. Still water in TBs of 1, 2 and 3. U1 had been dewatered. Electrical power to all 6 units. Testing components for Units 1-4. Trying to restore ventilation. Training is completed on pumping system. Ready to move equipment to site. Navy has 2 FW barges moving to site. Remain concerns about harbor damage. They want the Japanese to have their own tug fleet to be prepared to move barges into position when they arrive. RST provided coordinated set of recommendations to NRC team in Japan. Provided to NISA and TEPCO, no detailed discussions yet though. Received data from NEI - sampling from plants. Chuck and John travelling to J Village. Liaison is writing up roadmap to summarize deputies call to better understand roles and responsibilities.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1887	
Facility:	(b)(5)
	Probably stable. Worried about Unit 3 because contaminated workers got rad burns on feet. Did analysis of water and confirmed it came from core. Trying to figure out where breach is coming from.
Source: Chairman	

Address/Location:	
Attachment:	

(b)(5)

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Date/Time:	03/26/2011 14:18:18 (ET)	(b)(5)
Position:	EST Chronology Officer	(b)(5)
Name:	Nick Ballam	
Record:	1884	
Facility:	<p>Doing research on the 20 inches of water in the turbine building. 18 beta.</p> <p>They have power in the control rooms. The next step is for ventilation.</p> <p>Correction 18R, not 18 beta.</p> <p>EST Chronology Officer - Rebecca Karas at 15:15:10 on 3/26/2011</p>	
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/26/2011 14:44:49 (ET)	Chairman brief scheduled for 3:15.
Position:	EST Chronology Officer	Shift Change occurring - Briefing
Name:	Nick Ballam	
Record:	1885	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/26/2011 14:18:18 (ET)	(b)(5)
Position:	EST Chronology Officer	(b)(5)
Name:	Nick Ballam	
Record:	1886	
Facility:	<p>Doing research on the 20 inches of water in the turbine building. 18 beta.</p>	

(b)(5)

They have power in the control rooms. The next step is for ventilation.

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/26/2011 13:55:38 (ET) The end game is to fill up the containment to 2/3 full, without covering up the vent. The

Position: EST Chronology Officer hard part is figuring out how to do it, and get information on status.

Name: Nick Ballam

Record: 1883

Facility:

Source: Pat

Address/Location:

Attachment:

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Date/Time: 03/26/2011 13:49:58 (ET) Reaching a consensus. INPO and GE have provided a revision of our unit 1 - Mostly

Position: EST Chronology Officer reformatting. We have 5 or 6 recommendations. Under each of these we have

Name: Nick Ballam considerations (about 15 of them). Venting, oxygen mixture that may cause fire, etc. We

Record: 1882 are still seeing flow into the vessel. Gradually fill it up. Get nitrogen to the site and purge

Facility: the containment vessel with nitrogen. The water flow is coming in the bottom, 35-40

gallons per minute. They believe they clogged the external core spray with sea water

salt crystals. They have moved to the flow from beneath the building.

15 parties participating on the phone. Trying to get a general consensus. Keep pumping

water in, and vent. All three units have hardened vents according to GEH and Japanese

who met yesterday. We dont have information on what pieces are in place and what are

missing.

Source: Pat

Address/Location:

Attachment:

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Date/Time: 03/26/2011 13:43:47 (ET) Generate a matrix to show who is in charge of what types of action items. Trying to

Position: EST Chronology Officer determine the best format for this product. Next shifts will take over later today/tonight.

Name: Nick Ballam

Facility:

Source: Pat

Address/Location:

Attachment:

(b)(5)

Record:	1881
Facility:	
Source:	LT

Address/Location:	
Attachment:	

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Date/Time:	03/26/2011 13:25:09 (ET)	LT trying to get an understanding on which agency is going to take charge on each item. This will help us focus our efforts on items that are applicable to our agency.
Position:	EST Chronology Officer	
Name:	Nick Ballam	Tasking an action item from France for aerial photos of reactors from the time of hydrogen explosion to now. Has been tasked to RST.
Record:	1880	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/26/2011 13:09:05 (ET)	Jim - Cced Bill on the email to the Chairman regarding flooding. Status update to Bill on earlier talks with Chairman and Chuck. Pat started a call with INPO and industry to go through the details of the strategies and their revisions to capture some of the potential unintended consequences.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1879	

Facility:		(b)(5)
		(b)(5)
		In 3-5 days we will have a much better understanding of the data and possibilities.
		(b)(5)

Source:	Phone w/Bill Borchardt
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Address/Location:	
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(b)(5)

Attachment:

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Date/Time:	03/26/2011 12:53:03 (ET)	The communication with Pete Lyons has been completed and the question he had has been answered.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1878	
Facility:		
Source:	ET	

Address/Location:

Attachment:

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Date/Time:	03/26/2011 12:04:35 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Nick Ballam	(b)(5)
Record:	1877	
Facility:		
Source:	Terry	

Address/Location:

Attachment:

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Date/Time:	03/26/2011 11:41:06 (ET)	RST agrees with email to Chairman to flood 2 and 3, and concerns on unit 1 concerning possible hydrogen combustion.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1876	
Facility:		
Source:	ET	

Address/Location:

Attachment:

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Date/Time:	03/26/2011 11:29:45 (ET)	In the email give a brief assessment to what extent any of this information has been conveyed by Chuck to Japan and if so, to whom. Just check with RST if needed at a high level.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1875	
Facility:		

(b)(5)

Source: Phone w/Chairman	
Address/Location:	
Attachment:	

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Date/Time: 03/26/2011 11:18:26 (ET)	<p>Being asked by Ambassador for recommendation on whether we should flood the dry wells on 1 2 and 3. Wants to get Chuck on the line.</p> <p>The strategy paper will address this. The concern is Unit 1. The unit 1 containment is not inerted. If you flood the containment then you may compress hydrogen gas in the top of the containment causing an explosion. In general the SAM-Gs say to flood the containment, but you dont want to block the vent path, and there is concern about the hydrogen ignition.</p> <p>Chuck - Should flood the dry well on units 2 and 3, and should be cautious on unit 1. Recommendation on 1 - Try to inert the dry well, and if you cant do that then flood it. 2 and 3 are likely venting.</p> <p>We also heard reports that there was water in the basements of unit 2 and 3. Unit 1 was de-watered and wasnt contaminated. Unit 3 had fission products which must be concerned.</p> <p>Jim will send that to these recommendations in an email. Chuck will review the email before it goes to the Chairman.</p>
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 1874	
Facility:	

Source: Phone w/Chairman	
Address/Location:	
Attachment:	

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Date/Time: 03/26/2011 11:04:55 (ET)	<p>Got off the phone with Bill Webster with INPO. They are excited about a new phrase "Sign-off". They are being asked to sign off on recommendation on actions to take. That term implies some liability and extensive technical review.</p> <p>RST Strategies were sent to Chuck and NISA and TEPCO. Since the plant conditions have evolved, there are revisions being made to these strategies. The ambassador wanted to get a sign off from all responsible parties that this is the best approach to</p>
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 1873	

(b)(5)

take. Pat is working with INPO. We are looking for a consensus

(b)(5)

(b)(5)

(b)(5)

Facility:

Jim is preparing an email to frame this for the chairman. Will cc Bill and Josh.

Held a two hour meeting with the industry consortium. Had 17 issues for discussion. DOE and DOD had actions on 16 of them. INPO had action on one of the items. There is discussion on not having these phone calls since there are reps in the cabinet meetings getting these action items directly.

(b)(5)

Source: Phone w/Bill Borchardt

Address/Location:

Attachment:

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Date/Time: 03/26/2011 10:34:06 (ET)

Position: EST Chronology Officer

Name: Nick Ballam

Record: 1872

Facility:

Source: RST

(b)(5)

Address/Location:

Attachment:

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Date/Time: 03/26/2011 10:17:27 (ET)

Position: EST Chronology Officer

Name: Nick Ballam

Record: 1871

Jim - We will try to bring Vonna and Bill Rulon up on the bridge to relay the information.

Mike - They are looking for an affirmation that spent fuel is being safely stored. Why do we believe that? The white paper would be the requirements, compliance status, and how we inspect licensees to assure that it is safe.

Vonna and Bill Rulon join the call. Mike gives a review of the request to Vonna and Bill.

(b)(5)

Facility:

The paper will not be at a very detailed level (so as to keep it to a few pages).

We dont have the staff in the Ops Center to work on this. Much of this information should be in our Qs and As.

Bill and Vonna will work together to write it up and integrate it. Bill will be in the Ops Center beginning at 3:00 pm. Steve Jones may help with it. 2 pages max for each of wet and dry storage. (3-4 total)

Both Chuck and the newsflash talked about dewatering the Turbine 3 building (depending on whats in there).

Source: Phone w/Mike Webber

Address/Location:

Attachment:

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Date/Time: 03/26/2011 10:05:58 (ET) (b)(5) Looking for a document concerning spent fuel

Position: EST Chronology Officer storage, both wet and dry. There is growing interest in congress with continued storage

Name: Nick Ballam of spent fuel. They are looking for a paper this weekend that will layout requirements for

Record: 1870 dry and wet storage and what is the current status with our licensees complying with

these requirements. SFST for dry storage and NRR for wet storage. (b)(5)

Facility:

The paper is maybe 3-4 pages with bullets. We can attach the requirements. General design criteria and all of part 72... We need to address things like: How does it protect against significant external events, and where does our reasonable assurance confidence come from? Not get into the nitty gritty, but attach the requirements as extra info.

Source: Mike Webber

Address/Location:

Attachment:

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(b)(5)

Date/Time: 03/26/2011 09:38:12 (ET)
Position: EST Chronology Officer
Name: Nick Ballam
Record: 1869

RST recommendation paper - Summary report to go to the chairman and then he will go to the ambassador. Pat has indicated that INPO needs time to review the recommendations. Then we will get them to Chucks team. We are also putting together discussion points for the Chairman for his call with the Ambassador. The Ambassador told Chuck that he can be called 24/7, whenever we need to.

(b)(5)

Daily call with Chuck & Chairman will be at 6:30 p.m. Eastern Time.

Briefing on cabinet meeting: All three units are on freshwater. As of 10:10 a.m. this morning. At 4:46 p.m. Unit 2s control room was powered up. Turbine building basements flooding - They removed the water from unit 1s basement. Units 2 and 3 they are reviewing the plans for basement water removal. Unit 3 iodine 131 and lanthanum 140 levels indicated that there was damaged fuel (core). Chlorine 38 indicated it had been activated by a neutron which would have to be around some uranium. There is still speculation on this, but we think that the water in unit 3 turbine basement came from a core. We dont know the composition of unit 2 basement water yet.

(b)(5)

2:00 meeting - we requested a sit down with someone knowledgeable about each of the reactors, but they indicated they dont have anyone at this time. Hasano said that he would help open up communication channels to give us more information.

Facility:

Concerned about the hydrogen. Unit 2 and 3 are continually venting. Some people believe that the containments on 2 and 3 are already flooded. Unit 1 is the one you need to worry about flooding with regard to hydrogen. SHA group was contacted for heat removal. They wanted some more robots from DOE. They want Pacific Northwest Labs to come over right away to work on shielding and spent fuel removal (DOE will take action). DOD is in charge of most equipment requests. Having a difficult time getting to their cooling systems. 10,000 spent fuel bundles to dispose of. They are working on plans for this. Working on plans on what to do with the remaining buildings. Working on structural analysis of the spent fuel pools. They wanted all 300 pieces of equipment

(b)(5)

offered. 1st barge is headed up north. 2nd barge is 8 hours behind that.

Mike - The cabinet meetings should be assigning the items immediately to DOE, DOD, and INPO.

Chuck - The Cabinet meetings are important right now, but should be discontinued at some point down the road. We need to figure out what commitment the U.S. will have. Right now it is unlimited, but we need to determine future plans.

Will head to J-Village tomorrow at 9:00 a.m. Minutes on the meetings will come tomorrow.

[Redacted] (b)(5)

Chucks intent was to have people in there 24/7. The working groups they are requesting for us to contribute to are very long term and should probably be DOE instead of NRC for participation. They gave us 5 slots for these TEPCO working groups... Jim suggests that we split those slots with NISA. Tony Nagasaki has some really good contacts within TEPCO. Hes doing a great job and will be staying longer in Japan.

Source: Chuck on Phone

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/26/2011 09:34:44 (ET) Whitepaper. The paper will not be discussed until 1:00. The chairman and ambassador

Position: EST Chronology Officer will talk sometime later today/tonight.

Name: Nick Ballam [Redacted] (b)(5)

Record: 1868

Facility:

Source: RST

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/26/2011 09:23:09 (ET) Discussion on salt depositing. The fresh water is needed to dilute the salt deposits that

Position: EST Chronology Officer have accumulated.

[Redacted] (b)(5)

Name:	Nick Ballam
Record:	1867
Facility:	
Source:	ET
Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/26/2011 09:17:34 (ET)	INPO made a strong recommendation that we let them work on our paper for a couple of hours and get back to us with an endorsement. They need until 1:00 p.m. and will get back to us at that time. Mike Scott is interested in this document. We will send it to them (Japan team) by end of day/swing shift.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1866	
Facility:		
Source:	Pat	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/26/2011 08:32:22 (ET)	Plant status - As of this morning freshwater being injected into 1,2,3, borating water into unit 2. Coming from the reservoir. Electrical power is present. Have lighting in the control rooms. They are in process of restoring ventilation. Bechtel pumping system is still at the air base. They will have an additional day of training today. Not expected to be at the site until Sunday COB, implemented Monday. Navy has 2 freshwater barges on their way. The first is delayed due to weather. 30 hours until it will be available. Press release that Japanese govt gave recommending residents within 20-30 km to voluntarily evacuate their homes. Not radiological concern, but logistics related. Reactor Safety Team is working on draft strategies. Those have been shared with TEPCO and NISA. The feedback that we got is to revise those strategies in light of the actual conditions in Japan. We do not have hydrogen purging capabilities. We will have the revised strategies back to the Japan team today. Chuck will travel to J village. 10 miles from the site which is the staging area for recovery equipment. Will determine whether there is value to embed there. We are developing a road map for coordinating with other agencies on various issues, so as to not overlap. Vince Holohan will be traveling to PATCOM in Hawaii to coordinate with pacific fleet. They have the responsibility to evacuate American Citizens in Japan.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1865	

(b)(5)

Facility:

Elliott - Reading latest AP story quoting Japanese Defense Administer. Saying that we made an extremely urgent request to switch to freshwater. Is this accurate?
Jim - This was our number one priority, yes.

We do not have any more information on possible slumping in the cores? 18 rem dose would not cause beta burns to the workers. Are we taking a look at this? Yes, this is a follow up item for PMT.

Casto and Moniger coming home? Chuck has become the ambassadors right hand man. Not clear on when he will return. We dont have a schedule. We will be there for a while.

Reentry plan is the PMTs product. We provided it to the Japan team. Talking it over with the ambassador. Awaiting comments. How is EPA involved?

Why is the radiation much higher in one of the units? May have to do with the level of water in the containment.

Information on injured workers in unit 3. They were attempting to replace damaged cabling to pumps. What is the next strategy now that the recirc pumps may not be available? That is part of the ongoing dialog at this point. We will route these recommendations through the commission office when ready.

(b)(5)

J-Village is 12.5 miles due south along the coast from the site. Used for emergency response.

There have been no reports of anyone being deceased. The worst report were the three workers who got the beta burns.

Source: Phone CA Brief

(b)(5)

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/26/2011 08:19:56 (ET)	Concern with saltwater. We will follow up DOE's concern. Pete Lyons had the concern. What was the basis for the RHR restart? We want to close the loop with DOE on this.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1864	
Facility:		
Source:	Pat	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/26/2011 08:17:23 (ET)	Phonecall with Chuck and the Chairman? We will check when he calls in at the end of his shift today and set that up if needed.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1863	
Facility:		
Source:	EP	

Address/Location:	
Attachment:	

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Date/Time:	03/26/2011 07:46:08 (ET)	Summary from INPO call. Two hour call. INPO had action on 1 of the items
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1862	
Facility:		<p>(b)(5)</p> <p>Chairman was forwarding the meeting minutes down to us. Trying to piece together who has action for what for some of these issues. Trying to put together a flow chart to diagram this. Maybe US AID should be leading these phone calls, because they would be funding some of these things. Any equipment we "loan" will likely not be coming back due to contamination.</p> <p>Jim - According to Chron file, Recommendations document was shared with both NISA and TEPCO (per Mike Scott).</p> <p>(b)(5)</p>

(b)(5)

(b)(5)

We have completed some analysis on dose information that may be passed through State Department to Ambassador to Japan. Will check back with State Department on this issue.

(b)(5)

Source: Mike

Address/Location:

Attachment:

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Date/Time: 03/26/2011 07:39:58 (ET)

Position: EST Chronology Officer

Name: Nick Ballam

Record: 1861

Facility:

(b)(5)

Source: Terry

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information

Date/Time: 03/26/2011 07:30:50 (ET)

Position: EST Chronology Officer

Name: Nick Ballam

Record: 1860

Facility:

We have freshwater going into all 3 reactors. Assessment paper, we published a document. Had discussion with GE and INPO on the recommendations in this document. Following the SAM-Gs recommendations to fill up the containment. Need to review these recommendations based on current conditions. Jim explaining the upcoming phone calls with chairman and ambassador. Chairman will probably want to call around 7 or 8 p.m. (morning in Japan). Prepare talking points for the Chairman and give him the status of our schedule. Explain why these recommendations should not be taken as EOPs. Formatting some recommendations for Chuck. Exploring some recommendations on Chlorine 38. Finalizing some answers on hydrogen questions. Havent heard back from Pete Lyons yet. Will be reaching out to him today. Unit 3

(b)(5)

building - How long do we have before it goes back out to sea or elsewhere? Do we need to recirculate it?

Source: Pat

Address/Location:

Attachment:

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Date/Time: 03/26/2011 07:16:15 (ET)

Position: EST Chronology Officer

Name: Nick Ballam

Record: 1859

Facility:

We are now injecting freshwater into units 1-3. Borated into unit 2. Source is reservoir. Barges on the way... delayed because of weather. 30 hours until it gets there. We aren't sure if the water supplies will be depleted or not. The big event yesterday was that unit 3 turbine building is full of water from the containment, there is fission product isotopes showing that it's from the damaged core. The water has continued to increase to the turbine building. An area of focus is to look at leaks from that building. Japanese recommended that citizens within 20-30 km move. (b)(5)

(b)(5) The bechvel pumping system, they will continue training today and then transition. It's not believed to be on site either late tomorrow or Monday. The RST strategies on dealing with the core, we have some recommended changes that we want to put into the strategies. They have been shared with NISA, not sure if they've been shared with TEPCO yet.

(b)(5)

We suggest that you and the ambassador have a conversation on this. Chuck plans to visit J-Village, the pre-staging point for recovery, to see if it will be useful to embed some of the site team there. Roy participated in the deputies call last night. We want to know who has the lead on which issues.

We want to get revisions out around noon (at best). Sometime this afternoon we suggest the chairman talk to the ambassador. Plan a 15 minute discussion with the ET before this takes place.

Source: Phone Call w Chairman

Address/Location:

Attachment:

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Date/Time: 03/26/2011 07:03:18 (ET)

Position: EST Chronology Officer

Unit 3. You can't get beta burns with only 17 rem. The barge is on its way. RST took a look at dose levels. They tried to infer what the water levels are in the containment. They

(b)(5)

Name: Nick Ballam	think 2 and 3 are well on their way to being flooded based on the radiation levels. Trying to get a dialog between RST and site team considering severe accident management directives. (b)(5)
Record: 1858	
Facility:	Support Bill in developing recommendations on how we proceed with operations here at the Ops Center. Naval reactors want to know what is considered to be "stable conditions". If they keep filling up the turbin building it may create a path for moving the damaged fuel out of the site.
Source: ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/26/2011 06:23:41 (ET)	Marty heard from Chuck that Ambassador wants to continue with his request that organizations concur in White Paper on cooling recommendations. ET will brief Chairman on Ambassadors request.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1857	
Facility:	
Source: ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/26/2011 05:32:09 (ET)	Chuck just completed meeting with Admirals Walsh and Haley, General Fields, the Ambassador, and others. Ambassador would like principals of organizations who prepared White Paper on cooling recommendation to concur in writing. Ambassador would like concurrence so he can take White Paper to Edano. Marty indicated that RST should distribute updated White Paper to applicable agencies. RST has call planned for 11 a.m. with agencies to discuss White Paper. Chuck has meeting at 8 p.m. with Ambassador. Chuck proposes to indicate at meeting that White Paper is being discussed with applicable agencies for concurrence. RST will coordinate with other agencies at 9 a.m. to ask for written concurrence on White Paper.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1856	
Facility:	(b)(5) NR agrees that White Paper was written as best technical approach. Dave Hermann (NR) suggests that we address recommendations and Ambassador request on parallel paths to not delay White Paper. ET agrees. ET indicated that RST at 9 a.m. will work to have all stakeholders agree on White Paper ASAP. Then, ET will brief Chairman for call with Ambassador to discuss White Paper

(b)(5)

and path forward. Chuck will inform Ambassador.
 Separate topic: TEPCO provided hydrogen calculation rates to NRC Team. RST does not have calculated hydrogen rates. NR will check to see if they had hydrogen calculation rates.

Source: Chuck Casto	
Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/26/2011 04:36:22 (ET)	LT reviewed list of Deputies meetings and whether summary available. LT sent e-mail to Annette Vietti-Cook asking for any additional meetings that she might be aware of since she is on the meeting distribution list. LT will follow up with Annette in morning. Also, LT (b)(5) . LT presented US Government Coordination power point slides with each agency having a separate click-on page. For example, NRC would have a page that will identify individual groups and their tasks. LT will begin completing the power point file with applicable roles and responsibilities. US Government Coordination slides will identify high level roles and responsibilities (not small specific tasks) to minimize maintenance effort. ET agreed with LT approach. ET asks that LT check current ET task list for any tasks that might be responsibility of other agencies that can be reassigned and closed.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1855	
Facility:	

Source: LT	
Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/26/2011 02:36:05 (ET)	RST heard from Mike Scott in Japan that they had discussed the cooling recommendations with TEPCO. TEPCO appreciated the recommendations. TEPCO had questions about filling vessel and hydrogen status. RST working on reformatting and obtaining NR feedback. Dave Hermann (NR) agrees that reformatted recommendations will include hydrogen information. Table will include information for each reactor and each SFP. RST will include what US would do. Chuck will find out Japan actions to complete table. NR agrees that having Chuck find out Japan actions will be most efficient. RST will indicate where new information is added in the reformatted recommendations.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1854	
Facility:	

Source: RST	
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(b)(5)

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/26/2011 02:22:06 (ET)	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">(b)(5)</p> <p>LT informed by Situation Room that Executive Secretary for National Security Staff is maintaining a consolidated list of involved agencies and their assigned responsibilities. LT will call Situation Room after 0900 Saturday to speak to ExecSec and request copy of consolidated matrix.</p> <p style="text-align: center;">(b)(5)</p> </div>
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1853	
Facility:	
Source: LT	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/26/2011 00:00:21 (ET)	<p>TEPCO injecting freshwater in Units 1, 2, and 3. Freshwater barge 20 hours into 30 hours trip. Unit 5 RHR restored. Lights returning in control rooms. TEPCO testing pumps. TEPCO bringing in skid mounted pumps.</p> <p>DOE report on robotics available.</p> <p>Bechtel pump system training under way and will be moved to site on Sunday or Monday.</p> <p>J-Village is 10 miles from site. Chuck will check whether to embed at J-Village.</p> <p>Two step process for supplies in Japan.</p> <p>Chuck joins discussion.</p> <p>Barge has weather delays. Chuck will visit J-Village tomorrow for recon. ET concerned about proximity from site.</p> <p>HQ will not issue RIS on licensee external monitoring. NEI voluntarily will collect data and provide to NRC. Iodine detected in PA. PA law requires notifying public if level reaches threshold. Elliot Brenner developing press release. EPA issued press release on the PA iodine. PMT received call from Maryland about rad levels.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p style="text-align: center;">(b)(5)</p> <p>LT will check results of those meetings to be sure we are aligned. Summaries from Chucks meetings might be helpful. Lead for various issues not always clear. ET can help Chuck hand off issues if NRC is not</p> </div>
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1852	
Facility:	

(b)(5)

Facility:

appropriate lead.

(b)(5)

(b)(5)

RST working on action plan for cooling units with initial conditions and specific recommendations.

RST e-mailed answers to 5 questions to Chuck and has been working with NR, NRR, GEH, Bechtel, and others on cooling recommendations.

Telecon between Chairman and Chuck planned for 6:30 pm each day.

RST is aware of blogs on criticality and Chlorine activation.

Dave Hermann (NR) notes that NRC has severe accident guidelines, and suggests staying with guidelines and then discussing differences as necessary. Chuck will trust RST to ensure recommendations sent to him have been discussed with all of applicable participants back here in US.

RST checking on Pete Lyons question.

LT has e-mail from DOE indicating that they cannot support consortium call today.

(b)(5)

Jennifer will check with Roy on this task.

PMT has turnover request from Dan Dorman on dose run so will work on this request.

PMT working on another task for explaining changes in calculations.

ET discusses that local criticality in core might be possible but not over full core. RST will check with nuclear physicist.

(b)(5)

LT will check

who asked, what product requested, and who to go to?

PMT will check on status of Oyster Creek of iodine level. LT will send e-mail to Ron Nimitz in Region I to check on Oyster Creek status.

PMT has rad data from various plants. ET states that information should be sent to NSIR contact for the data. EPA has all rad data including Oyster Creek. LT will check with EPA on the data and indicate that evaluating Oyster Creek data.

Dave Hermann would like to discuss reformatting of cooling recommendations with RST. Dave Hermann would like to discuss criticality action item from NR. Dave Herrman will also discuss rad tasks with PMT.

(b)(5)

Source: ET and Chuck Casto	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/25/2011 22:25:33 (ET)	We are looking to clarify roles and responsibilities for the various functions, consistent with the deputies summaries from the deputies meetings.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1851	
Facility:	
Source: ET	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/25/2011 22:09:27 (ET)	Discuss and decide to send some representative photos (1 CD full) of hi res photos provided by TEPCO to site team to INPO, NR, GEH, Bechtel, etc as "treat on a need to know basis" for them to assist in analyzing. CDs completed. One provided to NR. Email to other organizations to coordinate pickup/mailing of CDs.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1850	
Facility:	
Source: ET	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/25/2011 20:01:38 (ET)	TB flooding in Unit 3 - elevated levels of radionuclides indicating from core. Do not have path at this time for how that occurred. RHR pump restored on Unit 5. Electrical power up to front of each unit, but they are still checking equipment. PMT working through source term runs. Japan shown interest in robotics from DOE. Pumping system - Japanese completed a day of training, day 2 is tomorrow. SDF is ready to move equipment to site. Navy is using tugs to bring up water barges. At least one has left and is about halfway to facility. INPO rep and team have seats in ops center in Japan. Pacific Command will take command for single federal entity on logistics. They have asked for additional support - Vince Holahan will be assisting him on Monday in Honolulu. HHS has a million bottles of KI. INPO has a million tablets.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1849	
	(b)(5)
	Orders: salt accumulation - will it prevent
(b)(5)	

Facility:

cooling? Ruland: SAMGs didnt really consider effects of salt accumulation. Best assessment is it is probably at bottom of vessel. Salt probably plugged CS nozzles in one case. configuration of salt and core debris is unknown. U1 and U3 now injecting freshwater. Orders: Is water going through RR seals? Yes. GE did that assessment. On 2 reactors, that was conclusion. With salt and low pressures, unclear how much is going through to containment. U3 TB contamination - how happen? Have theories at this point - could be a number of things. People contaminated where? TB. Castleman: TI mentioned to be issued for verifying that beyond design basis measures still in place and functional. Can get copy? Ops center not following - check with NRR. Franovich:

(b)(5)

Castleman: Do we have any more information on rad health effects, onsite and offsite? No. Heard staff was compiling RASCAL runs and contamination levels. Done? Trying to fit to NARAC summaries - not done yet. Have started plotting air monitoring data so we can trend it - work in progress. Last page of sitrep discusses NARAC results. How do they compare to 50 mile evac recommendation? Still within Japanese guidelines for evac. And Japanese also have evac to 30km now (voluntarily)

(b)(5)

(b)(5)

Cameron: progress on getting the NISA rep info translated? Yes. Next task is to take data and bounce vs. assessments. Not done yet.

Source: TA call

Address/Location:

Attachment:

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Date/Time: 03/25/2011 19:12:00 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1848

Facility:

Source: ET

PaCom really wants to be closely connected with us so there is no delay in communicating.

Address/Location:

Attachment:

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Date/Time: 03/25/2011 19:00:07 (ET)

Position: EST Chronology Officer

Roy - will be supplying senior individual - Vince Holahan - to PaCom. CIVITS call - HHS said they have a million bottles of liquid KI that they can provide to Japan if formally

(b)(5)

Name: Rebecca Karas	requested. INPO also has a million doses. One of barges is on way to site. Possibly 20h into its trip. Considerable discussion about bookending (modeling).
Record: 1847	
Facility:	(b)(5) There is hoarding of water taking place. Coke and Costco have offered donations of water. Best time to talk to Chuck is 6:30pm EST.
Source: Chairman	

Address/Location:

Attachment:

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Date/Time: 03/25/2011 17:56:17 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1846	
Facility:	
Source: RST	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 17:10:06 (ET)	Trish - after call with PaCom: Admiral needs someone who knows agency well enough to know who to call back to - not necessarily SES, but someone who knows who to call. Roy - make sure Bill and Eric understand. Trish - he doesnt mind if they come out tomorrow or Sunday, or if we send pinch hitter until next person comes.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1845	
Facility:	
Source: ET	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 16:54:23 (ET)	INPO, DOD, DOE, consortium call - have list of what Japan wants. Going to be a call for clarification tomorrow. Blamey believes we shouldnt be lead on this - are all things DOE or DOD would have. Logistics organization should handle. PMT said they were getting emails from individual plants. They are putting a table together to give to EPA.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1844	

(b)(5)

Facility:	
Source: ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 15:20:59 (ET)	<p>Freshwater injection being provided to 1 and 3. Big issue has been flooding in U3 turbine building. Shows evidence of contamination of radioisotopes from reactor fuel. Flowpath not yet clear. They have a limited freshwater reservoir. Sounds as if barges have not left yet. Heard about 30 hours to transport them to units. Admiral Willard had been looking to provide someone to Honolulu. Understand that we opted that we could not support. Chairman: would like us to be able to support that. Logistical team also needs to be stood up. Bill: Eric called Willard, and he was satisfied with communication channels we were setting up by phone. Roy: got email in last hour asking how we were coming along in supplying someone. Chairman: supportive of providing what Admiral needs. Hopefully logistical support team will fill void, though. Get back to Chairman by 7pm. Roy: DOE taking lead working with Japan on robotics - they are very interested. Japanese training on pumping system - 1 more day tomorrow, then will move equipment to site. SAMGs that were coordinated by RST have been provided to Chuck and NISA. Will be discussed with TEPCO tomorrow. Big news was U3 TB flooding. Have CIVITS call at 4:00. Interest on re-entry guidance for belongings retrieval. PMT put together. Also on information on rad monitoring from US plants. Chairman: please reenforce that we have not turned corner on this event. Still potential for more serious degradation. Needs to be emphasized. Also find out timeline for logistics team. Would like to talk to Chuck once per day (evenings or mornings).</p>
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1843	
Facility:	

Source: Chairman	
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Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 15:18:09 (ET)	<p>RIS will not be issued based on decision by Leeds.</p>
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1842	
Facility:	

(b)(5)

Source:	ET
Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/25/2011 09:55:17 (ET)
Position:	EST Chronology Officer
Name:	Hector Rodriguez-Luccioni
Record:	1827

Brief on Cabinet meeting:

The measurement equipment was discussed.

They were asking questions about measurements of vegetation, tap water and food equipment. DOE is taking the lead on radiation equipment and robotics.

There was a number of American companies trying to do business with TEPCO because they thought that we wanted that, so we clarified. That is TEPCO business.

The training on the pumping system is going to be done tomorrow.

Unit 1 is on reservoir water, but we have not verified that. We will check on this in the morning.

The turbine building flooding in unit 3 could be from the RCS or the SFP. It is not clear what happened with the explosion in Unit 3.

The seal up on the dry well was blown up because of over pressure and they didnt vent, so this could be were the Hydrogen came in.

At the cabinet meeting there is one team that is focusing on shielding, another on robotics and another on SF removal.

Chuck believes that there is progress but there are more challenges on controlling the reactors and SFP. We cant call victory yet.

(b)(5)

(b)(5)

We gave NISA the RST report and discussed it.

LT- there are questions about the requests on how to anticipate the TEPCO and Japan

(b)(5)

approval fit with the availability of the equipment.

Facility:

Chuck: Our request comes from the Cabinet meeting. They gave us a list of 14 items that they want and to be discussed. The process could take at least two days. Alan Blamey should have a copy of this list. Remember that those items are a request of additional information. Hosono is the single contact that can speak from the government. We are going to take that list and build a SharePoint sheet. The EST thinks that the logistical support for the equipment is given by the consortium. That this is not NRC business.

Chuck faxed in an agenda called the daily roundup of March 24th and is about the meeting with the Ambassador.

NRC team got embedded with TEPCO.

We will discuss tomorrow with TEPCO the strategies report.

There are two locations or facilities that we are not embedded. The J village and the LCC.

Tomorrow morning Chuck will send the minutes of tonights meeting. Jessica is in charge of the minutes. These are good to share with the consortium.

There is no other nation present in the meetings.

EST already called Alan Blamey for the 14 item list. (10:35 am)

Unit 2 has a bridge on the containment building because of all the steam.

Source: Call from Chuck Casto

Address/Location:

Attachment:

(b)(5)

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/25/2011 13:50:44 (ET)	NARAC run is confirmed.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1838	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/25/2011 13:50:44 (ET)	NARAC run is confirmed.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1840	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/25/2011 13:50:44 (ET)	NARAC run is confirm.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1839	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/25/2011 13:18:49 (ET)	The pump equipment on Yokota air base is going to be moved by the Self Defense Forces (SDF) of Japan.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	

(b)(5)

Record:	1836	
Facility:		
Source:	EST	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/25/2011 13:18:49 (ET)	The pump equipment on Yokota air base is going to be move by the Self Defense Forces (SDF) of Japan.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1837	
Facility:		
Source:	EST	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/25/2011 12:50:10 (ET)	RST will send an email to MJ Ross-Lee for the possibilities of the flooding in Unit 3. There is Iodine-131, an indication that is from the RCS water, but we dont know where it comes from. There is fresh water running in Unit 1 and 3. The iodine-131 concentration is 1.2E6 Bq/cm ³ EST Chronology Officer - Hector Rodriguez-Luccioni at 13:04:11 on 3/25/2011
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1830	
Facility:		
Source:	RST	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/25/2011 12:50:10 (ET)	RST will send an email to MJ Ross-Lee for the possibilities of the flooding in Unit 3. There is Iodine 131, an indication that is from the RCS water, but we dont know where it comes. There is fresh water running in Unit 1 and 3. The iodine 131 concentration is 1.2E6 Bq/cm ³ EST Chronology Officer - Hector Rodriguez-Luccioni at 13:04:11 on 3/25/2011
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1835	
Facility:		
Source:		

(b)(5)

323707

Source: RST

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 12:54:44 (ET) We need to clarify what Dan Dorman really wants.

Position: EST Chronology Officer

Name: Hector Rodriguez-Luccioni (b)(5)

Record: 1831

Facility:

Source: PMT

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 12:54:44 (ET) We need to clarify what does Dan Dorman really wants.

Position: EST Chronology Officer

Name: Hector Rodriguez-Luccioni (b)(5)

Record: 1833

Facility:

Source: PMT

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 12:54:44 (ET) We need to clarify what does Dan Dorman really wants.

Position: EST Chronology Officer

Name: Hector Rodriguez-Luccioni (b)(5)

Record: 1832

Facility:

Source: PMT

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: RST will send an email to MJ Ross-Lee for the possibilities of the flooding in Unit 3.

(b)(5)

Date/Time:	03/25/2011 12:50:10 (ET)	<p>There is Iodine 131, an indication that is from the RCS water, but we don't know where it comes.</p> <p>There is fresh water running in Unit 1 and 3.</p>
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1834	
Facility:		
Source:	RST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/25/2011 09:55:17 (ET)	<p>Brief on Cabinet meeting:</p> <p>The measurement equipment was discussed.</p> <p>They were asking questions about measurements of vegetation, tap water and food equipment. DOE is taking the lead on radiation equipment and robotics.</p> <p>There was a number of American companies trying to do business with TEPCO because they thought that we wanted that, so we clarified. That is TEPCO business.</p> <p>The training on the pumping system is going to be done tomorrow.</p> <p>Unit 1 is on reservoir water, but we have not verified that. We will check on this in the morning.</p> <p>The turbine building flooding in unit 3 could be from the RCS or the SFP. It is not clear what happened with the explosion in Unit 3.</p> <p>The seal up on the dry well was blown up because of over pressure and they didn't vent, so this could be where the Hydrogen came in.</p> <p>At the cabinet meeting there is one team that is focusing on shielding, another on robotics and another on SF removal.</p> <p>Chuck believes that there is progress but there are more challenges on controlling the</p>
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1841	

(b)(5)

reactors and SFP. We cant call victory yet.

(b)(5)

(b)(5)

We gave NISA the RST report and discussed it.

LT- there are questions about the requests on how to anticipate the TEPCO and Japan approval fit with the availability of the equipment.

Facility:

Chuck: Our request comes from the Cabinet meeting. They gave us a list of 14 items that they want and to be discussed. The process could take at least two days. Alan Blamey should have a copy of this list. Remember that those items are a request of additional information. Osano is the single contact that can speak from the government. We are going to take that list and build a SharePoint sheet.

The EST thinks that the logistical support for the equipment is given by the consortium. That this is not NRC business.

Chuck faxed in an agenda called the daily roundup of March 24th and is about the meeting with the Ambassador.

NRC team got embedded with TEPCO.

We will discuss tomorrow with TEPCO the strategies report.

There are two locations or facilities that we are not embedded. The J village and the LCC.

Tomorrow morning Chuck will send the minutes of tonights meeting. Jessica is in charge of the minutes. These are good to share with the consortium.

There is no other nation present in the meetings.

EST already called Alan Blamey for the 14 item list. (10:35 am)

Unit 2 has a bridge on the containment building because of all the steam.

(b)(5)

Source:	Call from Chuck Casto
Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/25/2011 09:55:17 (ET)
Position:	EST Chronology Officer
Name:	Hector Rodriguez-Luccioni
Record:	1829

Brief on Cabinet meeting:

The measurement equipment was discussed.

They were asking questions about measurements of vegetation, tap water and food equipment. DOE is taking the lead on radiation equipment and robotics.

There was a number of American companies trying to do business with TEPCO because they thought that we wanted that, so we clarified. That is TEPCO business.

The training on the pumping system is going to be done tomorrow.

Unit 1 is on reservoir water, but we have not verified that. We will check on this in the morning.

The turbine building flooding in unit 3 could be from the RCS or the SFP. It is not clear what happened with the explosion in Unit 3.

The seal up on the dry well was blown up because of over pressure and they didnt vent, so this could be were the Hydrogen came in.

At the cabinet meeting there is one team that is focusing on shielding, another on robotics and another on SF removal.

Chuck believes that there is progress but there are more challenges on controlling the reactors and SFP. We cant call victory yet

(b)(5)

(b)(5)

(b)(5)

Facility:

We gave NISA the RST report and discussed it.

LT- there are questions on the requests on how to anticipate the TEPCO and Japan approval fit the availability of the equipment.

Chuck: Our request comes from the Cabinet meeting. They gave us a list of 14 items that they want and to be discussed. The process could take at least two days. Alan Blamey should have a copy of this list. Remember that those items are a request of additional information. Osano is the single contact that can speak from the government. We are going to take that list and build a SharePoint sheet.

The EST thinks that the logistical support for the equipment is given by the consortium. That this is not NRC business.

Chuck faxed in an agenda called the daily roundup of March 24th and is about the meeting with the Ambassador.

NRC team got embedded with TEPCO.

We will discuss tomorrow with TEPCO the strategies report.

There are two locations or facilities that we are not embedded. The J village and the LCC.

Tomorrow morning Chuck will send the minutes of tonights meeting. Jessica is in charge of the minutes. These are good to share with the consortium.

There is no other nation present in the meetings.

EST already called Alan Blamey for the 14 item list. (10:35 am)

Unit 2 has a bridge on the containment building because of all the steam.

(b)(5)

328/707

Source: Call from Chuck Casto
Address/Location:
Attachment:
<i>This information is Official Use Only - Sensitive Internal Information.</i>

Date/Time: 03/25/2011 09:55:17 (ET)
Position: EST Chronology Officer
Name: Hector Rodriguez-Luccioni
Record: 1828

Brief on Cabinet meeting:

It was discuss the measurement equipments.

They were asking questions about measurements of vegetation, tap water and food equipments. DOE is taking the lead on radiation equipment and robotics.

There was a number of american companies trying to do business with TEPCO because they thought that we want that, so we clarified that. That is TEPCO business.

The training on pumping system is going to be done tomorrow.

Unit 1 is on reservoir water but we have not verify that. We will check this on the morning.

The turbine building flooding on unit 3 could be from the RCS or the SFP
The explosion on Unit 3 is not clear what happen.

The seal up on dry well was blew up because of over pressure and they didnt vent, so this could be were the Hydrogen came in.

At the cabinet meeting there is one team is focusing on shielding, another on robotics and another on SF removal.

Chuck believes that there is progress but there are more challenges on controlling the reactors and SFP. We cant call victory yet.

(b)(5)

(b)(5)

We gave NISA the RST report and discuss it.

LT- there are question on the requests on how to anticipate the TEPCO and Japan

(b)(5)

approval fit the availability of the equipment.

Facility:

Chuck: Our request comes from the Cabinet meeting. They gave us a list of 14 items that they want and to be discuss. The process could take at least two days. Alan Blamey should have a copy of this list. Remember that those items is a request of additional information. Osano is the single contact that can speak from the government. We are going to take that list and build a Share point sheet.

The EST thinks that the logistic support for the equipments is given by the consortium. That this is not NRC business.

Chuck faxed in an agenda call the daily roundup of March th and is about the meeting with the Ambassador.

NRC team got embedded with TEPCO.

We will discuss tomorrow with TEPCO the strategies report.

There is two locations or facilities that we are not embedded. The J village and the LCC.

Tomorrow morning Chuck will send the minutes of tonight meeting. Jessica in charge of the minutes. These are good to share with the consortium.

There is no other nation present on the meetings.

EST already call Alan Blamey for the 14 item list. (10:35 am)

Unit 2 has a bridge on containment building because of all the steam.

Source: Call from Chuck Casto

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

(b)(5)

Date/Time:	03/25/2011 09:28:24 (ET)	Unit 1 has fresh water being injected.
Position:	EST Chronology Officer	The information was given from TEPCO to INPO and from INPO to us.
Name:	Hector Rodriguez-Luccioni	Unit 3 has radioactive water flooding in turbine building. Have a 100 R/h point sources around turbine building. Equipment for unit 3 is measuring 20 R/h.
Record:	1825	
Facility:		26 mR/h at the gate and it is going up and down because of the wind. Unit 5 RHR pumps are back in service. RST received a lot of data from the 0900 call and they are going to compare it with what they have.
Source:	RST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/25/2011 09:28:24 (ET)	Unit 1 has fresh water being injected.
Position:	EST Chronology Officer	The information was given from TEPCO to INPO and from INPO to us.
Name:	Hector Rodriguez-Luccioni	Unit 3 has radioactive water flooding in turbine building. Have a 100 R/h point sources around turbine building. Equipment for unit 3 is measuring 20 R/h.
Record:	1826	
Facility:		26 mR/h at the gate and it goes up and down because of the wind. Unit 5 RHR pump is back on service. RST team receive a lot of data from the 0900 call and they are going to compare it with what they have.
Source:	RST	

Address/Location:	(b)(5)
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Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/25/2011 09:13:44 (ET)	Cindy wants to know what kind of information can be released to the public, especially about damages of the core and the condition of the SFP. EST doesnt know what we can say to the public. Cindy will ask public affairs. EST will ask to OPA to send the latest talking points to Cindy.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1823	
Facility:		
Source:	Call	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/25/2011 09:13:44 (ET)	Cindy wants to know what kind of information can be release to the public, specially about damages of the core and the condition of the SFP. EST doesnt know what we can say to the public. Cindy will ask public affairs. EST will ask to OPA to send the latest talking points to Cindy.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1824	
Facility:		
Source:	Call	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/25/2011 08:45:49 (ET)	Created talking points for Chairmans 11:00 am call with the Ambassador. State Liaison participating in 11:00 am call with HHS. FED liaison is preparing consortium call agenda. <div style="border: 1px solid black; width: 600px; height: 20px; margin: 5px auto; text-align: center;">(b)(5)</div> Int liaison is arranging the 0930 call with RMT and the 1430 call with PMT and Germany, UK and Canada.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1821	
Facility:		
Source:	LT	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/25/2011 08:45:49 (ET)	Created talking points for Chairmans 11:00 am call with the Ambassador. <div style="border: 1px solid black; width: 450px; height: 20px; margin: 5px auto; text-align: center;">(b)(5)</div>
Attachment:		

Position: EST Chronology Officer	State Liaison participating in 11:00 am call with HHS.
Name: Hector Rodriguez-Luccioni	FED liaison is preparing consortium call agenda.
Record: 1822	(b)(5)
Facility:	Int liaison is arranging the 0930 call with RMT and the 1430 call with PMT and Germany, UK and Canada.
Source: LT	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/25/2011 08:31:45 (ET)	The fresh water is going to be injected using the fire trucks.
Position: EST Chronology Officer	Unit 1 has an increase in pressure in the reactor water vessel (around 50 psig).
Name: Hector Rodriguez-Luccioni	Fuel Pool in Unit 1 is lower priority.
Record: 1819	Unit 2 is at atmospheric pressure.
Facility:	Unit 3 reactor pressure is 5.5 psig.
Source: RST	RST will have a working level call with the consortium at 11:00 am.

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/25/2011 08:31:45 (ET)	The fresh water is going to be injected using the fire trucks.
Position: EST Chronology Officer	Unit 1 has an increase in pressure in the reactor water vessel (around 50 psig).
Name: Hector Rodriguez-Luccioni	Fuel Pool in Unit 1 is lower priority.
Record: 1820	Unit 2 is at atmospheric pressure.
Facility:	Unit 3 reactor pressure is 5.5 psig.
Source: RST	RST team will have a working level call with the consortium at 11:00 am.

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/25/2011 08:23:49 (ET)	TEPCO is planning on changing to fresh water injection today from the dam.
	(b)(5)

Position:	EST Chronology Officer
Name:	Hector Rodriguez-Luccioni
Record:	1817
Facility:	
Source:	EST

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/25/2011 08:23:49 (ET)	TEPCO is planing of changing to fresh water injection today from the dam.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1818	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/25/2011 08:17:07 (ET)	[Redacted]
Position:	EST Chronology Officer	[Redacted] (b)(5)
Name:	Hector Rodriguez-Luccioni	
Record:	1815	Other priority is to pass the data to DOE.
Facility:		We need to continue on making a list of all the runs we have with the assumptions and purposes.
Source:	PMT	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/25/2011 08:17:07 (ET)	[Redacted] (b)(5)
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	PMT priority is Tokyo run with realistic parameters.
		Other priority is to pass the data to DOE.

[Redacted] (b)(5)

Record: 1816	We need to continue in making a list of all the runs we have with the assumptions and purposes.
Facility:	
Source: PMT	
Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 08:06:06 (ET)	The EST will send an email to Josh with the information the commission office asked for.
Position: EST Chronology Officer	
Name: Hector Rodriguez-Luccioni	
Record: 1813	
Facility:	
Source: EST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 08:06:06 (ET)	The EST will send an email to Josh with the information the commission office ask for.
Position: EST Chronology Officer	
Name: Hector Rodriguez-Luccioni	
Record: 1814	
Facility:	
Source: EST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 07:31:35 (ET)	<p>No significant changes at the plants in the last 24 hours. There are uncertainties if there is fresh water in U1.</p> <p>The Bechtel equipment is at the Yokota Air Base and the plan is to get the Japanese for training and then to move the equipment to site.</p> <p>The barges status is still uncertain.</p> <p>Last night we provided the RST feed backs to the site team in japan.</p> <p>We are working on the second NARAC run, revising the assumption we made.</p>
Position: EST Chronology Officer	
Name: Hector Rodriguez-Luccioni	
Record: 1812	

(b)(5)

Facility:

At 11:00 am the Chairman will talk with the Ambassador.

The 10% release in Unit 1 is from venting not containment damage.

In unit 2 there is a 5 in^2 hole.

The NARAC runs time goes back and forward.

We are working in put together and dismiss this lack of clarity of all the runs with the dates, assumptions, and results.

There is no disagreement that putting sea water on the reactor is a bad thing. The efforts is to change to fresh water.

The commissioner office ask for a copy of the RST analysis of the Units and recommendations.

Source: EST Morning Briefing

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 07:23:33 (ET) **Plant status remains unchanged. We are having mixed communications in whether U1 has fresh water or not.**

Position: EST Chronology Officer

Name: Hector Rodriguez-Luccioni **PMT- is working on the NARAC runs and alternative ways of getting more realistic assessments.**

Record: 1810 **The liaison team prepares a package for your 11:00 am call.**

Facility: **The priorities are to clarify with Chuck the status of the plants. Follow up with the strategies talked yesterday** (b)(5)

A positive view is that passing the days we have less decay heat to remove and the negative is the accumulation of salt on the core.

EST briefing to the

(b)(5)

Source: Chairman

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 07:23:33 (ET) Plant status remain unchain. We are having mix communication in U1 have fresh water

Position: EST Chronology Officer or not.

Name: Hector Rodriguez-Luccioni PMT- is working of the NARAC runs and alternative ways of getting more realistic assessments.

Record: 1811 The liaison team prepare a package for your 11:00 am call.

Facility: The priorities is to clarify with Chuck the status of the plants. Follow up with the strategies talked yesterday (b)(5)

A positive view is that passing the days we have less decay heat to remove and the negative is the accumulation of salt on the core.

Source: EST briefing to the Chairman

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 07:22:29 (ET) After the Morning Briefing the EST wants to make sure that all the teams have the same

Position: EST Chronology Officer agenda and priorities list.

Name: Hector Rodriguez-Luccioni

Record: 1808

Facility:

Source: EST

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 07:22:29 (ET) After the Morning Briefing the EST wants to make sure that all the teams has the same

Position: EST Chronology Officer agenda and priorities list.

Name: Hector Rodriguez-Luccioni

Record:

(b)(5)

Record:	1809
Facility:	
Source:	EST

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 09:41:56 (ET)	<p>Josh: Chairman talk with the secretary. They agree to jump in our calls starting today and the NRC jumping in their calls. We need to brainstorm who is going to be in those calls from NRC.</p> <p>The ambassador call with the chairman went well and there is going to be another call in an hour.</p> <p>EST Chronology Officer - Hector Rodriguez-Luccioni at 07:00:55 on 3/25/2011</p>
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1764	
Facility:		
Source:	Call	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 09:41:56 (ET)	<p>Josh: Chairman talk with the secretary. They agree to jump in our calls starting today and the NRC jumping in their calls. We need to brainstorm who is going to be in that calls from NRC.</p> <p>The ambassador call with the chairman went well and their is going to be another call in an hour.</p> <p>EST Chronology Officer - Hector Rodriguez-Luccioni at 07:00:55 on 3/25/2011</p>
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1807	
Facility:		
Source:	Call	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/25/2011 04:50:31 (ET)	<p>PMT provided draft reentry recommendations. ET provided comments. PMT will revise and send to NRC Team in Japan.</p>
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	
Record:	1805	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	

(b)(5)

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 04:18:55 (ET)	ET received fax with Fukushima Response org chart from NRC Team (CCasto) in Japan.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1803	
Facility:	
Source: NRC Team	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 04:18:55 (ET)	ET received fax with Fukushima work chart from NRC Team in Japan.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1804	
Facility:	
Source: NRC Team	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 04:06:52 (ET)	Discussion of NRC paper with cooling recommendations. Site Team on board with recommendations. Venting discussion planned for consortium telecon later today. RST will make a few edits and send to Chuck.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1802	
Facility:	
Source: RST	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 03:28:04 (ET)	Chuck requests if SIT report could be issued at 0430 (rather than 0600) to support Ambassador meeting. ET will do.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1801	Discussion of Chucks e-mail on 4 questions from Admiral Willard. Military command wants to make sure they protect the health of their soldiers and sailors. Admiral pushing for greater penetration into local coordination center, etc. Chuck working on responses to these questions. TEPCO has accepted NRC into conference room in TEPCO
Facility:	

(b)(6)

Facility: headquarters. Chuck notes that there will be greater penetration as industry gears up. Chuck thinks that we are being balanced in our efforts. Chuck will send matrix and copy of strategic plan to ET. ET reviewing RST recommended actions and preparing points for Chairmans meeting with Japanese Ambassador. Chuck will prepare notes on his meetings with the Ambassador to provide to ET.

Japan training personnel for use of pumping system in preparation for delivery. NRC Team member flying up to observe preparation. TEPCO trying to hook up additional small freshwater supplies at site while waiting for Navy barge.

Source: Chuck Casto

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 02:06:10 (ET) **SIT report from FEMA contained consortium language that was in NRC SIT report as official use only.**

Position: EST Chronology Officer

Name: Thomas Scarbrough **US AID is on distribution for NRC SIT report. ET directed that LT notify US AID of this information but that it is official use only. ET plans to remove this information from NRC SIT report as part of streamlining the report. US AID can request industry for public information on consortium.**

Record: 1800

Facility:

Source: LT

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 01:53:13 (ET) **Discussed request from US AID on availability of public information on consortium. ET stated that LT should indicate to US AID that we do not have any detailed public information on consortium. LT can refer US AID to industry or DOD for possible public information.**

Position: EST Chronology Officer

Name: Thomas Scarbrough

Record: 1799

Facility:

Source: LT

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/25/2011 00:00:14 (ET) **(b)(5)** **Talking points prepared for Chairman meeting with Japanese Ambassador. Chairman interested in status of US-Japan coordination. LT will discuss with NRC Team in Japan. ET asks LT to check on (1)**

Position: EST Chronology Officer

(b)(5)

Name:	Thomas Scarbrough	reentry efforts by other organizations and (2) survey support for reentry.
Record:	1798	
Facility:		RST: NRC and other consortium members working on long-term cooling recommendations. NISA document on long-term cooling plan being translated. RST will compare with NRC recommendations. NRC Team in Japan has latest NRC recommendations on long-term cooling.
		<p>Priorities:</p> <p>(1) Unit 1 decided not to vent yesterday; (2) Unit 2 containment barriers; (3) Unit 3 containment; (4) Unit 4 SFP cooling.</p> <p>RST will check on Unit 5 SFP temperature status. RST requested by PMT to help with source term.</p> <p>Marty: Provide final (not interim) version of recommendations to Chuck for his meetings. Might need to update later if information changes.</p> <p>(b)(5)</p>
		<p>PMT: (b)(5)</p> <p>(b)(5)</p>
		<p>(b)(5) ET asks PMT to prepare plan for reentry for personal effects and trend available data. PMT will flesh out reentry plan. PMT will develop technical approach for source term and what information is needed. PMT working on Congressional questions. PMT will trend data if time permits tonight. PMT has spectral data from DOE that suggests gap release rather than core damage. PMT believes hydrogen release indicates that there was core damage. Therefore, ground deposition might not be helpful for core damage evaluation. PMT will check on iodine levels indicated at Oyster Creek.</p> <p>(b)(5)</p>
		(b)(5)

ET will prepare e-mail to NRR on setting up process for line organization to review rad input from power plants.

Dave Hermann (NR): Discussed tasker for support to Admiral Willard. ET indicates this task is being worked.

Source: ET Briefing

Address/Location:

Attachment:

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Date/Time: 03/24/2011 21:02:06 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1797

Become clear of NRCs importance in assisting Japanese. Now that weve seen that Ambassador Roos and embassy have one set of experts. Also have Joint Taskforce in support of General Iriki. Can see that we have an ability through military to provide expertise, influence, etc, through bilateral military relationship. Admiral Willard went over to embassy. Will be back in Hawaii tomorrow. Having an NRC liaison (not tech expert) would be good. Please consider dispatching an appropriate-level liaison to Admiral Willard as soon as you can (in Honolulu). Person looking at would be a Bill Borchardt type. That is unlikely.

(b)(5)

Facility:

He has leverage in deputies meetings. Want someone who knows NRC well enough to provide Admiral each day with what they want to see happen. Someone who knows business and can be reading internal NRC emails and be able to report back. About 10-19 days would be needed. Until get through initial salt to freshwater problem. Will we use unmanned vehicle to create sarcophagus? Brought in DOE guy from ORNL who has helped staff understand what is going on with readings, and helped people reach back to DOE.

Source: Piccuta (Pacific Command)

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/24/2011 20:57:39 (ET)

Position: EST Chronology Officer

Have final version of report - NR reviewing.

(b)(5)

Name:	Rebecca Karas
Record:	1796
Facility:	
Source:	RST

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 20:46:57 (ET)	Need to talk about de-staffing ops center. Wanted to gradually reduce staff. A lot of work needs to go back into the line organization.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1795	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 20:43:20 (ET)	Marty - Chuck has been able to convey to Japanese that freshwater is not end of this. Chuck is trying to convey to them that this is first of many steps. IAEA has also come forward as multi-national coordinator, so need to connect DOD-led support team with IAEA and they need to start connecting with other countries so we are not duplicating efforts.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1794	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 20:30:08 (ET)	Barges are in Japan. Admiral in Hawaii asking just for logistics person. Looks like will have someone assigned for logistical support team soon - they are just looking for person to be in charge. Admiral Rodin giving great support. Marty - TEPCO has agreed to provide conf room and 5 spots for embeds. Would be good spot for logistics team. NR will embed Japanese speaking person in J Village (staging area at stite) and Crisis Mgt Center. We meet with Crisis Mgt Center, but dont have someone there. We also dont have anyone at J Village. They will have clearest view of what needs are. At cabinet meeting, we confirmed that all requests will go through cabinet meeting. Japanese will present spreadsheet of needs tonight. We also have spreadsheet of what we have. They
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1793	

(b)(5)

Facility:	also agreed to share data for PAGs. Have asked DOE to take lead in sharing data for PAGs. Also share our sampling with them. Original water line that TEPCO reinitiated from dam is not sufficient for what they need. The system we have should fit in and give them more sustainable water supply and pumps. There is also talk of bringing in another high level person - may not work out.
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Source:	Chuck & Chairman
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Address/Location:	
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Attachment:	
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This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 19:58:03 (ET)	Little changed on plant status. Unit 1 confirmed to be cooled with freshwater. Others with seawater. U1 receiving power from U2. They believe the fuel may have slumped to bottom of core for 1-2. Slow heatup of SFP in Unit 1. Doing some testing in U2 related to power restoration. Working to attach fire hoses for Unit 1 to be able to cool sfp. They are recovering instrumentation in 1-4.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1792	

Facility:	<p>(b)(5)</p> <p>GE, Bettis, etc spoke on conf. call and have status and recommendations for each reactor. All parties in alignment. Concern about salt gone up today. Believe some salt may have built up all the way to lower core plate. Recommendations include attempting to inert primary containment with nitrogen. Also attempting to flood primary containment.</p> <p>(b)(5)</p> <p>Admiral in Pacific Fleet is working on getting freshwater barges to Japan and would like logistical support. NRR issuing RIS on Monday to get monitoring data from licensees. DOE preparing another AMS flight. Dont have many rad readings. Is 20mR/hr at main gate. Going to try and trend data points. Need to continue to align on source term for modeling. There are a lot of conservatisms in Melcor/transpacific model. It is not accurate, and shouldnt be issued. Japan wants KI, the unmanned aircraft. We are working this, and will be staffing a logistical team in Japan. INPO concerned they have a million KI tablets. Japanese will be interested. PMT working on short-term re-entry plans for retrieval of personal effects. Casto/Monninger to return this weekend. Did change U1 information. Also have information now on 5" square hole in containment in Unit 2. Working different model based on this information. RST - we are doing last-minute fact-checking on assessment document. We found out that Japanese do have SAMGs, so we will try and use the</p>
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(b)(5)

same kind of language so they will match. Also got their integrated plan and procedure to deal with saltwater and the general situation. We will cross-check our document with theirs. Franovich: sounded like we were taking proactive approach to coordinate. No, at this point, that hasnt been determined. Chairman working this. Leaning towards Pacific Command. Does data we got include all 6 units? Likely a number. Saw 1-2 data. Assuming several. Not translated yet. Rogge: hi-res photos? yes. Castleman: update on bechtel equip? RST: they are working on staging, etc. On U3 in sfp, do we have indication that it is able to hold water? Know it has low water level as we have heard. They have been pumping seawater into it. Believe fuel pool is heating up, but is cooled. Do believe based on info from TEPCO on neutron sources that some fuel may have been ejected from SFP.

Source: TA brief

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/24/2011 19:34:48 (ET)
 Position: EST Chronology Officer
 Name: Rebecca Karas
 Record: 1791
 Facility:
 Source: Chairman

On getting logistics/communications support team into Japan. That is moving forward, so lets make sure we can put it to good use. No contact yet, but Tokyo folks should get that. It will be under auspices of broader humanitarian effort. Chuck had asked for about a week ago. Will likely be DOD personnel leading it, and will also be a central coordination function for INPO/consortium also.

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/24/2011 19:14:32 (ET)
 Position: EST Chronology Officer
 Name: Rebecca Karas
 Record: 1790
 Facility:
 Source: RST

Received table of plant parameters in detail from individual TEPCO employee. Being translated and treated as sensitive.

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: Admirals foreign policy advisor wants to talk to someone - asked for Bill. Wants

(b)(5)

Date/Time:	03/24/2011 18:30:58 (ET)	someone from NRC to support the Admiral at PCO. Piccuta is who we should talk to. Discussion about having routine phone call with him instead. Will talk to him at 9pm.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1789	
Facility:		
Source:		

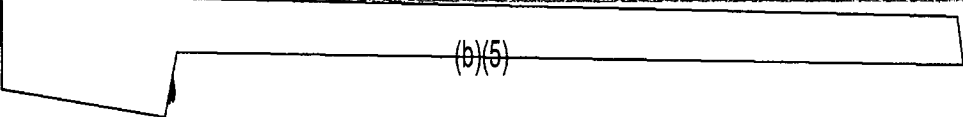
Address/Location:	
Attachment:	

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Date/Time:	03/24/2011 18:28:26 (ET)	Chairman has meeting with Japanese Ambassador in Washington tomorrow. Wants update/more info for background for that call.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1788	
Facility:		
Source:	Bill	

Address/Location:	
Attachment:	

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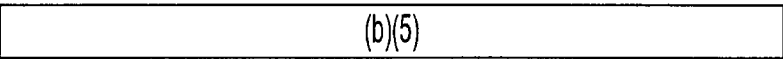
Date/Time:	03/24/2011 17:26:34 (ET)	 (b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1787	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 17:04:17 (ET)	Unit 1: Can get water in via FW or CS (but CS likely clogged with salt). Outside plant less than 6R. Working on getting comments on doc. Fuel pool slowly heating, not at saturation. NR has hypothesis that is the reason Unit 4 had Hydrogen explosion is because when U3 had hydrogen explosion, the pipes connect, and this affected the other unit. Believe focus should be on cores, not SFPs.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1786	
Facility:		
Source:	RST	

Address/Location:	
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 (b)(5)

Attachment:		
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Date/Time:	03/24/2011 16:27:51 (ET)	Maybe just give Chairman the highlighted areas from the last status report. Highly unlikely he will get asked difficult questions.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1785	
Facility:		
Source:	Bill	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/24/2011 16:12:28 (ET)	Document out for comment now. Goal is to get document into hands of in-country team. Can use it to talk from when speak to Japanese. Being coordinated with Bettis, DOE, GE, etc. RST says U1 was never on fresh water. NISA said in press conference was on freshwater. Most recent sitrep says seawater. Maybe ran out of CST water. Chairman talking to head of NISA soon - wants background on todays issues, in case hes asked specific questions.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1784	
Facility:		
Source:	RST	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/24/2011 15:20:24 (ET)	Focus of priorities remains similar. Focus on reactors primarily. Trying to get fresh water in. Dont know if made success in getting larger pumping quantities in. Unit 1 is on freshwater through CST. Working with military to bring in large barges. Is concern about saltwater being injected. Hope is to redissolve some salt by using freshwater. DOE and others all have own sitrep reports. Trying to align on dose projection model also. Have been invited into TEPCO crisis center with INPO rep. (b)(5) Does Chuck still want PM leader? Not sure. Impression is we are past that. They are interested in pumping system, aircraft, protective gear, KI (HHS has a million tablets). They plan to send TEPCO technicians to Yokoda to train on system. How long is it going to take before we pump water in and it doesnt boil off - when get steady state. Right now dont know geometry of core. Is it possible core has left vessel? Yes. Not same for SFPs. But right now not significant containment breach? No. Doing some controlled venting. Have heard different things on whether drywell flooded. Recommendations they are
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1783	
Facility:		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
		(b)(5)

discussing is trying to cover lower part of RPV.

Source: Chairman

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/24/2011 14:57:11 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1782

Facility:

Source: Bill

DOE believes imminent high likelihood of problem due to seawater injection - NR thinks it is a matter of days. Told Troughtman we would look at and give him a call back. He wants to make sure the govt agencies are aligned. RST developed status summary and next steps. U1 is on freshwater injection now. Need to recover for 2+3.

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/24/2011 13:53:00 (ET)

Position: EST Chronology Officer

Name: Hector Rodriguez-Luccioni

Record: 1779

Facility:

Source: EST

We have two NARAC runs.

(b)(5)

(b)(5)

(b)(5)

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/24/2011 13:53:00 (ET)

Position: EST Chronology Officer

Name: Hector Rodriguez-Luccioni

Record: 1781

We have two NARAC runs.

(b)(5)

(b)(5)

(b)(5)

Facility:	EST Chronology Officer - Hector Rodriguez-Luccioni at 14:00:37 on 3/24/2011
Source:	EST

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 13:53:00 (ET)	We have two NARAC runs.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	(b)(5)
Record:	1780	
Facility:		Second Run: Called Tokyo is about the 3 cores with containment failure and SFP.)
Source:		

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 13:24:13 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	EST Chronology Officer - Hector Rodriguez-Luccioni at 13:33:18 on 3/24/2011
Record:	1777	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 13:24:13 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1778	
Facility:		
Source:		

Address/Location:	
Attachment:	

(b)(5)

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 12:44:32 (ET)	ETS sent the Q&A for seismic activities and nuclear power plant to Daryl Johnson of NSIR/DSO/ILTAB for DHS HQ EST Chronology Officer - Hector Rodriguez-Luccioni at 12:46:49 on 3/24/2011 It was a request from Secretary Napolitano EST Chronology Officer - Hector Rodriguez-Luccioni at 13:07:14 on 3/24/2011
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1773	
Facility:		
Source:	ETS	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 12:47:24 (ET)	We have the 90 day quick look team approve. This will not interfere with our response to Japan.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1775	
Facility:		
Source:	Call from the Chairman	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 12:44:32 (ET)	ETS sent the Q&A for seismic activities and nuclear power plant to Daryl Johnson of NSIR/DSO/ILTAB for DHS HQ EST Chronology Officer - Hector Rodriguez-Luccioni at 12:46:49 on 3/24/2011
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1776	
Facility:		
Source:	ETS	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 12:44:32 (ET)	ETS sent the Q&A for seismic activities and nuclear power plant to Daryl Johnson of NSIR/DSO/ILTAB for DHS HQ
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	

([redacted])

Record:	1774
Facility:	
Source:	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/24/2011 12:39:06 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1772	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/24/2011 11:27:13 (ET)	The EST will provide Brian Sheron with the latest RST assessment of the plant status for the DOE daily call. This information is going to be send to Richard Lee also who is going to participate on DOE call too. EST Chronology Officer - Hector Rodriguez-Luccioni at 11:46:14 on 3/24/2011
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1770	
Facility:		
Source:		

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/24/2011 11:27:13 (ET)	The EST will provide Brian Sheron with the latest RST assessment of the plant status for the DOE daily call.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1771	
Facility:		
Source:		

Address/Location:	
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(b)(5)

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 11:15:42 (ET)	RES is going to support with two people the daily call of DOE.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1769	
Facility:		
Source:	Call with Brian Sheron	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 11:14:39 (ET)	EST is considering the office of RES to participate in the meetings of DOE.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1768	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 11:04:28 (ET)	The NRC wants a list of the different scenarios used on the NARAC model with the assumptions and the purposes.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1767	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 10:44:54 (ET)	We need to integrate an analysis of all the data from the military, NRC, EPA, DOE for the public.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-	

(b)(5)

Name:	Luccioni
Record:	1766
Facility:	
Source:	EST
Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 09:50:06 (ET)	Chuck: I had a two and a half meeting. The admiral will look for different strategies for every reactor and SFP and what where the right approaches and long term strategies.
Position:	EST Chronology Officer	The biggest thing to accomplish is the degree of penetration the agencies have.
Name:	Hector Rodriguez-Luccioni	Weber: we were requested to sent our team to be in the respond center.
Record:	1765	Chuck: We are not embedded in the crisis center.
Facility:		They want mass of bottle of water. They accepted all the radiation monitoring equipment. They want water sampling gamma spectrometry. DOE is doing the radiation monitoring and DOD is doing all the vehicle.
		We told them that they needed to work faster and that they can do more and that we would work hard to help them.
		The pump equipment is going to start tomorrow night.
		The navy is in process of sending the barges with fresh water. They are making arrangements for access.
		Weber: Are they are thinking if plan A dont work?
		Chuck: We were doing a contingency planing and we will share that.
		They ask for advise of removing SF from the building.
		Borshardt: The Chairman talk to the ambassador and the secretary about the salt issue. DOE has a brainstorming with the secretary everyday and the NRC is going to participate on that now.
		Weber: who do you think should be doing this? We are going to work on this and do a proposal and give you the input on that.
		Borshardt: DOE is going ot participate on the consortium call.
		Chuck: DOE is working with robots to give continues temperature levels on the SF.

Source:	Call from Chuck
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Address/Location:	
Attachment:	

(b)(5)

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 09:41:56 (ET)	<p>Josh: Chairman talk with the secretary. They agree to jump in our calls starting today and the NRC jumping in their calls. We need to brainstorm who is going to be in that calls from NRC.</p> <p>The ambassador call with the chairman went well and their is going to be another call in an hour.</p>
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1806	
Facility:	Three Mile Island	
Source:	Call	

Address/Location:

Attachment:

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Date/Time:	03/24/2011 08:27:34 (ET)	<p>EPA report rain water samples that shows 18-19 pCu/L.</p> <p>This is 10 times drinking water standard</p> <p>EST Chronology Officer - Hector Rodriguez-Luccioni at 08:28:48 on 3/24/2011</p> <p>This was a report from Utilities to the NRC (not EPA). It is Iodine 131 18-19 pCi/L</p> <p>EST Chronology Officer - Hector Rodriguez-Luccioni at 09:07:30 on 3/24/2011</p>
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1761	
Facility:		
Source:		

Address/Location:

Attachment:

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Date/Time:	03/24/2011 08:27:34 (ET)	<p>EPA report rain water samples that shows 18-19 pCu/L.</p> <p>This is 10 times drinking water standard</p> <p>EST Chronology Officer - Hector Rodriguez-Luccioni at 08:28:48 on 3/24/2011</p>
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1763	
Facility:		
Source:		

Address/Location:

Attachment:

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Date/Time:	03/24/2011 08:27:34 (ET)	<p>EPA report rain water samples that shows 18-19 pCu/L.</p>
Position:	EST Chronology Officer	

(b)(5)

Name:	Hector Rodriguez-Luccioni
Record:	1762
Facility:	
Source:	

Address/Location:

Attachment:

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Date/Time:	03/24/2011 08:08:09 (ET)	We understand that some of the state have KI available but we are not sure. The chairman agree we dont need to go and ask the states.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	(b)(5)
Record:	1760	
Facility:		
Source:	EST	

Address/Location:

Attachment:

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Date/Time:	03/24/2011 08:05:38 (ET)	NARAC run will be run today. I want the PMT and RST to work with what should be the best estimate of parameters used.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1759	
Facility:		
Source:	EST	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/24/2011 07:33:05 (ET)	NISA had a press conference today in Japan and they indicated that they are using fire trucks with fresh water in Unit 1, and continuing on Unit 2 and 3 but with low flow rates. The three unit containment integrity is questionable. Pump from Unit 5 trip off on the conversion to off site power. It should be reestablish today.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	Power has been restore to all units.
Record:	1758	We are working with DOE on a conference call with industries and other agencies on

(b)(5)

Facility: solid accumulation on the vessels and we want to focus communication with the Japanese counterparts.
 NR assessment is about what actions can we make to mitigate the problem in Japan.
 (b)(5)
 (b)(5)
 In 36 to 48 hours nave will arrive with fresh water.
 It took three flights to deliver the first train.
 The previous assessment was posted on the DOE website.
 In term of the SFP fire we are not sure what it is.
 Our primary protection actions are in concern of our people and the military. We are thinking on additional shelters and drinking water.
 At this point we are not changing our protection actions to the US citizens in Japan.
 Next call will be at 2000.

Source: Morning Briefing

Address/Location:

Attachment:

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Date/Time: 03/24/2011 07:20:34 (ET) Early morning pres conference. They are now injecting fresh water to Unit 1 using the fire trucks. They are interested of bringing a Navy that have fresh water.
 Position: EST Chronology Officer
 Name: Hector Rodriguez-Luccioni The flow rate to Unit 1 and 3 are low, but unknown.
 Record: 1757 The integrity of all 3 units is questionable.
 All four unit have power with limit availability of equipment.

Facility: We are planing a call with DOE and EPA about measurements of reactivity on the USA
 (b)(5)
 Bill: Chairman: Set a call with the ambassador. I am not so worry on continue and increase the NRC support team. We can push a little bit more. I will talk with the ambassador about this.
 Weber: (b)(5)

(b)(5)

Chairman: How are we progressing on a model that we can share with the Japanese?
Weber: we have one, but I will give you an input on that.

Source: Chairman Call

Address/Location:

Attachment:

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Date/Time: 03/24/2011 07:12:46 (ET)

We have an analysis develop by the RST that provide the current status of the plant and the actions that should be taken.

Position: EST Chronology Officer

Name: Hector Rodriguez-Luccioni

(b)(5)

Record: 1756

Facility:

Source: EST

Address/Location:

Attachment:

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Date/Time: 03/24/2011 07:06:09 (ET)

The team in Japan still have only one guy working at night. The bulk is working during the day.

Position: EST Chronology Officer

Name: Hector Rodriguez-Luccioni

Record: 1755

Facility:

Source: EST

Address/Location:

Attachment:

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Date/Time: 03/24/2011 07:00:30 (ET)

(b)(5)

Position: EST Chronology Officer

Name: Hector Rodriguez-Luccioni

Record: 1754

Facility:

Source: EST

(b)(5)

Address/Location:	
Attachment:	

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Date/Time: 03/24/2011 06:35:31 (ET)	<p>New shift arriving...</p> <p>Discussion on fresh water sources that may be being used for Reactor 1. Containment is questionable for all three units. Drywell pressure is 58psi, has been going up. Unit 5 - trying to figure out if the problem is pump, component, or what part is not working. The initial data has gone to EPA. During Day Shift the PMT will engage other agencies. Industry will be gathering that.</p> <p>Discussion on Naval Reactors request for the paper with status, possibilities, and recommendations. RST should finalize this document on day shift. We said it would be done by the end of the day. Weve been working with GE to get this draft prepared. Recommendation to pass it by Bill Borchardt and the chairman before passing to NR.</p>
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 1753	

Facility:	(b)(5)
	<p>Reviewing NEI recommendations. Fresh water is better than sea water.</p> <p>We got word from Japan team that the chairman was going to talk to General with an objective of restoring roles and responsibilities. Where we are supporting NISA instead of the other way around.</p>
	(b)(5)
	In order to restore people to living in the area things need to be stable and we need good data.

Source: ET	
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Address/Location:	
Attachment:	

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(b)(5)

Date/Time: 03/24/2011 06:18:32 (ET)	Japan team called in to us, Mike Scott. The Japanese, NISA, are requesting our advice for recovery, TMI kind of recovery. They are asking that we make an assignment for any advice that we can give them concerning longer-term recovery. Look for historical documents that help tell the story. Mike Scott and his team are happy that Japanese are looking ahead and asking for help. We may want to look at giving them expertise in the next team that we send to Japan. Passed this information to LT (Jake). NRC Historian may be able to identify the appropriate documents. Important to fully understand the request.
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 1752	
Facility:	
Source: Randy	

Address/Location:	
Attachment:	
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Date/Time: 03/24/2011 06:03:42 (ET)	Weve come up with a beginning conversation document concerning what it would take to re-enter to pick up things from your house. Found documents that we use for situations like this to lean on. Want to pass it by some more eyes before we send it out. The next shift will review it and pass it to LT to send it off to the ambassador.
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 1751	
Facility:	
Source: Randy	

Address/Location:	
Attachment:	
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Date/Time: 03/24/2011 05:54:40 (ET)	(b)(5)	Our SRM	
Position: EST Chronology Officer			
Name: Nick Ballam			should help answer in the short-term.
Record: 1750			
Facility:			
Source: ET			

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/24/2011 05:51:11 (ET)	Naval reactors told us 350,000 gallons per barge. Naval Reactors told provided this information and Chuck confirmed it.
Position: EST Chronology Officer	
Name: Nick Ballam	

(b)(5)

Record:	1749
Facility:	
Source:	ET

Address/Location:	
Attachment:	

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Date/Time:	03/24/2011 05:50:19 (ET)	Capacity of the navy barge(s). Get the full capacity from the RST for each barge.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1748	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/24/2011 05:37:20 (ET)	Had good discussion with GE info and Site Team. We developed a draft. GE and INPO both agreed with the recommendation across the board in accordance with the NUREG to flood the containment. Reactor Water Cleanup discussion. If thats not available go with RHR.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1747	
Facility:		INPO has a couple requests that they are working on questions to answer. Hydrogen-Oxygen mixture in vessel. On Unit 3 thats still steaming, a recommendation is to put external water on it to act as a scrubber. INPO guy thinks this would be good for a consortium call.
Source:	Brian	

Address/Location:	
Attachment:	

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Date/Time:	03/24/2011 05:28:12 (ET)	Brief discussion on which US sites have seen traces of radiation thus far.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1746	

(b)(5)

Facility:	
Source: ET	

Address/Location:	
Attachment:	

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Date/Time: 03/24/2011 05:02:58 (ET)	Status check on previous Naval Reactors request. We are still waiting on GEs input to complete the request.
Position: EST Chronology Officer	
Name: Nick Ballam	Distribution of K.I. The Japanese are all used to that already. No sense of alarm comes with the distribution.
Record: 1745	
Facility:	
Source: Dave Harmon	

Address/Location:	
Attachment:	

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Date/Time: 03/24/2011 04:54:27 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 1744	
Source: Randy	

Address/Location:	
Attachment:	

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Date/Time: 03/24/2011 03:55:01 (ET)	ET informs Dan & Chuck that Naval Reactors has asked us to develop plant status now, possibilities for the future, and recommendations for them. Recommendations such as filling water up to the dry wells in case they go or have gone ex-vessel. What could happen, and let the Japanese decide if they think these possibilities have occurred or are probable. At that point give them the recommendations.
Position: EST Chronology Officer	
Record: 1743	
Facility:	We continue to support the PAX.

(b)(5)

(b)(5)

Chuck joins call. Needs to debrief Marty on a meeting that occurred with the ambassador and some other 3 and 4 star generals. Will call back later on a new line.

Meeting occurred discussing how to get a Navy Barge in close to the site.

Source:	Phone Call with Dan
Address/Location:	
Attachment:	

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Date/Time:	03/24/2011 03:51:47 (ET)	Discussion on whether reactors 2 and 3 are ex-vessel. There have been discussions at NISA regarding this possibility. We dont have access to information on how high the water levels are in the reactors as part of our status sheet.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1742	
Facility:		Does our survey data support that? We dont know yet.
Source:	Brian	

Address/Location:	
Attachment:	

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Date/Time:	03/24/2011 03:30:17 (ET)	Marty - We will be working on three or four strategies as opposed to one single strategy.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1741	
Facility:		Discussion on staffing with RST to coordinate with the Japanese. Protective Measures Team... May start scaling back staffing. LT - could be scaled back to a minimum set of functions. Would need somebody here as long as we had a team of 6 at the site. The federal liaison and a coordinator would both be important people to have. EST Chron officer may be scaled back as well.
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/24/2011 02:52:17 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1740	

(b)(5)

(b)(5)

BMI may be more likely to leak through due to weak points near the bottom of the vessel. In peach bottom vessel melt was less than 12 hours with loss of all cooling power.

Consequences? The containment gets lost at the same time and then you have a somewhat filtered release.

(b)(5)

Facility:

The source has given up a lot already. The fission product left days ago. It might be like a Sorca event, which was an ex-vessel as well.

Sorca guys believe that a spent fuel hydrogen explosion didnt make sense. The hydrogen would rise to the top of the containment and explode there.

(b)(5)

Randy - Would like to release plant monitoring data from the last couple of days to EPA. The data is below reportable. Doesnt appear to be trending. See some up and down in the palo verde data but its all 10 to the minus 13.

Dry well moitor readings that we got a while back... The ITM gives information for 1 hour and 24 hour readings. If that were a 24 hour reading it would correspond to about 2% melt. Dont know how to determine the veracity of this information.

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/24/2011 02:09:26 (ET)

Position: EST Chronology Officer

Requesting a formal paper written from the NRC that can be shared with other organizations including DOE, State, etc. Giving a status of the situation (reactor

(b)(5)

Name: Nick Ballam

Record: 1739

conditions) and what it means for American Citizens in Japan.

We need some type of understanding what the source term is to help with this.

Marty - We can bring an assessment of where the reactor is today and where it might go. Another priority is to give the Japanese recommendations on what measures they could take to help their reactor.

The Japanese are throttling flow. Should we make a recommendation to push towards filling the dry well (open up the throttle)?

Discussion on the status of the fuel rods. Most likely not in a nice straight line anymore... may have leaked down.

(b)(5)

NRC published a document several days ago which received comments by the Naval reactor folks.. Will there be another revision to this document? Dave will send an email regarding this issue.

(b)(5)

Marty - Naval Reactors and DOE are now in the lead for protective actions in Japan.

Brian - We have some of that started, but not complete yet. Recommendation to switch to fresh water injection. Will get a peer review on day shift and proceed.

Time is an issue... By the time we have our recommendation (24 hours) the conditions likely have changed.

Try to get more information from GE, either tonight or during the day shift. Chairman may want to talk about this on the 8:00 deputies. It would be good to get something out

Facility:

(b)(5)

to Naval people if this will be discussed at a meeting tomorrow.

What degree of certainty is expected? We would be giving a severe accident management recommendation.

24 hours ago State Department had the lead and they were going to publish something that would be the starting point for US policy on protective actions. Dont know the current status on this.

We are going to assume that the core is slumped. This puts different emphasis on things than earlier today. Should keep water going in there.

Dave - We do know they are pushing water in with various methods. We dont know for sure whether the core is slumped or not.

Need to decide whether we want to move to strategies based on ex-vessel core versus strategies to keep the core in the vessel.

We need to understand why they are throttling. They probably dont want to put too much salt water in and they dont want to fill up the dry well.

The trending of the temperature monitor shows that it is not a severed cable.

We dont want to change our strategies without input from GE.

We havent given a recommendation yet regarding the water to TEPCO. They havent asked for it yet.

The primary request is: What is the condition of the core and what could happen? We would provide a scenario, ask if the Japanese think that we are going down this path, then we provide them with recommendations on what they may want to be doing.

Source: Dave Harmon

Address/Location:

Attachment:

(b)(5)

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Date/Time:	03/24/2011 01:51:45 (ET)	Discussion on placement of functions that support the chairman, which ones lie with NSIR vs. NRR.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1738	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/24/2011 01:31:40 (ET)	The goal in the first 30 days is to come out with "What is it that we really need to focus on?". One person will be dedicated to "Station Blackout". Not necessarily have dedicated teams but a matrix approach.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1737	
Facility:		
Source:	ET	Discussion on Ops Center staffing issues. May try to scale back night shift positions.

Address/Location:	
Attachment:	

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Date/Time:	03/24/2011 01:28:20 (ET)	It would be helpful if GE produced the four strategies for us. The letter only addressed one strategy, but GE came up with four strategies that we endorse.
Position:	EST Chronology Officer	
Name:	Nick Ballam	Calculations are still being made towards these strategies. We are not ready to give the strategies at this point. There are unknowns concerning the salt potentially clogging things up.
Record:	1736	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/24/2011 01:04:07 (ET)	Have Mike call Pete Lyons in the morning about the letter that Secretary Chiu is concerned about.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1735	

(b)(5)

Facility:	
Source:	ET
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time:	03/24/2011 00:55:50 (ET)
Position:	EST Chronology Officer
Name:	Nick Ballam
Record:	1734
Facility:	
Source:	ET
<p>Heard a report that we arranged 13 busses to evacuate Americans within that 50 mile radius, and 10 of them were not needed. We have over 110,000 in the country.</p>	
(b)(5)	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time:	03/24/2011 00:51:47 (ET)
Position:	EST Chronology Officer
Name:	Nick Ballam
Record:	1733
Facility:	
Source:	Jake
<p>Will be issuing a conference call summary at 7:00 a.m. to go to emails/blackberries. The call is at 10:00 a.m.</p>	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time:	03/24/2011 00:38:43 (ET)
Position:	EST Chronology Officer
Name:	Nick Ballam
Record:	1732
<p>We want to get this environmental information to EPA. Cindy helped with a document. Will pass it by ET. This is not the same as the IN. The IN is telling licensees what information we will be requesting from them.</p> <p>Tim - We are going to stand pat on the IN. NEI has agreed to take the lead on providing that information to NRC and then we will provide it to our partners.</p> <p>Randy - We have single readings from two dozen plants.. all of it very very low. DOE also has sites with information.</p>	
(b)(5)	

Facility:

(b)(5)

(b)(5)

(b)(5)

(b)(5)

This will probably take 24 hours to formulate.

Source: Randy

Address/Location:

Attachment:

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Date/Time: 03/24/2011 00:30:01 (ET)

Position: EST Chronology Officer

Name: Nick Ballam

Record: 1731

Richard Lee to Brian Sheron. Titled Conference call with DOE 6-7 PM. Have you seen this email?
Question from secretary Chiu. Understands that the NRC Japan team is not providing Japanese counterpart DOE information.

(b)(5)

Chairman needs to get to Chiu and explain why we didnt get hte letter to TEPCO. It wasnt the Japan team that made that decision... it was the NRC that made that decision.

DOE person is embedded in Chucks team. They explained that we were not going to provide the letter.

(b)(5)

Facility: The Chairman didnt want any letter to go to TEPCO that was not OK with the NRC team. Chucks team didnt think it prudent to send the letter.

Marty needs to talk to the Chairman in the morning to let him know that Chiu is asking why we didnt provide the letter. Tim says that the Chairman was going to talk to Chiu personally. Not sure if he has talked to him since the email.

We will form a plan of attack for the morning.

INPO rep is in place. They have begun introducing him to people. Call ended.

Source: Phone Call from Chuck

Address/Location:

Attachment:

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Date/Time:	03/24/2011 00:21:08 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1730	

Facility:

We dont know where the source term came from either.

Bruce - Are they venting also? We presume they are. Bleeding (venting off the steam). We dont konw what their venting schedule is. We will run some numbers on venting.

(b)(5)

LT - EPA 400 procedure.

(b)(5)

(b)(5)

NARAC is shut down. Only doing calculatoins in day shift.

Source: Randy

Address/Location:

Attachment:

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Date/Time: 03/23/2011 23:58:38 (ET)

(b)(5)

Mike Salay is looking at the

Position: EST Chronology Officer

document. They will give it to the PMT and then it will come to ET for comments due by noon.

Name: Nick Ballam

Record: 1729

Working on the four questions calcs left over from last night. Salt deposition in units. We had a phone call last night with Japan, but our numbers were different. GE is standing by their calculation, we think one plant is nearly full of salt. TEPCO wanted our advise on that issue. Our flow rate may have been too high. Early on they were using a higher flow, but they scaled it down (according to GE). We will get the calcs to the site team.

An email came in that said Unit 1 is injecting fresh water. This is the first weve heard of this... Bruce - We have conflicting information... Took that informatoin from a DOE Cert Rep. Well check on that information.

The temperature started to come odwn from 400 degrees to 360.. now were hearing 310. Unit 1 temps coming down. Majority of flow coming through the feed ring. We will look to see if there could be any salt on the feed ring? They are getting intermittent power. Temperatures say they are trending down. We dont know where theyre getting the information from.

Dont have good status of what MCCs are powered yet. Unit 3 control lights are on.

Doses - Status sheet shows that unit 1 core is 70% unit 2 and 3 are 30% in damage. INPO gave us... 4780 R on unit 1 drywell. unit 2 4590, unit 3 6000r

unit 1 tourus 3490... unit 2 and 3 are 193 and 158 respectively. We dont know how theyre getting the data yet.

(b)(5)

Facility:

Bruce - From Roys email: Focus on largest source farms... pump larger qtys of water and start to inject fresh water. Missing from this list is to start using RHR.

Better to get source cooling back. What are the concerns of throttling flow? Would RHR give them better flow rates and circulate salt?

Salt and another compound may make a gelatinous compound? Just get water in right now, and then get freshwater in when possible. We will look into gelatinous issue.

Bruce - What do we think the core looks like? Is the thought process different depending on what the core looks like? Japanese dont think the core has dropped down yet.

Trying to help PMT with questions from research. To try to figure out what the source term is. How did they get the damage estimates (70%). Mike Salay will interface with them.

We are working on answering these Hydrogen issues on Unit 2. Are there any concerns on hydrogen? Where are these concerns coming from and why?

Is GE done or is GE still with the salt strategy?

No phone calls scheduled yet with Chuck. We may schedule something when we have answers to these questions.

Source: Brian Holihan

Address/Location:

Attachment:

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Date/Time: 03/23/2011 23:57:08 (ET)	Will advise our team to stand pat on further development of the information notice (IN).
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 1728	

(b)(5)

Facility:	
Source:	Tim
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/23/2011 23:42:59 (ET)	We may be scaling back on some night shifts in the Ops Center next week.
Position:	EST Chronology Officer	
Name:	Nick Ballam	Chuck would like accident management people. Four technical people. The management team would be 2 people. This would be Tepco team (to send to Japan).
Record:	1727	
Facility:		<p>For cabinet meetings we need management folks. IP coordinators are value added. Great opportunity for jr. OIP people to get experience. Altogether hes thinking 6 or 7 people.</p> <p>Chuck could be coming home as early as Sunday.</p> <p>Eventually we would like to scale down to have only two people in Japan until they get fully out of the woods.</p> <p>If we choose to scale back, we could scale back night shifts for Japan.... Reactor Safety Team is needed fully..</p> <p>Strategies are probably good enough for the spent fuel pools.. Not good enough for the reactors.</p>

Source:	ET
Address/Location:	
Attachment:	
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Date/Time:	03/23/2011 23:31:27 (ET)	Developed a draft I.N. Will be sent to Stacy Rosenberg and Tom Blount. Will be coordinating with EPA on the information we gather. FERMAC is in Japan.
Position:	EST Chronology Officer	
Name:	Nick Ballam	
Record:	1726	
Facility:		

(b)(5)

Source: ET	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/23/2011 23:27:02 (ET)	Whats going in to unit 1? Is it fresh or salt water being used? There are some initial reports on TV that it might be freshwater. There are some CST in fact and theyre using the water in the CSTs. This is a limited amount of water. Shown interest to floating barges that have fresh water to use on the reactors. Within 36-48 hours they will have them there.
Position: EST Chronology Officer	
Name: Nick Ballam	
Record: 1725	
Facility:	
Source: Bill Ruland	

Address/Location:	
Attachment:	
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Date/Time: 03/23/2011 21:44:46 (ET)	Just had alignment meeting. Question of why we are not 24/7 embedded with MOD. Just got a call from MOD and they want us to attend working group meetings. Media reports optimistic - talk about restoring ability to bring freshwater to U1 reactor (NISA press conference). Chuck: they have a small tank on the North tank of Unit 1 - probably got that hooked up, but not sustainable. Some research shows that salt and boron will become gelatinous. Just think you need to pump a lot of clean water in there. Now they think pumping system may be too high capacity. So now working with Bechtel to provide only parts of system they need. Debate at RST is where to go with cooling of cores - possibly flooding of containment. TEPCO is thinking that fuel is at lower head. How do we stop continuous release in Unit 2? Maybe flood reactor building. Ultimately maybe sand/concrete. Reactor building not water-tight. Can only flood to ground elevation.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1724	
Facility:	
Source: Chuck	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/23/2011 20:39:29 (ET)	CDC has KI only for children. Correction: CDC has KI in a liquid form. They have 2.1 million vials. Each vial contains 30ml of KI, at a concentration of 65mg/ml. This can be administered to adults or children.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1722	

(b)(5)

Facility:	EST Coordinator - Robert Ragland at 20:57:07 on 3/23/2011	
Source:	ET	

Address/Location:		
Attachment:		
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Date/Time:	03/23/2011 20:39:29 (ET)	CDC has KI only for children.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1723	
Facility:		
Source:	ET	

Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		

Date/Time:	03/23/2011 20:01:43 (ET)	Plant status: About the same. Priorities that we see align with Japanese. Concern is the reactors. SFPs are area of interest, but primary focus on reactors. Focus on pumping more water into vessels. Reports from our team indicate low flowrates. Also need to swap to freshwater as soon as possible. Unit 5 lost running RHR pump, supplying Rx and sfp cooling. Have 2 conflicting reports - 1 that they plan to fix later today, and 1 that its already done. Team in-country feels that there is likely continuous release from U2 hydrogen explosion that they feel breached suppression pool, and also U3. Also been working on changing out members of in-country team. Have a few people flying back tomorrow, and others replacing them. Team managers, Casto, Monninger and Dorman - that is separate decision. Want to maintain relationships with counterparts. There is interagency
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1721	
		(b)(5)
		Chuck was more upbeat - a lot due to Japanese being ready to ask for assistance. They are interested in supply of KI. INPO has a million doses. We would likely work through HHS. US Embassy in Japan is offering KI to US citizens but recommending not taking it yet. Most are not taking KI. DOD remains interested in US recommendations - currently unchanged. Some families have departed. One INPO rep in Japan now. In process of bringing other individuals together. Bill Webster will send us the additional people they are bringing in-country. INPO is interested in which Federal agency will be lead for their consortium. Leaning is towards Pacific Command. We have received 90 photos of site from TEPCO -

(b)(5)

considerable damage to units. Plan on working with OIS to put up on controlled sharepoint site. Some are pretty devastating.

[Redacted] (b)(5)

We are continuing to work with them. Have some reports from DOE that are more encouraging that some flowrates have increased. They have started injection of freshwater. We have not validated yet. Have seen reports showing I131 at several sites. Are looking at sharing info with EPA this evening. Casto attended cabinet-level meeting. Sending draft minutes. Chuck indicated US was only country at meeting he attended. Japanese interested in Lockheed Martin unmanned helicopter. Pumping system from Australia. also interested in freshwater barges. Military ready to make happen. Chuck said Japan appreciated severe accident guidelines. They understand immense challenges ahead now. Working on draft IN taken for Chernobyl requesting US plants to record unusual radiological data and provide it. Getting information that 5 workers believed dead from lethal doses. Franovich: Looks like change in U3 status - reporting containment damaged and at atmospheric pressure. Change in condition? Information changes as NISA changes reports [Redacted] (b)(5) Had long conversation with on-site team. We dont get answers to how we know the information from them. Team onsite is trying to find right contacts to get people willing to talk about tech information to answer questions. They also continue to toggle flow into sfps and cores. When get report, typically is instantaneous report - does not reflect how they are actually operating filling system. Q: first time seen damaged primary containment on Unit 3. That is based on report from JAIF and NISA. Q: salt report from DOE? DOE letter did not go out. yesterday provided answers to 5 questions on salt. TEPCO heard our answers. was based on info coordinated by NRC, Bettis, INPO, etc. As a result 4 additional Qs came back. Have answers from GEH. Staff looking at to resolve vs. different analyses. Snodderly: On I131 measurements on San Onofre. Are we seeing higher measurements than first ones? Same now. We are getting reports from licensees of slightly elevated readings. Have on table. NEI may blog on this tonight. Franovich: Saw that EPA is posting daily summary from readings on west coast from over the weekend. Orders: On Unit 5, lost RHR pump - think they have 2, do we have concerns. We have 1 report will get pumps back tomorrow - another says back now. Not sure which is accurate. They would not expect much heatup, though. Not drasic situation. What are our latest recomemndations to NARAC on dose/source term? Had coordination call on this.

Facility:

[Redacted] (b)(5)

Taking 12-16 hours per run, 24 hours with review. Information would be shared by DOS to Japan as conservative case. Castleman: Source term assumptions: no sfp fires, U1 70% melted, U2-3 30% melt. This is considered realistic case. Assuming leak rate is 0.5%/day. Assumed started Tue 15th at 2150. NARAC will provide estimates for Tokyo and West Coast. Castleman: looks like we are assuming no sfp release? Roy: may be too optimistic based on info we have. Still quesitons on whether some pools are filled. Wouldnt want to be too optimistic on pools. Castleman: any info on general rad levels around site? No. Roy: Seeing photos from media that are showing people around facilities - people in control room. Not sure what doses are, but they are not evacuating site. Not sure whether they are heroic actions or dose is going down. Q: At am briefing, heard would be deputies call on PAs for US citizens in Japan. Do we have more info? Dont think they made firm decision. They are continuing to assess, but was discussed.

Source:	TA Call
Address/Location:	
Attachment:	

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Date/Time:	03/23/2011 18:55:49 (ET)	Believe the black smoke is a hydrocarbon, so not of concern. Lots of lube oil from MG set. Not concerning us if rad levels not going up. Number 1 priority is more water and fresh water. SFPs coming along. 2 is in good shape, we think 1 is in good shape, but noone knows. Looks like it survived explosion. Probably has water in it. they think 2 has water, and they have sfp running. They believe they see water in U3 SFP. Biggest issue is continuous release through Unit 2 now. We also suspect breach in Unit 3, but no confirmation. NR tends to say worst case. We try and get what we know, and say that. On Admiral call: They are filling barges with fresh water. Navy also was running down KI - we are sharing information now.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1720	
Facility:		

Source:	Casto
Address/Location:	
Attachment:	

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Date/Time:	03/23/2011 18:43:31 (ET)	Very difficult to tell, but seems they are not getting enough flow. We have information that says it should be 20-100gpm for each of the reactors. They have to run into building to get numbers. We get numbers like 7 gpm and 79 gpm. Level is not changing. all we know is pumping lots of water is better than now. Our pumping system is very high flow. We think its urgent to get pumping system there. They are daisy-chaining fire
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1719	

(b)(5)

trucks from ocean. We provided them with R-800 course, SAMGs, EOPs, etc. They got a lot out of that, and met yesterday on those. Now that they have seen the material, they say they realize they have more challenges than what they thought. We highlighted sections, etc. They translated them and read them that night. The course goes through this exact accident on a BWR4.

(b)(5)

Facility:

They are pumping with cement trucks into 3 and 4 SFPs. We talked to them about anti-cs. INPO has those and also KI. Unit 1 still at 300 degrees C. And on Unit 3 we have high confidence they have a containment breach. Unit 1 they believe that through CS they dropped tem from 400C to 300C, but noone knows whether that is accurate or not. Other theory is you are measuring corium temperature. Because reactor pressure is very low. On Unit 2, since they have somewhat confirmed they have filled SFP and is still steaming, that pretty much confirms there is a containment breach. They think no, but we think its a containment breach. GE is looking at strategies for how to respond to each of these reactors. We told HQ to inform GE that Unit 2 has torus breach - may change strategy. Think is a hydrogen explosion from torus. We dont know for sure that they inert, but assume they do. They were going to try and inert RB with Nitrogen rather than punching more holes. We told them priority is getting water in. We are getting closer to aligned priorities with TEPCO. We also decided that reactors are more important - source term much higher. Finally after yesterday they agree. They are also developing long-term plan. We have seen draft, but is not yet approved by PM. On U2 containment breach, we mentioned issue, but did not push it.

Source: Casto

Address/Location:

Attachment:

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Date/Time: 03/23/2011 18:42:42 (ET)

Roy: are we able to articulate exact flowpaths to each unit? Bill: we have a sense of most of that info. Most is exiting seals of recirc pumps.

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1718

Facility:

Source: ET

Address/Location:

(b)(5)

Attachment:

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Date/Time: 03/23/2011 18:25:13 (ET)
 Position: EST Chronology Officer
 Name: Rebecca Karas
 Record: 1717

Facility:

MOD wants to make meeting known publically. Would have been worthwhile for public to know Americans and Japanese working closely together. Would be helpful if HQ can brief industry on meeting minutes, but not give them a copy of the minutes (DOS meeting last night). Industry is helping us with KI (they had offered it). INPO has a million doses available for \$\$\$\$. Gave us a description of doses and formulation. Japanese wanted information on the doses. INPO said they have access to a million doses. The Japanese are interested (have not accepted yet though). Can HQ handle KI issues directly with AI Hochivar. Minutes incomplete right now, but will send draft to HQ now. Meeting very successful. They accepted a lot of the offers of equipment. Admiral sent out note for C5 to be sent out from New England (unmanned helicopter). Today they are (b)(5) The original water line from the dam to the plant has a pump, and that was their solution, but that source appears not viable. They just have 1 tank onsite right now. We proposed they consider the water barges. They are sending people to be trained on the pumping system. But the Admiral is looking at moving the system from Yokoda to somewhere near site. Noone really knows draft of dock area after tsunami. Lockheed Martin is sending helicopter, AF is lifting it. Will be used for aerial surveillance, and other activities. Has a 1500# lift capability. Should have left NE last night. 4 TEPCO engineers were at Yokoda working with it yesterday. They understand its capabilities, and the engineer was going to turn it over to his staff to be trained on its use. Right now earliest that TEPCO can have folks available for training is tomorrow. The workers they are identifying are from subsidiary from TEPCO (b)(5) (b)(5) If can get training done in 1 day, should then get gear to staging area close to site. The Navy has water barges in Japan, but are Japanese-leased water barges. Dont know timeframe for barges. Admiral Roden working hard to get water barges there. Nothing is firm, but they are expressing aggressive interest in it. Question from Charlie was if there are any other countries are participating in cabinet meetings? Right now Americans are only ones in there. And we have a deputy administrator leading the meeting. People were concerned on lack of flowrate to reactor - we know that.

Source: Casto

Address/Location:

Attachment:

(b)(5)

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Date/Time: 03/23/2011 16:58:48 (ET)	We have information collected from US reactor sites on measured I and Cs. Want to send to EPA and tell them this is only for EPA - tomorrow will work on who else gets. Mike - just heard from Eric - agree that Federal agencies need to agree on how we will handle the info. We want to put out IN anyway as the regulator. Should hold discussion between NRC, DOE and EPA on who will be repository of information. States have already asked for the information.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1716	
Facility:	
Source: ET	

Address/Location:	
Attachment:	

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Date/Time: 03/23/2011 16:35:52 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1715	
Facility:	Also getting information from reactors in US on reported measurements of I-131. FEMA put together a short list. Very low levels. We had IN go out when Chernobyl happened. We need someone to do IN and sign out. However, Marty contacted Tony Petrangelo, and they are going to send information to NRC. NEI will be putting the information on their blog tonight. EPA and states are asking how we share that information to them. Need to coordinate closely with OPA if this goes out. Should get information to EPA and just have them hold closely until we can check it, etc.
Source: Liaison Team	

Address/Location:	
Attachment:	

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Date/Time: 03/23/2011 16:07:19 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1714	
Facility:	Military is concerned over chronic nature. Expect Japan to ask for assistance in supplying KI. CDC has nations stockpile of KI. If their stockpiles are depleted, then we would go to the states. About 170,000 U.S. citizens in Japan, and 150,000 military. Limits in US is at 5 rem thyroid, then we would tell you to take KI (for adults). We dont have EPA PAGs for children, but thought is it would be different. Iodine levels in Tokyo are twice recommended level. Was consortium call today. Al Hochivar is in Japan - trying to

(b)(5)

Facility: embed with TEPCO. INPO asking which govt agency is going to take consortium under its wing. Looks like it will probably be Pacific Command. Salt accumulation letter from DOE - did not get sent out. (b)(5)
 (b)(5) Bechtel equipment in Yokoda. Still no request from Japanese to use. Some fittings not fabricated yet - will ship out Thursday. Japanese may cannibalize it instead of using as is. Head there was a 2nd train being fabricated by Bechtel also. French offered robotics, and Japanese said dont send. It is on the airport in France.

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/23/2011 15:53:24 (ET) **Flew aerial today - awaiting results.**
Position: EST Chronology Officer
Name: Rebecca Karas
Record: 1713
Facility:
Source: ET

Address/Location:

Attachment:

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Date/Time: 03/23/2011 15:23:42 (ET) **Plant status about the same. Unit 5 - when swapping diesels to offsite power, lost RHR pump. Expect to be able to restore tomorrow. Heatup between now and then shouldnt cause problems. Working to changeup our staff overseas. Still have decision to make about senior managers over there. Chairman: wants to make decision before change out senior managers. Roy: Looking at HHS and states for surplus KI. HHS and FEMA would have the lead for this. Lead consortium is looking for Federal agency to be named that they would work through. Possibly Pacific Command.**

Facility: (b)(5) /Roy:
 NEI getting information on increased readings on a number of plants. We are working on a clearinghouse for that information. (b)(5)
 Roy - going to try and get understanding of flowpaths

(b)(5)

	through reactors.
Source:	Chairman

Address/Location:	
Attachment:	
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Date/Time:	03/23/2011 15:14:52 (ET)	SONGS, Diablo, Kewaunee seeing trace amounts of radionuclides.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1711	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	

Date/Time:	03/23/2011 15:06:25 (ET)	Al Hochivar (INPO) is in Japan. INPO also supplementing their team in INPO operations center.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1710	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	

Date/Time:	03/23/2011 15:04:05 (ET)	Unit 5 lost RHR pump - working to replace motor. Pump tripped when trying to change from DG to offsite power.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1709	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
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Date/Time:	03/23/2011 14:09:58 (ET)	Discussed USAID paying for NRC staff travel costs but not wages, KI logistics/process, (b)(5)
Position:	EST Chronology Officer	

(b)(5)

Name:	James Vaughn	opportunities for robotics, DOE, FEMA interactions.
Record:	1708	
Facility:		
Source:	Mike Dudek	

Address/Location:	
Attachment:	

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Date/Time:	03/23/2011 13:45:37 (ET)	Reviewed translation of Japanese status chart for reactors 1-5 and SFPs.
Position:	EST Chronology Officer	
Name:	James Vaughn	
Record:	1707	
Facility:		
Source:	Liaison Team	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/23/2011 13:28:44 (ET)	Discussion: 3pm congressional phone call. ET: Last "One-Pager" provided (b)(5) Discussed shifted fault line as it relates to other reactors in Japan. Discussed New York state press release regarding Indian Point.
Position:	EST Chronology Officer	
Name:	James Vaughn	
Record:	1706	
Facility:		
Source:	Brian Sheron (RES)	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/23/2011 13:02:56 (ET)	ET Discussion: Commission briefing planned on Health Effects. Should prepare a proposal for Chairman on topics, key points, objectives. Work trough NRC then EPA then exteranal panel. Same high level/format as Bill Borchardts this week.
Position:	EST Chronology Officer	
Name:	James Vaughn	
Record:	1705	
Facility:		
Source:	Rob Lewis (Agreements States)	

Address/Location:	
Attachment:	

(b)(5)

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/23/2011 10:55:00 (ET)

Position: EST Chronology Officer

Name: James Vaughn

Record: 1700

All matters and recommendations coming from the Consortium should go through the NRC. The DoE letter should not be passed on by Chuck.

ET: Discussed:

1) Japans desire to go public with meetings.

2) Reduction of staffing in the operations center. Borchardt: Exercise what is appropriate. I am having a meeting with all offices today to discuss impacts.

ET: Reviewed Deputy call conducted this morning. Highlights: How we will deal with equipment provided to Japan, (Loaned, etc.), dissemination plan, working group related

(b)(5)

Conducted a review of current and new taskings. Discussed roles, responsibilities, process issues, communications, matters that fall out of normal functions for operation center teams, tasking of other NRC elements outside the operations center. Discussed Information Notice (IN) 86032 and 86032s1 and preparing a new IN.

Bill Borchardt: Not all matters falling out from Japan should go to the operations center or a operations center function.

ET: Recommend an EDO Update regarding operations center and NRC functions.

Bill Borchardt: We should add a discussion point regarding the roles of operations center to the monthly management meeting for this Friday and the meeting today at 12:30.

PMT: Provided relaxation criteria to the Commissions assistants. Weather has improve for data collection flights. Discussed talking points for DoE. ARAC working on source term project.

Facility:

(b)(5)

(b)(5)

EST Chronology Officer - James Vaughn at 11:26:52 on 3/23/2011

Mike Tschiltz: Discussion on the history of the four-train pump system.

EST Chronology Officer - James Vaughn at 11:59:21 on 3/23/2011

EST Chronology Officer - James Vaughn at 12:59:44 on 3/23/2011

Source: Bill Borchardt

Address/Location:

Attachment: 

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Date/Time: 03/23/2011 12:09:47 (ET)

Entered the ET room

(b)(5)

Position: EST Chronology Officer

Name: James Vaughn

Record: 1703

Facility:

Source: Bill Borchardt

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/23/2011 10:55:00 (ET)

All matters and recommendations coming from the Consortium should go through the NRC. The DoE letter should not be passed on by Chuck.

Position: EST Chronology Officer

Name: James Vaughn

Record: 1704

ET: Discussed:

1) Japans desire to go public with meetings.

2) Reduction of staffing in the operations center. Borchardt: Exercise what is appropriate. I am having a meeting with all offices today to discuss impacts.

ET: Reviewed Deputy call conducted this morning. Highlights: How we will deal with

(b)(5)

equipment provided to Japan, (Loaned, etc.), dissemination plan, working group related

(b)(5)

Facility:

Conducted a review of current and new taskings. Discussed roles, responsibilities, process issues, communications, matters that fall out of normal functions for operation center teams, tasking of other NRC elements outside the operations center. Discussed Information Notice (IN) 86032 and 86032s1 and preparing a new IN.

Bill Borchardt: Not all matters falling out from Japan should go to the operations center or a operations center function.

ET: Recommend an EDO Update regarding operations center and NRC functions.

Bill Borchardt: We should add a discussion point regarding the roles of operations center to the monthly management meeting for this Friday and the meeting today at 12:30.

PMT: Provided relaxation criteria to the Commissions assistants. Weather has improve for data collection flights. Discussed talking points for DoE. ARAC working on source term project.

(b)(5)

EST Chronology Officer - James Vaughn at 11:26:52 on 3/23/2011

Mike Tschiltz: Discussion on the history of the four-train pump system.
EST Chronology Officer - James Vaughn at 11:59:21 on 3/23/2011

Source: Bill Borchardt

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/23/2011 10:55:00 (ET)

All matters and recommendations coming from the Consortium should go through the

Position: EST Chronology Officer

(b)(5)

Name: James Vaughn
Record: 1702

NRC. The DoE letter should not be passed on by Chuck.

ET: Discussed:

1) Japans desire to go public with meetings.

2) Reduction of staffing in the operations center. Borchardt: Exercise what is appropriate. I am having a meeting with all offices today to discuss impacts.

ET: Reviewed Deputy call conducted this morning. Highlights: How we will deal with

(b)(5)

Facility:

Conducted a review of current and new taskings. Discussed roles, responsibilities, process issues, communications, matters that fall out of normal functions for operation center teams, tasking of other NRC elements outside the operations center. Discussed Information Notice (IN) 86032 and 86032s1 and preparing a new IN.

Bill Borchardt: Not all matters falling out from Japan should go to the operations center or a operations center function.

ET: Recommend an EDO Update regarding operations center and NRC functions.

Bill Borchardt: We should add a discussion point regarding the roles of operations center to the monthly management meeting for this Friday and the meeting today at 12:30.

PMT: Provided relaxation criteria to the Commissions assistants. Weather has improve for data collection flights. Discussed talking points for DoE. ARAC working on source term project.

(b)(5)

(b)(5)

EST Chronology Officer - James Vaughn at 11:26:52 on 3/23/2011

Source: Bill Borchardt

Address/Location:

Attachment:

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Date/Time: 03/23/2011 10:55:00 (ET)

Position: EST Chronology Officer

Name: James Vaughn

Record: 1701

All matters and recommendations coming from the Consortium should go through the NRC. The DoE letter should not be passed on by Chuck.

ET: Discussed:

- 1) Japans desire to go public with meetings.
- 2) Reduction of staffing in the operations center. Borchardt: Exercise what is appropriate. I am having a meeting with all offices today to discuss impacts.

Facility:

ET: Reviewed Deputy call conducted this morning. Highlights: How we will deal with equipment provided to Japan, (Loaned, etc.), dissemination plan, working group related

(b)(5)

Source: Bill Borchardt

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/23/2011 10:02:13 (ET)

Position: EST Chronology Officer

Name: James Vaughn

Record: 1699

Still reviewing how has lead interface with TEPCO. U.S. support to structures and roles: Industry responding to numerous technical matters. INPO staff is Tokyo with Chuck to get understanding of matters from NRC team. ERC support staff will begin calls to site members and NRC site team members. INPO staffing is going up. We need help with getting "AI" tied into the NRC team via USAID. AI is in Tokyo now. Webber: We are still pursuing that.

Tom Vervosa (Naval Rx): Any additional people deploying. "Bill:" The number of people on the group is under continued evaluation.

(b)(5)

Facility:

Rick Nelson: We received seven major requests. All but one has been completed. We are discussing personal protective equipment and radiologic detection equipment. TEPCO is asking about KI.

NRC team has made major progress with Cabinet. The Cabinet wants all equipment/logistic actions to go through the daily Cabinet meeting (e.g K-MAX and remote helicopter). Japan wants the Cabinet meeting to be public. Operational matters will not be made public.

Tom Varvoso (Naval Rx): Is this meeting for information flow or just logisitces? Just for logistics coordination/facilitation.

Brain ODonnell: Is the meeting multi-national.

ET: NRC has not heard that any other countries are involved. DoS is creating minutes. Major progress regarding SAMGs.

Bill Borchardt : Did we reach agreement with INPO to making meeting minutes available to TEPCO. INPO should send minutes to HCOs/Ops Center for inclusion in 6am/6pm daily status report.

Tom Vorvoso: Do you have a roll in evaluating in actions plans and priorities? Do you see anything different with TEPCOs? INPO: We are not in place to support that effort.

Discussion regarding the support of reactor vendors, Industry Working Group (IWG) and INPO. Discussion of how information and coordination is communicated to TEPCO.

Contact Information:

J-4, Pentagon (b)(5)

INPO Webster: websterwe@inpo.org.

(b)(5)

Tom Varvos: Recommendation for a daily technical call with all parties.

INPO team is working five issues with NRC at the central POC. The consortium is not on the calls.

"Sall:" Report on Robotic systems was distributed this morning to Japan. The report has the capabilities of the robotics. Email from Ron Jerry has the specifics.

Source: Consortium TELCON

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/23/2011 08:39:25 (ET)

Position: EST Chronology Officer

Name: James Vaughn

Record: 1698

Debrief from Cabinet meeting held to night. DoS will generate minutes. Good meeting with Prime Ministers representative over the last 24 hours. SAMGs and technical manuals were very helpful. Accepted a lot of DoE equipment, who did a great job with their report on equipment. DoE was well prepared. K-MAX was accepted. (b)(5)

(b)(5)

We discuss Boron injection to change to fresh water. Discussed change to fresh water with four analysis to make the change. They are having difficulty with original water line. We offered them water barges and pumping systems. Discussed location of barge(s). Bill Cook has done a great job at Yakoda and was requested by the General. Identified staff to be trained on pumping equipment. Training should be done in the north - quickly. Discussed issue of venting out Unit 2. Amount of steam suggest its coming from containment. This will be a discussion point for tomorrow night. KI issue: Discussed details related to potassium iodine. Will coordinate with PMT. At the Cabinet level, all request for equipment will come through that meeting and no other sources. DoE letter:

(b)(5)

TEPCO is committed to getting to fresh water. Letter is a poke in the eye. Battle plan: Meetings are planned and sequenced with end state of 2000hr cabinet meeting. Communications have greatly improved. The Cabinet wants the meeting to go public. Contents of the meeting would not be discussed. Demonstrates good working relationship. With "DCMs" permission, we will respect it. We gave them the SAMGs which are public. The DoE list of detection

(b)(5)

equipment was not public. Our public affairs will be notified.

Questions:

Facility:

Will barges be involved with water to the vessel? Yes to containment. Barges get water to naval vessels then to the Units. We will work with Nany to make interfaces between systems. Likely to be used for containments and SPFs. Bill Cook designed a great system. Runs off of diesel with 5 day supply. Hyrdominning systems.

K-MAX DoE equipment? It is not in the March 22,2011, Robotics document. Drone helicopter. Carries video and harden cameras. "Damian" will send 30-page report. Report provides time-lines to get the equipment in Japan.

Protective Actions: no tap water for infants under a year. News indicate trace amount of Iodine in water. Jack Foster has some radiation monitoring data.

Embassy asked about another quake. Should we evaluate the change in the geo-plate and the relation to other plants. Fault lines have moved. How does the effect other plants?

(b)(5)

Some agencies are backing down watch standing. Some down to a duty officer. DoS is looking to scale down response.

"Michell:" Two people are flying out now. You should discuss transition. Remainder of team goes out Sunday. Bill Cook will stay longer. Pump issue is gong very well. Base commander made numerous positive comments. Rick is on the night shift with the duty officer.

Source: Chuck Casto: Site Team

Address/Location:

Attachment:

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(b)(5)

Date/Time: 03/23/2011 07:31:15 (ET)	Plant status review provided. Dose rates in Ginna and Nine Mile Point discussed. 10am call with the Consortium today. Receive report from DOE on robotics. Coordination continues regarding who is lead agency with consortium. DoE report regarding salt accumulation. DOE wants the report to go to Japan.
Position: EST Chronology Officer	
Name: James Vaughn	
Record: 1696	

Chairman said to contact DOE.

Deputies call at 8am. We will discuss additional protective actions for Americans.

Discussed Japan's warning regard infants not drinking water. (b)(5)

(b)(5)

(b)(5)

(b)(5)

Mike Frenofick: DOE Report – will GE be able to review? Webber: Yes. What is status of RES work regarding Zirconium fire research? Webber: No new information. It is plausible that there has been such a fire in the pool. We will not know until we get more information.

Facility:

(b)(5)

Bill Orders: Unit 4. What are your assumptions of dose rates? Unit 4 model is all contents of inventory.

Mike Conroy: Please send the relaxation criteria.

“Castleman:” What is the coordination with Japan? We are working with Japan. DOE report. What is the summary? Consortium and calculations indicate salt in the core could be a problem. Status of Bechtel systems?” Two of the systems are in country at Dakota. The others are pending transport to Japan.

(b)(5)

Corrected spelling: Mike Franovich.
EST Chronology Officer - James Vaughn at 08:20:45 on 3/23/2011

Source: Commissioners' assistants briefing

Address/Location:
Attachment:

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Date/Time:	03/23/2011 07:31:15 (ET)	Plant status review provided. Dose rates in Ginna and Nine Mile Point discussed. 10am call with the Consortium today. Receive report from DOE on robotics. Coordination continues regarding who is lead agency with consortium. DoE report regarding salt accumulation. DOE wants the report to go to Japan.
Position:	EST Chronology Officer	
Name:	James Vaughn	
Record:	1697	

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Deputies call at 8am. We will discuss additional protective actions for Americans.

Discussed Japan's warning regard infants not drinking water. (b)(5)

(b)(5)

(b)(5)

(b)(5)

Mike Frenofick: DOE Report – will GE be able to review? Webber: Yes. What is status of RES work regarding Zirconium fire research? Webber: No new information. It is plausible that there has been such a fire in the pool. We will not know until we get more information.

(b)(5)

Bill Orders: Unit 4. What are your assumptions of dose rates? Unit 4 model is all contents of inventory.

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(b)(5)

“Castleman:” What is the coordination with Japan? We are working with Japan. DOE report. What is the summary? Consortium and calculations indicate salt in the core could be a problem. Status of Bechtel systems?” Two of the systems are in country at Dakota. The others are pending transport to Japan.

Source: Commissioners' assistants briefing

Address/Location:

Attachment:

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Date/Time: 03/23/2011 07:29:58 (ET) Mike Webber

(b)(5)

Position: EST Chronology Officer

Name: James Vaughn

Record: 1695

Status: The same. Smoke from Unit 3 and steam from Unit 2. Elevated temp reading in Unit 1. New cooling to Unit 1. Lowered temps.

AC Power: Continue to work. Some units have power with lights. Units 5/6 have AC power. Still trouble hooking power to equipment. Does rate is on the decline. Detection of trace of ID 131 at Ginna & 9 Mile. DoD agrees to take the logistical lead.

(b)(5)

Facility:

TEPCO Call: Salt accumulation was discussed. TEPCO requested assistance/analysis regarding salt building up in lower containment.

Chairman: Work this effort analysis through RST - don't send directly to Chuck. Chuck will not send information directly to Secretary of Energy.

Call from Chuck: Unit 2 is full of water.

(b)(5)
Preparing plant status report for Congressional Over Sight

(b)(5)

	Committee.
Source:	ET Brief to the Chairman

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/23/2011 05:22:16 (ET)	ET discusses news reports:
Position:	EST Chronology Officer	1. Restricting water use in Tokyo for infants, but does not reach level for adults.
Name:	Thomas Scarbrough	2. Smoke rising from Unit 3 of unknown cause.
Record:	1693	
Facility:		The smoke from Unit 3 appeared to be grey in color. EST Chronology Officer - James Vaughn at 07:04:53 on 3/23/2011
Source:	Brian McDermott	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/23/2011 05:22:16 (ET)	ET discusses news reports:
Position:	EST Chronology Officer	1. Restricting water use in Tokyo for infants, but does not reach level for adults.
Name:	Thomas Scarbrough	2. Smoke rising from Unit 3 of unknown cause.
Record:	1694	
Facility:		
Source:	Brian McDermott	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/23/2011 04:53:34 (ET)	JANS reports Unit 2 SFP full of water temperature at 54C. However, steam coming out of Unit 2 reactor building, (b)(5) NRC Team believes this indicates a primary containment breach. Unit 2 had loud noise last Tuesday and TEPCO indicated damage but not how significant.
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	
Record:	1692	
Facility:		TEPCO considering Nitrogen injection into Unit 2 building. NRC Team requests that ET have GEH strategize about possible Unit 2 primary containment breach. ET informs RST that Unit 2 SFP full and cool, but Unit 2 building still steaming. RST will

(b)(5)

	alert GEH to consider potential primary containment breach in Unit 2 in its strategy evaluation.
Source:	Chuck Casto

Address/Location:	
Attachment:	

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Date/Time:	03/23/2011 04:25:57 (ET)	Discussion of DOE letter on "Analysis of Salt Accumulation." Embassy considering
Position:	EST Chronology Officer	officially forwarding DOE letter to TEPCO (b)(5)
Name:	Thomas Scarbrough	(b)(5) NRC Team stated its view at Cabinet meeting
Record:	1691	last night.
Facility:		NRC Team indicates unified position of NRC, INPO, GEH, and NR is to get off salt water cooling. NRC Team will specify this at the Cabinet meeting tonight. NRC Team stated at Cabinet meeting last night that there are significant concerns with moving highly radioactive water outside of containment into a system with uncertain integrity. NRC Team just heard that DOE letter on hold. NRC Team will wait for instructions from ET on the DOE letter issue. ET states that NRC Team should indicate that significant concerns exist with use of RHR system with highly radioactive liquid. ET has GEH working on strategies for cooling core and SFPs. NRC Team working on talking points for Cabinet meeting tonight. Marty will discuss DOE letter with EDO this morning for his briefing with Chairman. NRC Team provided info on R-800 severe accident course and SAMGs to TEPCO. ET working to provide info for Chucks meeting with Admiral tomorrow.
Source:	Chuck Casto	

Address/Location:	
Attachment:	

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Date/Time:	03/23/2011 03:45:03 (ET)	(b)(5)
Position:	EST Chronology Officer	(b)(5)
Name:	Thomas Scarbrough	PMT is reviewing. Embassy
Record:	1690	has made voluntary KI available to US citizens. PMT will provide highlighted note for
Facility:		Chairman on these issues.
Source:	PMT	

Address/Location:	
Attachment:	(b)(5)

<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/23/2011 03:39:16 (ET)	NHK TV reports black smoke coming from Unit 3. Power supplied to control room.
Position: EST Chronology Officer	Control room staff removed while smoke evaluated.
Name: Thomas Scarbrough	
Record: 1689	
Facility:	
Source: NHK TV	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/23/2011 03:22:51 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Thomas Scarbrough	Dave reported that Navy had received requests from Japan govt for assistance with temperatures in several units and structural integrity.
Record: 1688	Media reports of high temperatures in reactor units. Temperature issue addressed during TEPCO telecon. RST indicated high temperatures might suggest core relocation. TEPCO believes structure would prevent relocation of fuel to bottom of reactor vessel.
Facility:	
Source: Dave Hermann (NR)	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/23/2011 02:00:16 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Thomas Scarbrough	TEPCO working on obtaining fresh
Record: 1687	water ASAP.
Facility:	TEPCO using Unit 1 core spray and looking at additional strategies. TEPCO using feed ring in Units 2 and 3. TEPCO thinks SLC might be available when fresh water supply arranged. RST will discuss DOE recommendations received on cooling system strategies. RST checking on AC power status. RST discussed equipment need list in telecon with Chuck Casto. ET provided RST with received list of robotic system availability.
Source: Brian Holian	
Address/Location:	
Attachment:	
(b)(5)	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/22/2011 23:47:10 (ET)	RST: Working on salt buildup issue. GEH and INPO conducted calculations of salt buildup. Midnight call scheduled to discuss issue with Chuck. Lights on in Unit 3 control room. Will obtain update on AC power. Will check on status of freshwater supply from dam. Marty also asked that various strategies on reactor and SFP cooling be considered.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1686	
Facility:	PMT: Telecon with Navy planned to discuss Navy base doses. No data today. Trending down from most recent information. Bad weather grounded flights. Call from Region I that Ginna and NMP found Iodine that might be related to Japan event. Marty will send e-mail to NEI about this information to alert industry. Discussed possible information notice. PMT to find out status of KI distribution to US citizens in Japan.
	LT: Additional flight (May 24) needed to provide equipment to support first pumping train. Rest of first pumping training has arrived. No schedule for shipping second pumping train. Truck trailers available in Japan to transport pumping train/ [redacted] (b)(5)
	Hope to receive tonight. Discussed LT task to work with RST to develop chronology of Bechtel equipment purchase. LT will work on chronology. Working with IAEA contacts on clearinghouse idea for international efforts.

Source: Team Briefings

Address/Location:

Attachment:

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Date/Time: 03/22/2011 22:15:17 (ET)	Discusses salt layer on bottom head - what is potential if it went through bottom head for causing major damage to containment via steam explosion. Right now still need to pump seawater. Right now pumping into vessel, which is effectively putting water into containment and filling it up very very slowly.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1685	
Facility:	

Source: RST

Address/Location:

Attachment:

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Date/Time: 03/22/2011 21:14:57 (ET)	Marty: need to develop matrix and determine strategies. Lay out objectives and strategies. Could get working on something tangible if we know strategies. Chuck: Dont
Position: EST Chronology Officer	

(b)(5)

Name:	Rebecca Karas	see that systematic approach with them. Marty: [redacted]
Record:	1684	[redacted] (b)(5)
Facility:		[redacted] Need to try and continue to help them on strategies. Marty: AI will arrive at 5pm Japan time. INPO would like for us to introduce him and give him the connections he needs. chuck: [redacted] (b)(5)
Source:	Chuck	

Address/Location:

Attachment:

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Date/Time:	03/22/2011 20:55:47 (ET)	[redacted] (b)(5)
Position:	EST Chronology Officer	[redacted] (b)(5) MOD in control of cabinet meetings. [redacted] (b)(5)

Name:	Rebecca Karas	[redacted] (b)(5) We are working with TEPCO with NISA there now. Wiggins; had CIVITS call -
Record:	1683	there is some expectation that at some point Japan will need assistance with KI. USAID

person did mention needed another government agency to help with coordination. Marty: where do we stand with respect to exit strategies? Chuck: not very far along. DOE is doing same thing. We have draft at HQ as starting point. Chuck: command center needed. Right now everyone has own command center. Marty: Seems that we need agreement amongst NRC, JP govt, US govt on priorities. Should be reliable level and cooling to cores and SFPs. Then lay out strategies. Dont see overall plan. Chuck: [redacted] (b)(5) their priorities are water in SFP, electricity and fresh water. Marty: [redacted] (b)(5) chuck: [redacted] (b)(5) Marty: INPO has stood up entire network of procurement people and vendors. If we understood strategies, we could help them. Chuck: we are gaining that information now. Today they will fly over SFP 3 to characterize. They are pumping in buildings with cement trucks. There is process to go through to get info and get things moving. They turned back French equipment. TEPCO engineers excited about equipment. [redacted] (b)(5) Skeen: if their long-term plan is to get plant equipment restored - not sure how they will do that. Chuck: We have known all along that power is helpful. But for U3 and U1, questionable whether it will help. Also high dose rates. Chuck: we have suggested to them that they will need to use temporary equipment - will have to hook in.

[redacted] (b)(5)

Source:	Casto
Address/Location:	
Attachment:	

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Date/Time:	03/22/2011 20:41:24 (ET)	<p>Heard INPO and GE did salt analysis - do we have? Dave mentioned Bettis, us looked at salt and determined that salt cake is there already, but should continue until can get freshwater replacement. Casto? With the info were getting on Unit 1 conditions - does that sound viable? Holahan said thermocouples not reliable post-TMI. Casto: need to prepare for contingency that freshwater pump cant pump in there. If high pressure and temperature - is probably a low-head pump. Their solution for freshwater is line coming from dam to plant - used to originally fill up plant. They are recovering the line, but problems with power supply to pump. Hoping to fill up CST and then use something to pump to reactor. Concerned about what can be used to pump in, given damage. Some question - burned up a couple fire pumps originally trying to get in there - plus may not be really pumping into Unit 1 with whatever they are using now. Dan: pressure info they have and temperature data are 180 degrees out. Either the pressure is right, and temp is core material in bottom of vessel. Or temp is right and pressure is shot. Or both are bad data points. We have notified NISA of the analysis. Need to get the information to TEPCO. We owe them the document. Most urgent thing right now. SFPs of lesser concern than reactors. They are really desperate for people/engineers. Very scarce resources. This would help them make that decision. The R-800 course is going to be very helpful to them. There is real potential that units 2 and 3 are continuously venting. NR thinks there is a continuous vent. Whether from broken U2 suppression line - and for Unit 3 (b)(5) maybe stack. Out of reactor. Asked them to look for refractory iodine. Trying to get inside 13 mile circle today. country has no barricades up. Last night cabinet minsters got involved, and want everyone to cooperate fully. Now, trying to get into rhythm with NISA and TEPCO. Going to start having calls every morning with TEPCO on latest data. Then meet face-to-face with NISA. Admiral is coming over this am. They are flying over today. They are going up to Sendai.</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1682	
Facility:		
Source:	Casto	

Address/Location:	
Attachment:	

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(b)(5)

Date/Time:	03/22/2011 20:01:36 (ET)	Units are fairly static. Dose trend is declining. Some progress on powering up facilities.
Position:	EST Chronology Officer	Some power to Units 1-3. 3 control room has some lights. Power connected to center at U4. Power at 5 and 6, but 6 diesel still running. AMS was grounded last couple days due to weather. Have not heard if its flying yet. Still have 9:00 call to look at dose projections in Japan. DOD is concerned about certain projections that may indicate dose commitments in areas around Tokyo that are more than we think might likely occur. We are working on. DOD very concerned about its members and dependents. Bigger tech issue is concern with continued seawater injection. Some calculations done by Bettis that suggest they are caking up bottom of vessel with salt. Much better to use freshwater, but not easy to do without supply of freshwater. Thought is fresh is better, but if dont have use saltwater. Both flights landed, but there is 3rd shipment needed for first train.
Name:	Rebecca Karas	
Record:	1681	

Facility:

(b)(5)

USAID person gave compliments to NRC, DOE, NR for helping ambassador and licensee out. Did mention that there is a search going on for who should be new govt department that would take stronger coordination role in-country. Castleman - do we know exit criteria from 50m evac zone? Yes, worked on - fashioned after reentry criteria domestically. releases have to terminate/under control, field data and samples required. meet EPA PAGs (projected dose in first year less than 2 rem, 0.5 in second year, etc...).

(b)(5)

Will probably look at some version of PAGs with stay time. Orders: in status printout, mentions U4 SFP has been refilled - true? They got concrete pumping truck, delivered water to SFP. They think they have water back in. heard they will put camera on end of pumper truck with video, but havent seen yet. Orders: Are we re-considering source term based on this? No, not until confirmed

(b)(5)

Have been looking at data. They dont have data that gets anywhere close to PAG values. Both DOS and DOD have exercised a voluntary departure process. Have also issued KI with instructions not to use

(b)(5) Q:

on seawater, are they looking at how much boron was dumped in? Skeen - yes. have

(b)(5)

some differing views on how much they might need - maybe 300ppm. But recommendation is to switch to fresh water either way. Heard they did put in boron previously - not sure how much.

Source: TA call

Address/Location:

Attachment:

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Date/Time: 03/22/2011 19:55:50 (ET)

Should we consider asking our licensees to voluntarily submit data? That would be IN from NRR. Could start with INPO also, though. Marty: EPA and Radnet were going to be primary, though. PMT: they are not collecting rainwater samples. Marty: maybe get through NEI.

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1680

Facility:

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/22/2011 19:51:46 (ET)

Both Ginna and NMP have detected I-131 in their water samples. Levels are above their environmental minimum detection levels. At Ginna, they exceed 30d report to us level. As far as they can tell, is not plant activities. During Chernobyl, NRR issued IN asking them to provide data to us but that was not reportable.

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1679

Facility:

Source: PMT

Address/Location:

Attachment:

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Date/Time: 03/22/2011 19:48:32 (ET)

No AMS data yet. Have started to provide very limited data on seawater. Only I-131 exceeds their level. Been looking at NR data. Have 9:00 call to Japan to understand their PAR, and why that appears to be different from call where they said it was voluntary before.

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1678

Facility:

Source: PMT

Address/Location:

Attachment:

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(b)(5)

Date/Time:	03/22/2011 19:40:54 (ET)	Ventilation into U2 would be best to avoid hydrogen explosion. Portion they removed is not very big. If can get power back, maybe can get ventilation working. They have not asked us for any fans. Just got report from TEPCO Washington that Units 5 and 6 have power restored from temporary power line - have RHR and control rooms back. Wiggins: how is fuel oil supply? Dave: we can ask that. Using CS into Unit 1, Feedwater into 2 and 3. Have SRVs open on all 3 units
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1677	
Facility:		
Source:	RST	

Address/Location:	
Attachment:	

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Date/Time:	03/22/2011 19:34:46 (ET)	Japanese are concerned they have 2 weeks left before they go solid on salt in the lower plenums of the reactors. We show a day or 2 max. So recommendation is to keep putting water in, but try and get fresh water ASAP. Could bottom head thermocouple be cooking? Holahan said following TMI they couldnt trust the thermocouples. At 700+, with heat and damage, cant trust reading. But changes can be used - showing temperatures going up or down. Plan for 9:00 call is to tell Japanese fresh water is best, but otherwise keep with salt. Should put boron in if possible. Continue to vent primary containment if needed. GE said they read something that they had hardened vents, but we are not sure. Wiggins: maybe blew rupture disks?
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1676	
Facility:		
Source:	RST	

Address/Location:	
Attachment:	

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Date/Time:	03/22/2011 18:46:40 (ET)	Discusses continued problems with space limitations of incoming emails. also working to get facebook access to ops center so official channels of communication from japan can be monitored there.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1675	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/22/2011 18:03:03 (ET)	(b)(5)
Position:	EST Chronology Officer	
		(b)(5)

Name:	Rebecca Karas
Record:	1674
Facility:	
Source:	ET

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/22/2011 17:16:55 (ET)	Shipment of enriched research reactor fuel from France to Japan - Japan indicated it is in no position to accept. Areva Richland indicated it could be a safe haven. Not sure where shipment is right now.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1671	
Facility:		
Source:	Weber	

Address/Location:	
Attachment:	

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Date/Time:	03/22/2011 17:28:09 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1672	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/22/2011 17:16:55 (ET)	Shipment of 20% enriched research reactor fuel from France to Japan - Japan indicated it is in no position to accept. Areva Richland indicated it could be a safe haven. Not sure where shipment is right now.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1673	
Facility:		
Source:	Weber	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

(b)(5)

Date/Time:	03/22/2011 16:55:41 (ET)	Have a few people who understand file transfer. CITRIX keeps closing due to inactivity - file transfer problems. Gitter: With 3GB of data, should be able to transmit those in 1 (b)(5) Got a folder compressed. Will try to transfer compressed folder. Will get someone from OIS to help. So far 147MB been sent to TTC. Will email some.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1670	
Facility:		
Source:	site team	

Address/Location:	
Attachment:	

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Date/Time:	03/22/2011 16:08:09 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1669	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/22/2011 16:04:08 (ET)	NMP reporting readings they are postulating could be from Japan.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1668	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/22/2011 15:18:47 (ET)	(b)(5)	3rd shipment needs to occur to make 1st train work - may not be there until Thursday. 480V AC restored to portions of all the plants. Consortium coming together. Etiquette with Japanese complex - rather than shipping them things, have to ask specifically what they need, and ship only that. Getting higher than normal temps in Unit 1. About 740F at bottom head. Much higher than normal. Not really bad, based on what the head can handle.
Position:	EST Chronology Officer		
Name:	Rebecca Karas		
Record:	1667		
Facility:			
Source:	Chairman		

(b)(5)

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/22/2011 14:43:58 (ET)	The piping of Train #1 is incomplete. The material will be ship on Thursday since is under fabrication.
Position: EST Chronology Officer	
Name: Hector Rodriguez-Luccioni	
Record: 1666	
Facility:	
Source: EST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/22/2011 14:39:58 (ET)	The second wave of the NRC team leaves on thursday to Japan.
Position: EST Chronology Officer	
Name: Hector Rodriguez-Luccioni	
Record: 1665	
Facility:	
Source: EST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/22/2011 14:37:21 (ET)	All the cargo of the military are taken.
Position: EST Chronology Officer	
Name: Hector Rodriguez-Luccioni	
Record: 1664	
Facility:	
Source: EST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/22/2011 14:27:49 (ET)	The NRC wants to know what assumptions were used on the calculation of the radiation levels on the model that end up in thyroid in a 1 year old.
Position: EST Chronology Officer	

(b)(5)

Name:	Hector Rodriguez-Luccioni
Record:	1663
Facility:	
Source:	

Address/Location:	
Attachment:	

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Date/Time:	03/22/2011 13:57:42 (ET)	<div style="border: 1px solid black; width: 100%; height: 15px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 100%; height: 15px; margin-bottom: 5px; text-align: center;">(b)(5)</div> <div style="border: 1px solid black; width: 100%; height: 15px; margin-bottom: 5px;"></div>
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1662	
Facility:		
Source:	Call from Team Japan	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/22/2011 13:38:53 (ET)	RST should verify the status information on the plant status situation report.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1661	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	

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Date/Time:	03/22/2011 13:01:12 (ET)	RST- They got an email from the US foces Japan. The RST Suggested that the US forces in japan maintain full contact with NRC forces Japan and the Embassy.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1660	
Facility:		

(b)(5)	
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Source:	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/22/2011 11:56:54 (ET)	Allan Blamy left today to Japan and Mike Scott.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1659	
Facility:		
Source:		

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/22/2011 11:31:28 (ET)	There are long term sustain impact on KI injections. This is a question not an statement. Is for a brain storming on potential issues. EST Chronology Officer - Hector Rodriguez-Luccioni at 11:34:16 on 3/22/2011
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1657	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/22/2011 11:31:28 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1658	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:		Both shipments for pump train #1 have arrived in Japan
(b)(5)		

	03/22/2011 11:27:19 (ET)
Position:	EST Chronology Officer
Name:	Hector Rodriguez-Luccioni
Record:	1656
Facility:	
Source:	EST

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/22/2011 11:07:00 (ET)	One of the barriers is the transportation for the utilities.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1655	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/22/2011 11:06:10 (ET)	Industries preferences is that TEPCO pays directly for the utilities.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1654	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/22/2011 11:04:38 (ET)	Aparantly there are not eanough radiation detectors on the vendors, so the instrumentations is limited.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	

(b)(5)

Record:	1653
Facility:	
Source:	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/22/2011 10:53:50 (ET)	Lights are on on Unit 3.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1652	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/22/2011 10:48:08 (ET)	The Japanese are going to provide a thumb drive with a couple of thousand pictures.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1651	
Facility:		
Source:		

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/22/2011 10:41:27 (ET)	DOE is working with national labs and with the robotics vendors. INPO and DOE list is going to be send to the NRC.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1650	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	

(b)(5)

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/22/2011 10:40:07 (ET)	INPO put together a list of equipments available and the possible venders.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1649	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/22/2011 09:29:43 (ET)	<p>Meeting with the cabinets briefing. Good dialog with USFFJ and other organizations and talk about robotics.</p> <p>We ask the HQ to look ad the INPO and DOE with regard with robotics and radiation monitoring. We also want to make contact with DOE to get some high range area radiation detection. Unit 2 SFP is full (they think it is). Change from see water to fresh water.</p> <p>They have a meeting at with the cabinet again tomorrow and they are looking what area of radiation monitoring around the SFP and the use of the robotics.</p> <p>Tom from NR: have an input that they are working with robotics and the French have a plane full of robotics and the Japanese say not to land. So we need a Japanese to say they want the robotics.</p> <p>Chuck: We are trying to get information from DOE and INPO. We are waiting for a thumb drive (b)(5)</p> <p>For the briefing Marti has a good view we should give a high general level of the status of the plant. There is a lot of gap on the data. Some of the data sheet we are producing is from JAIF.</p> <p>Weber: Are you are aware of the INPO individual is getting there?</p> <p>Chuck: Yes I am.</p> <p>Weber: He will have the opportunity to work with you. Introduce him to the Japanese counterpart. We will be working at the Tokyo Center.</p> <p>Chuck: what is the status of the OPS center?</p> <p>Weber: is busy all day long.</p> <p>Weber: The chairman is working with the head counterparts of other agencies. We</p>
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1648	

(b)(5)

Facility: should have soon an answer on who is going to be leading.
 Weber: are you taking care of your health?
 Chuck: We are not working around the clock. We are running one person at nigh right now.
 Weber: Have we work out the training of who is going to operate the new equipment?
 Chuck: Yes the representative of Australia offer their assistance to train to operate the equipment.
 Weber: Any update on Unit 1?
 Chuck: No
 Tom NR: Data from TEPCO, 750 F degrees from the bottom head and feed nuzzle.
 Our team: If we have melting, that is normal on the bottom head. We will go in the morning and look at that. We are more worried on mitigating actions. We are only going two times a day to get data.
 Tom NR: There is no change in the posture of the military actions.
 RST-We are looking to change priorities. SFP unit 4 is our lower priority because the level is low.
 Team in Japan: [redacted] (b)(5)
 [redacted] Unit 4 has a continue water filling and the radiation level is not going down.
 RST: The request on information about Robotic came from Japan and INPO is working on it.
 Team japan: The Japanese want the library of equipment. If you put a pile of equipment they will rejected. They want high level radiation detector equipment.
 RST: when INPO get their inventory we will send you that list.
 Team Japan: Tomorrow morning they are flying a Helicopter unit with a camera and radiation detectors to characterize the SFP.

Source: Call from Chuck

Address/Location:

Attachment:

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Date/Time: 03/22/2011 08:30:06 (ET) RST suggested to enter a tac for each team with their priorities.

Position: EST Chronology Officer

[redacted] (b)(5)

Name:	Hector Rodriguez-Luccioni
Record:	1647
Facility:	
Source:	EST
Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/22/2011 08:23:54 (ET)	We have a call plant at 10:00 am. Our team is working on a meeting in Japan to meet with the individual that is leaving from Atlanta. We dont have any leagal issues. We want to use the individual inputs without making him part of the team.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1646	
Facility:		
Source:	Bill Call	

Address/Location:	
Attachment:	

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Date/Time:	03/22/2011 08:12:58 (ET)	Use the WebEOC priorities list to discuss priorities at shift turnover.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1645	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	

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Date/Time:	03/22/2011 07:50:56 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	We are not making any changes to the 50 miles evacuation suggestion. The NRC should not publish the model results because is not NRC results.
Record:	1644	
Facility:		
Source:	EST	

(b)(5)

Address/Location:	
Attachment:	
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Date/Time:	03/22/2011 07:33:45 (ET)	Unit 1,2, and 3 apparently are in static conditions but Unit 1 has a temperature of 750 F degrees. The smoke of Unit 3 reason is still unknown and there is steam from Unit 2. Progress continue on restoring AC power. Restore in Unit 5 and diesel running in Unit 6. Slightly decaying levels on radiation. The highest level is around Unit 3. Received results overnights of the Bounding Reasonable Model based on 1 reactor. <div style="border: 1px solid black; padding: 2px; text-align: center;">(b)(5)</div> Consortium call is at 10:00 am. The train arrived yesterday and the second is arriving today (still need confirmation). The calculation that was done is hypothetical and is an indication of what actions we should take. The results shows for a Thyroid on a 1 year old. But the whole body doses are within the limits. The Chairman is working on which agency is going to take the lead. Next call will be at 2000.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1643	
Facility:		
Source:	Morning Briefing	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/22/2011 07:18:57 (ET)	Disturbing news about Temperature elevated on Unit 1 about 750 F degrees. Still dont know the reason of smoke in unit 3. There is a steam/smoke in unit 2. Succeed in connecting power to unit 1 and 2. Continue to work with our team to mitigate the cooling of the reactors. The vicinity of Unit 3 has the highest radioactivity reading. New information of the NARAC sorrowwunding scenarios. Shows concerned of Thyroid doses. Still reviewing dose results. If we agree this are realistic concerns the questions is how to communicate it. Confirmation of the first train for the SFP arrived, still confirming this. Off line we will be working with the criteria to be used to stand down of our team Priorities:
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1642	
Facility:		

(b)(5)

Facility:

Understand the status of Unit 1
 Continue with the other agencies in the protection actions of the USA
 There is a call tonight with Federal
 Also trying to understand the results of the modeling and what action should be make.
 Agencies to see what actions to make, an important call to prepare tomorrow morning
 Deputy call.
 Navy is very anxious of doing something and they would like to use NARAC model.
 Chairman: If there is an agency that wants to take the lead, it will be fine and the NRC
 will continue with technical support.

Source: Chairman Briefing

Address/Location:

Attachment:

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Date/Time: 03/22/2011 05:48:20 (ET)

Position: EST Chronology Officer

Name: Thomas Scarbrough

Record: 1641

NRC Team provided briefings to dependents in town hall meetings before they left and
 continue town halls for Embassy employees. Ambassador appreciates these meetings.
 Since event, 250 emergency VISAs to leave Japan.
 Embassy continues contingency plan for more broad evacuation if needed.
 Embassy posting reactor data on their website. Chuck will check data.
 Today was first day of distribution of KI at Embassy (2 distribution points) for US
 citizens.
 Narrative this week is US leaving but actually being prudent for US citizens. US rescue
 efforts continue as strong as ever. GW repositioned to not be within plume. Some bad
 press stories on movement of GW.
 Embassy set up hotline on radiation protection such as KI and any health concerns.
 Preparation underway for Admiral Willard briefing on Thursday. He wants to know why
 cross talk on data and what is the real story.
 Marty: Briefing should discuss the priorities based on available data.
 Chuck will draft briefing plan and share with ET for preparation.
 DOD indicated that they had 450 radiation control staff in US prepared to support effort.
 Chuck indicated positives of MOD and 7th Fleet working together and NRC team
 providing support and interacting with TEPCO.

(b)(5)

Facility:	<p>Chuck heard that [REDACTED]</p> <p style="text-align: center;">(b)(5)</p> <p>NRC Team relayed positives to Japan Cabinet contacts on meeting today. Each day getting better for interactions in Japan. ET provides info:</p> <ol style="list-style-type: none"> 1. RST reports JANO meeting indicated Unit 1 temperature data of 750 F. Chuck will ask TEPCO for Unit 1 temperature and need to address water cooling. 2. ET sending robotic information to NRC Team. 3. NISA questions on severe accident analysis could be addressed by JENS, such as radiolysis. Chuck will provide information on those issues in the references. 4. ET updating Status Summary Sheet based on information sent by Chuck.
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Source: Chuck Casto

Address/Location:

Attachment:

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Date/Time: 03/22/2011 05:37:18 (ET)	RST reported that INPO had obtained data indicating 750F temperature readings in Unit 1 SFP. Evaluating reliability of data.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1640	
Facility:	
Source: RST	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/22/2011 05:19:16 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1639	
Facility:	
Source: RST	

[REDACTED] (b)(5)

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/22/2011 05:12:36 (ET)	PMT continuing evaluations of worst case scenario and interactions with govt and industry contacts. ET considers topic for Deputies meeting should include worst case scenario analysis. Topic for Consortium should include priorities. Aftershock warning on Japan TV of 7 Richter scale.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1638	
Facility:	
Source: PMT	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/22/2011 04:06:08 (ET)	Field radiation data appear to be trending down over last several days.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1637	
Facility:	
Source: PMT	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/22/2011 02:07:16 (ET)	Chuck reports that a lot of progress occurred today. TEPCO accepting one train pumping equipment at Yocoda and will be transported to site. Chuck concerned that Units 3 and 4 SFPs do not appear to be filling. Tony: TEPCO meeting most productive yet. RST participated in call and helped with technical issues. Sea water issue discussed with TEPCO. NRC Team will provide recommendations to TEPCO on sea water issue within a day. TEPCO first option is pump from dam with original construction fill line. TEPCO analyzing potential fuel channel blockage from salt in sea water toward end of March. GEH has portable desalination unit (300 gpm). RST will contact GEH ASAP. Cable problem with water source from dam. Navy offered to lay 6900 volt cable when requested. Working on water cannon delivery issues with TEPCO. Working with INPO on list of rad protection
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1636	
Facility:	

(b)(5)

Facility:

equipment for TEPCO. Still checking on robotic equipment list. TEPCO says it has sufficient boron at this time.

NRC Team met with Cabinet level, DOD, DOE and Embassy staff on integrated effort.

Japan priority for cooling fuel and obtaining data. Discussed dam and piping and

broken cable. Discussed robotic equipment. Will provide NUREG on BWR post-

accident. (b)(5) Want to find out fuel cooling in reactor and SFP.

Structural integrity for SFP questionable after pumping water. NISA provided NRC Team with a table for Units 1-3 data.

NRC Team evaluating Unit 1 temperature for pressure implications.

TEPCO is the only organization that has data (including NISA table) (b)(5)

(b)(5)

Unit 3 plots Rx and suppression pool data shows movement of data so evaluating.

TEPCO using IR to show SFP have water. NRC Team not convinced on TEPCO conclusion.

Chuck asks if GEH can help determine Rx status if no instrumentation.

ET does not know exact layout of units.

NRC Team said they can find that information.

Restoration of plant equipment is a long term effort. Eg., Units 1 and 3 not possible for plant equipment. Power is good because can supply temporary equipment, but not answer for supplying plant equipment. Had to shut down fire trucks to prevent overheating.

Sea water swap-over is best plan. Pipe from dam from original construction to CST to fill reactor and SFP. Have damaged cable that must be fixed.

Sea water being injected by fire trucks to reactors. Injection paths are Unit 1 core spray, and Unit 2 and 3 jet pump nozzles.

NRC Team needs to provide (1) Severe accident guidelines and (2) Robotic equipment availability.

ET will check with INPO on ALARA guidelines (b)(5)

ASN offered robotic equipment to TEPCO but was rejected.

Chuck asks for any recommendations based on new data for the units.

(b)(5)

NRC Team will check unit status

prepared by ET for accuracy.

Chuck follow-up call: (b)(5)

(b)(5)

(b)(5)

Bottom line is that today was a good day.

Source: Chuck Casto

Address/Location:

Attachment:

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Date/Time: 03/21/2011 23:31:34 (ET)

Position: EST Chronology Officer

Name: Thomas Scarbrough

Record: 1635

Assigned actions:

- 1. What criteria to adjust previous PAR? Also, what criteria for standing down NRC response?
- 2. Any actions that we might have missed? For example, checking on any potential sources in affected Japan areas.
- 3. What requests from Japanese?

(b)(5)

(b)(5)

Facility:

RST: Discussions of salt buildup.

LT: INPO person arrives in Japan today. Rill asked what region can communicate with states.

Marty: Are we working on everything that Chuck needs?

Dave Hermann: Recent call with TEPCO was positive interaction. Agree with seawater cooling priority while working on additional actions.

Source: Team Leader Meeting

Address/Location:

Attachment:

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(b)(5)

Date/Time:	03/21/2011 21:15:38 (ET)	Going to try and get better data today - embedded folks at NISA. Wiggins - learned that Bechtel system is in halves. 7 more hours for 2nd piece of train. Wiggins: anything on smoke/steam at U3. Looked like hydrocarbons to site team. Doesnt look like zirc. probably from MG set. Likely carbon (b)(5) say there is steam off of Unit 2 floor. We are with TEPCO and NISA on smoke from Unit 2. Wiggins: you want explosive/civil/structural? Ralph Way is coming. Chuck: dont see need for structural resources. Was some structural info done on weight with sand. Were probably going to tell them to drop boron if worried about criticality. Marty: What about INPO guy being part of team? chuck: he might as well. Going to be 10am daily call with consortium. Way to get them to accept industry help may be through GEH. DOE or someone else may be better at logistics. Chuck: big TEPCO meeting on salt, hydrogen, criticality. They put on agenda when is water cannon arriving. So even with reluctance to take, they keep adding to agenda. Have 2 people at NISA today. Mgt meeting at Conte at 1:00. Naval reactors has field data. DOE cant fly right now, but are trying to get data from south. Wiggins: will need ground samples also. Chuck: have real ground data. Was supposed to come to PMT last night. PMT - trying to track down. Marty: IAEA is collecting data? Yes, heard, but havent seen data. Chuck: (b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1634	
Facility:		

Source: Chuck

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/21/2011 20:24:05 (ET)	First plane had only half of system - the rest is on next plane.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1633	
Facility:		
Source:	ET	

Address/Location:

Attachment:

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Date/Time:	03/21/2011 20:00:21 (ET)	Things have not appreciably changed. U1-3 are under seawater injection. Cont. integrity status - still need to confirm. There was noise in U2 early in event - some think problem
Position:	EST Chronology Officer	

(b)(5)

Name:	Rebecca Karas	in torus -no huge problem as long as maintain cooling in vessel. Grey smoke/steam reports from U3 and U2. Dont know if independently confirmed - reports from Japanese and DOE. Reports tepco thinks its steam, and there was a temporary evac from around the units. TEPCO restored U1 and 2 power to power center, running cables now. No indication of significant dose rate changes. Some reports of reductions, but not sustained. AMS flights grounded due to bad weather. Industry call at 2pm. They want to get going. Had reports of advance team of 2 people trying to make way to embassy. Chairman still making phone call for the govt agency that would be lead coordinator,
Record:	1632	
Facility:		(b)(5) First train still sitting on C-17, but 2nd train landed at 4pm EST. Needs to be moved to staging area. Navy has agreed to hold off until agreement on dose assessment. Standard source term decided on. Working on criteria to relax 50 mile decision - considering re-entry provisions applied by states in this country if the event had happened in U.S. Castleman: sitrep indicates water added to SFP - fresh or sea? Skeen - have no fresh water yet as far as we know. All from trucks. Do we have hard info on site doses and environment? Wiggins: no. have varying reports with some numbers - doses around 3 and 4, around 10-15 rem on outside. single digit rems and tenths of rems Don: have additional survey data - not same points, so cant say if gone up or down. Conclude not a substantial change. Do we have info on rad heath effects? No, only have AMS overflight data, and bits of environmental surveys. Have no info on fire truck guys. (b)(5)
Source:	TA Call	(b)(5)

Address/Location:	
Attachment:	

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Date/Time:	03/21/2011 19:53:13 (ET)	TEPCO still concerned about salt in reactors, and potential for criticality if we switch to fresh water (instead of borated water). They ran out of boron some time ago. Boron is good, except it is like a rock when it precipitates out. Did we ever tell them non-energetic hole in Unit 2 method? Fred Brown was looking at. Came up with couple of options, but questionable. Will go back and take a look at it.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1631	
Facility:		
Source:	RST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

(b)(5)

Date/Time:	03/21/2011 19:47:17 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1630	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/21/2011 19:34:21 (ET)	Chuck had said needed civil/structural and explosive expert. Probably he will be asked to look at effects of blast on pool integrity.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1629	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/21/2011 19:15:57 (ET)	Need to identify exit strategy: rad source under control, measured data shows less than 2 rem in first year
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1628	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/21/2011 19:01:31 (ET)	Work to connect power cables to U2 and U3 halted yesterday. Smoke believed to be steam not from pools.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1627	
Facility:		
Source:	DOE communication	

Address/Location:	
(b)(5)	

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/21/2011 18:53:16 (ET)	Watches helicopter video with long metal stick-like components of uniform length scattered on the ground and roof of Unit 4 (postulated maybe fuel bundles).
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1626	
Facility:		
Source:	ET	

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/21/2011 18:51:14 (ET)	Receive quesiton from Admiral on smoke, and whether any rad increase.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1625	
Facility:		
Source:	ET	

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/21/2011 17:01:57 (ET)	First plane landed at 3:15 pm EST at Yokota AFB with Bechtel equipment.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	Correction: 3:50pm.
Record:	1623	EST Chronology Officer - Rebecca Karas at 17:02:39 on 3/21/2011
Facility:		
Source:	RST	

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/21/2011 17:01:57 (ET)	First plane landed at 3:15 pm EST at Yokota AFB with Bechtel equipment.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1624	
Facility:		

(b)(5)

Source: RST	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/21/2011 16:15:47 (ET)	Laura - Carpers office - had report workers were evacuated at Unit 3 due to high rad. Wiggins - connected to puff of smoke. Joseph from Markeys office asked about smoke coming from 2 and 3? Wiggins: true, but separated in time. Tinkler: last night started getting questions on what would happen in SFP wrt core-concrete interaction. We made melcor calculations available to NR. Now getting many Qs on models, etc. We are in process of trying to figure out Q.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1622	
Facility:	
Source: Brian	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/21/2011 15:35:25 (ET)	PMT to come up with basis for relaxing 50 mile criteria (re-entry).
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1621	
Facility:	
Source: ET	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/21/2011 15:28:07 (ET)	Should have equivalent of FRMAC team doing sampling etc before let people back in 50 mile radius. Should have group of people seeing if we are missing anything? Do we have rad levels inside containment? Maybe they powered rad monitors up.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1620	
Facility:	
Source: ET	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/21/2011 15:19:12 (ET)	Still have not figured out U3 smoke. No update on power. Its at a power panel at U1 and 2. Most of news is not new. Concern Navy had - have agreed to hold off pending inter-
Position: EST Chronology Officer	
(b)(5)	

Name: Rebecca Karas	governmental coordination on dose assessment.
Record: 1619	(b)(5)
Facility:	<p>Charlie met on plume modeling. Have new source term assumption. Is a core, part of 3 and part of 4 SFPs. Not much different than supercore scenario. Had consortium call at 2pm. Ellis, et al are pushing for a decision on who in government is in charge of tech support function</p> <p>(b)(5)</p> <p>He would have INPO person embedded on team. Seems to be a legal process holdup. Priority is to get lead identified to get those people out to help Chuck. People have already been sent we think. Priority is to get through to complete information on facilities, and work on dose assessment. Any update on Bechtel equipment? Mike - should have arrived in Japan. Chairman: is there anything we are missing? We will think about that. Working on stand-down criteria. Looking for a dialing back approach. Maybe different criteria for going from full site team, to partial, to none. chairman: also look at when would relax 50 mile. Wiggins: looks like re-entry criteria. Thought is dont adjust, just go back the whole way at some point.</p>
Source: Chairman	

Address/Location:	
Attachment:	

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Date/Time: 03/21/2011 14:48:01 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Hector Rodriguez-Luccioni	
Record: 1618	
Facility:	
Source: ETS	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/21/2011 14:41:23 (ET)	PMT is in continue contact with the Navy gathering information.
Position: EST Chronology Officer	
Name: Hector Rodriguez-Luccioni	

(b)(5)

Record:	1617
Facility:	
Source:	EST

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/21/2011 14:27:14 (ET)	There is a INPO equivalent representatives in DC. Bill is going to try to make contact with them.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1616	
Facility:		
Source:	Call	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/21/2011 14:00:41 (ET)	Purpose is to focus on the action needed.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1615	
Facility:		Deputy of Naval Reactors is in the ETS.
		We have not determine who will have the lead.
		NRC team has being working on strategies to be pursued. The train is close to Japan.
		They are thinking of having a person on the center in Tokyo to have access to TEPCO information. Searching for approval.
		TEPCO is still providing strategic response.
		The NRC technical discussion are going pretty well.
		Weber: We dont want to propose something to the Japanese that will not work.
		Delays on flights from Australia to Japan, they are progressing and they expect to land anytime soon.
		INPO has coordinated the industry input and will continue to do that.

(b)(5)

NRC team is working with the Japanese counterparts in cooling the reactors.

The next call will be tomorrow morning 1000 eastern time.
INPO should continue working with RST.

Source: Consortium Call

Address/Location:

Attachment:

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Date/Time: 03/21/2011 13:53:21 (ET)

Weber will be running the 2:00 pm Consortium call.

Position: EST Chronology Officer

Name: Hector Rodriguez-Luccioni

The call will be to share what actions will be on the way.

Record: 1614

Facility:

Source: call

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/21/2011 13:40:52 (ET)

Bill is on the bridge listening to what is going on the ETS.

Position: EST Chronology Officer

Name: Hector Rodriguez-Luccioni

Record: 1613

Facility:

Source: Call

Address/Location:

Attachment:

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Date/Time: 03/21/2011 11:52:25 (ET)

The Chairman will participate in the 2:00 pm call.

Position: EST Chronology Officer

Name: Hector Rodriguez-Luccioni

(b)(5)

Record: 1612	
Facility:	
Source: Call	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/21/2011 11:37:34 (ET)	No one should take KI at this time. Is just pre-distribution of KI.
Position: EST Chronology Officer	
Name: Hector Rodriguez-Luccioni	
Record: 1611	
Facility:	
Source: EST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/21/2011 11:24:31 (ET)	DOE (email): Ask for the triggers that the NRC will uses to know that the conditions are getting worst.
Position: EST Chronology Officer	
Name: Hector Rodriguez-Luccioni	
Record: 1610	
Facility:	
Source: EST	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/21/2011 11:16:32 (ET)	The model will project hypothetically the doses expect in Tokyo. The Japanese have share information so we need to reciprocate. Janapanese are asking what is our basis for acting in the distribution of KI.
Position: EST Chronology Officer	
Name: Hector Rodriguez-Luccioni	
Record: 1609	
Facility:	
Source:	

(b)(5)

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/21/2011 10:51:39 (ET)	When the plant state conditions chance an analysis will be done with realistic conditions. The SuperCore model used assume conditions.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1608	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/21/2011 10:38:24 (ET)	DOE presented the model for SuperCore and some results. This is for planning purposes. We have to continue with realistic scenarios.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1607	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/21/2011 08:33:00 (ET)	Is still reasonable that the sample is not accurate or an inaccurate count. The 10E-7 is a total radiation measurement not iodine alone. If this source came from the plant it could be from the SFP or one of the reactors.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	
Record:	1606	
Facility:		
Source:	EST	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

(b)(5)

Date/Time:	03/21/2011 08:08:38 (ET)	Same information of the morning briefing.
Position:	EST Chronology Officer	Top Priorities:
Name:	Hector Rodriguez-Luccioni	Continue stabilization of the SFP.
Record:	1605	Verify the reason of the smoke.
Facility:		Continue Support to the ambassador.
Source:	Chairman Call	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/21/2011 07:41:44 (ET)	Unit 1,2,and 3 reactors appears to be in stable conditions with seawater injection. Their containment is believe to be intact.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	Unit 3 smoke, source unknown.
Record:	1603	
Facility:		Unit 1 and 2 has power.
		Unit 5 has RHR working.
		Radiation concentration in Milk.
		Working on the worst case scenario.
		Radiation level dedcted in Sacramento.
		The 3 containment are intact. SFP are the concern in water level.
		EST Chronology Officer - Hector Rodriguez-Luccioni at 07:55:18 on 3/21/2011

Source:	Morning Briefing
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:		Unit 1,2,and 3 reactors appears to be in stable conditions with seawater injection. Their
	(b)(5)	

	03/21/2011 07:41:44 (ET)	containment is believe to be intact.
Position:	EST Chronology Officer	
Name:	Hector Rodriguez-Luccioni	Unit 3 smoke, source unknown.
Record:	1604	Unit 1 and 2 has power.
Facility:		Unit 5 has RHR working. Radiation concentration in Milk. Working on the worst case scenario. Radiation level dected in Sacramento. The 3 containment are intact. SFP are the concern in water level.
Source:	EST	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/21/2011 05:48:56 (ET)	Evening Debrief:
Position:	EST Chronology Officer	KI in Japan is enough for 380,000 people - just got shipmentl. There will be two distribution points (Embassy and hotel).
Name:	Mark Resner	
Record:	1601	
		Tomorrow at 10 a.m. there will be a meeting and PMT and RST will be part of it. Dan Dorman just returned from Committee meeting. Cabinet Secretary did most of the talking. Implications for NRC to attend other meetings, however, there is a resource issue to staff those meetings. Twice today re criticality has been discussed and not sure of implications for NRC. Gray smoke from Unit 3 SFP caused site evacuation late this afternoon. NRC does not know the outcome of that at this time. Finally, while electrical power is restored, the damaged equipment will have to be

(b)(5)

Facility:

assessed. This is estimated to take at least 2-3 days.
 Three loops cooling needed for SFP but radiation levels at this time prevent progress.

John added that he was in meeting with Ministry and they were very interested in NRC Commission meeting. He advised them of what was covered in meeting.

NRC ET provided status update.
 Brian M. suggested provided on-site NRC Team with written sit-rep status update rather than relying on discussion.

Conference call ended at ~6:17 a.m. EST

clarification: Commission mtg. to take place today
 EST Chronology Officer - Mark Resner at 06:24:19 on 3/21/2011

Source: Chuck Casto PMT

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/21/2011 05:48:56 (ET)	Evening Debrief:
Position: EST Chronology Officer	KI in Japan is enough for 380,000 people - just got shipment. There will be two distribution points (Embassy and hotel). Tomorrow at 10 a.m. there will be a meeting and PMT and RST will be part of it. Dan Dorman just returned from Committee meeting. Cabinet Secretary did most of the talking. Implications for NRC to attend other meetings, however, there is a resource issue to staff those meetings. Twice today re criticality has been discussed and not sure of implications for NRC. Gray smoke from Unit 3 SFP caused site evacuation late this afternoon. NRC does not know the outcome of that at this time.
Name: Mark Resner	
Record: 1602	

(b)(5)

Facility:

Finally, while electrical power is restored, the damaged equipment will have to be assessed. This is estimated to take at least 2-3 days.

Three loops cooling needed for SFP but radiation levels at this time prevent progress.

John added that he was in meeting with Ministry and they were very interested in NRC Commission meeting. He advised them of what was covered in meeting.

NRC ET provided status update.

Brian M. suggested provided on-site NRC Team with written sit-rep status update rather than relying on discussion.

Conference call ended at ~6:17 a.m. EST

Source: Chuck Casto PMT

Address/Location:

Attachment:

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Date/Time: 03/21/2011 00:46:11 (ET) **Conference call. Admiral Donald (phonetic) U.S.S. George Washington reported that beginning at 2035 hrs.90 miles north of Tokyo, and also readings were taken 175 miles away from site at (Yokuska). Air sample readings reported by Admiral Donald were taken over 15 minute intervals and continuing at this time.**

Position: EST Chronology Officer

Name: Mark Resner

Record: 1598

Ambassador John Ruse (phonetic) is on call.

NRC Chairman joined conference call.

Chuck Burrows from Naval Reactors - there are gamma radiation samples also being taken at same location along with surface contamination data. Most surprising reading was radioactive iodine 90 miles north of reactor site. Level of reading would not trigger protective action.

(b)(5)

(b)(5)

NRC Chairman requesting validation of data reported. Recommends getting validation of data from Japanese.

(b)(5)

NRC Chairman advised that level of exposure is low level that would not prompt any direct action at this time We operate on principle of ALARA and at this time the level as reported does not appear to be high enough to trigger protective action.

NRC PMT recommendation is that samples reported are not high enough to trigger protective action.

NRC Chairman would like to revisit actions to be taken in 6- 7 hours once data can be verified.

Curt Campbell (phonetic) on conference call.

(b)(5)

NRC Chairman proposed continued monitoring of dose levels at the local level and reconvene in 6-7 hours to determine whether dose levels are increasing. The Chairman suggested when agreement on data reached that Japanese issue a statement. He suggested that FEMA should be included in any analysis. NRC EDO suggested to also include EPA.

(b)(5)

Call concluded at ~ 2:07 a.m. EST.

(b)(5)

Facility:

Clarification: DEDO suggested including EPA
EST Chronology Officer - Mark Resner at 04:49:04 on 3/21/2011

Source:	(b)(6)
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Address/Location:	
Attachment:	
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Date/Time:	03/21/2011 03:29:27 (ET)	Reports via phone that Mr. Ito (Phonetic) Deputy Chief, Cabinet Office is changing method of communications. Specifically, there will be a Coordinating Committee made up of NRC, Minister of Defense, Minister of Foreign Affairs, and NISA. As part of this new structure, there will be three subcommittees - Radiation - Analysis - and Solutions. The first meeting of Coordinating Committee will be at 5:30 p.m.today (Japanese time). Chuck, Dan, et al will attend this first meeting.
Position:	EST Chronology Officer	
Name:	Mark Resner	
Record:	1599	
Facility:		
Source:	Chuck Casto PMT	

Address/Location:	
Attachment:	
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Date/Time:	03/21/2011 00:46:11 (ET)	Conference call. Admiral Donald (phonetic) U.S.S. George Washington reported that beginning at 2035 hrs.90 miles north of Tokyo, and also readings were taken 175 miles away from site at (Yokuska). Air sample readings reported by Admiral Donald were taken over 15 minute intervals and continuing at this time.
Position:	EST Chronology Officer	
Name:	Mark Resner	
Record:	1600	
		Ambassador John Ruse (phonetic) is on call.
		NRC Chairman joined conference call.
		Chuck Burrows from Naval Reactors - there are gamma radiation samples also being taken at same location along with surface contamination data. Most surprising reading was radioactive iodine 90 miles north of reactor site. Level of reading would not trigger protective action.

(b)(5)

(b)(5)

NRC Chairman requesting validation of data reported. Recommends getting validation of data from Japanese.

(b)(5)

NRC Chairman advised that level of exposure is low level that would not prompt any direct action at this time We operate on principle of ALARA and at this time the level as reported does not appear to be high enough to trigger protective action.

NRC PMT recommendation is that samples reported are not high enough to trigger protective action.

NRC Chairman would like to revisit actions to be taken in 6- 7 hours once data can be verified.

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(b)(5)

NRC Chairman proposed continued monitoring of dose levels at the local level and reconvene in 6-7 hours.to determine whether dose levels are increasing. The Chairman suggested when agreement on data reached that Japanese issue a statement. He suggested that FEMA should be included in any analysis. NRC EDO suggested to also include EPA.

(b)(5)

Facility:

(b)(5)

(b)(5)

Call concluded at ~ 2:07 a.m. EST.

Source: (b)(6)

Address/Location:

Attachment:

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Date/Time: 03/20/2011 23:49:29 (ET)

Position: EST Chronology Officer

Name: Mark Resner

Record: 1594

(b)(5)

Facility:

Equivalent throid dose of 1.5 MR per hr. not valid. PMT verified that dose rate is 150 MR per hour.

EST Chronology Officer - Mark Resner at 00:44:22 on 3/21/2011

Source: John

Address/Location:

Attachment:

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Date/Time: 03/21/2011 00:23:40 (ET)

Position: EST Chronology Officer

Name: Mark Resner

Record: 1596

Facility:

Sample reported by Navy taken 4 hours ago. Requesting advice on administering KI. Navy will only distribute.

Source: John

Address/Location:

(b)(5)

Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/21/2011 00:12:44 (ET)	TEPCO has new GM who advised that within last 24hr. there was no venting from Units 1, 2, & 3. No changes in spent fuel pools for Units 1, 2, & 3. There has been a significant shift in wind.
Position:	EST Chronology Officer	
Name:	Mark Resner	
Record:	1595	
Facility:		
Source:	John	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/20/2011 23:49:29 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Mark Resner	
Record:	1597	
Facility:		
Source:	John	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/20/2011 22:30:14 (ET)	Mechanical difficulties with plane in Australia. Takeoff time TBD.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1593	
Facility:		
Source:	RST	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/20/2011 22:23:32 (ET)	Our intervention levels are about half of the Japanese levels for food. So we would have taken the same actions.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	

(b)(5)

Record:	1592
Facility:	
Source:	PMT

Address/Location:	
Attachment:	

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Date/Time:	03/20/2011 21:45:04 (ET)	Watches youtube videos comparing Unit 1 and Unit 3 explosions. Unit 3 much larger, initiating event and then 3 loud bangs.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1591	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/20/2011 20:51:01 (ET)	Marty: Have note from Josh asking whether we had successfully embedded in TEPCO and if not, should Chairman call Japanese ambassador. John: They have status boards on reactors, etc. Not sure how would work in there and who our interface would be. Couldnt really drift around table to table. Then they took us to 1 engineering floor, and they were heavily staffed up. Had multiple conf rooms for proiect tasks they were working on. They had significant ongoing activities.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1590	

(b)(5)

Brian: maybe find out from TEPCO or NISA what is best estimate of status of U4 SFP - no steam been seen coming out of. People worrying is melting through floor, and then will go to Torus, and then potential steam explosion. John: NHK news release mentioned cooling wiht fire trucks of U4.

(b)(5)

Facility:

(b)(5)

pumper truck at Unit 4 - getting water in? (b)(5) Could be interaction between melt and concrete. Larry - heard food was contaminated, if can learn about it, that would be helpful. John: is all over news. Picking it up. They have about 7.5% of countrys production in that area of country. They decided to ban cheese and milk. Marty: (b)(5)

Embassy has been monitoring. Medical officer characterized as 2 orders of magnitude below permissable limit (b)(5)

(b)(5)

Should get Foster, PMT and DOE working together to give ambassador consolidated input.

Source: John

Address/Location:

Attachment:

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Date/Time: 03/20/2011 20:19:07 (ET) Marty: (b)(5) to discuss assumptions for calcs on consequences. Don: (b)(5)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1589

Facility: (b)(5) DOD wants to know where to move ships. HHS wants to know for KI. Steve Aoke has been on several calls with PMT (b)(5) meeting in am. Mike: Josh talked to Deputy Admin of AID asking if we were able to embed in TEPCO. Marty: (b)(5)

Source: Charlie Miller

Address/Location:

Attachment:

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Date/Time: 03/20/2011 20:18:08 (ET) Site team doesnt believe having someone embedded with TEPCO is helping (b)(5)

Position: EST Chronology Officer (b)(5)

Name: Rebecca Karas

Record: 1588

(b)(5)

Facility:	
Source:	RST
Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/20/2011 19:58:14 (ET)	<p>Status of units basically same. Have seawater cooling to 1-3 reactors. SFP in Unit 1 right now think some cooling going on. Pools worrying about are U3 and U4. In U4, dont see steam. Would imply pool is dry. Heard on news that TEPCO was focusing on Unit 4. Were attempting to spray water in it. Our understanding is Bechtel pump has been loaded on C-17 and should leave later on this evening. Will have to see how TEPCO uses it. 3 other pumps and equip in Australia. Plan was to ship 1, take to site, hook up and see if works. Utility still trying to hook up elec, offsite power. Have offsite coming into 1 side of switchgear room, but still need to run more tests. Not clear that equipment isnt damaged. Got reports today that contamination was measured in tap water in Japan. Going to ask Foster for details. New AMS data. Skeen: Think U1-3 stable at this point. Concerned about 3-4 SFPs. Seems spraying water has had some impact, so have switched to U4. The SFP there - seen no evidence of steaming. Believe event they had characterized as lube oil fire - still appears to be hydrogen explosion. Seems like there was material released around time of lube oil fire in Unit 4. Going to look at concrete-core interactions this shift to see what does if melts through U4 SFP. Don: Have gotten updated AMS plot. 12 flights taken over last 2 days. Continues to show band of higher contamination stretching NW from plant with dose levels measured that would be in 20-30mR/hr range. Evac level exceeded in those areas. Others are at levels below PAGs. Rad conditions have not changed that significantly. Understand that some of dose rates around U3 have come down a little. Still very significant dose rates. Trying to follow up on media reports of iodine in tap water in Tokyo, and iodine in milk, and contamination levels in spinach. We dont know what they measured or what their action level is. On unit 2 looks like cont pressure is high - would indicate intact. They report containments intact on 1-3. Brian: Dont know much about status of Unit 4. Unit 4 had full core offload. If fuel melted after pool went dry, and interacted with concrete, worst situation is goes through and falls down to rooms below, including torus (b)(5)</p> <p>(b)(5) We dont have dose rate information on Unit 4. They are reporting pressure inside the vessels in 5-6. Dave: they say they have no danger for 5-6. Not concerned with 5-6 right now. Q: would think would have big heat source and rad</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1587	

Facility:	
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(b)(5)

signature if it had melted. Dave: they are getting high rad levels, but all reports are from TEPCO. Q: [redacted]

(b)(5)

Q: The AMS data - does it capture time period when wind shifted onshore. Don: getting continuously built up info of surveys. Shows depositoin over time. Very clearly has plume to NW of facility, which correlates to time of "lube oil" fire on Unit 4.

Source: Cmsr TA call

Address/Location:

Attachment:

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Date/Time: 03/20/2011 19:38:33 (ET)

Had call with Congressional Aides. Many questions on modeling and assumptions.

Position: EST Chronology Officer

Tasker was for separate briefing to try and answer questions for some of the staffers

Name: Rebecca Karas

who had very specific questions. One from Markeys staff, [redacted] (b)(5)

Record: 1586

(b)(5)

Have been continuing to work with

Facility:

NARAC. No results for transpacific. They asked for total inventory in reactor - we sent to them. Call ongoing on modeling. [redacted] (b)(5)

modeling assumptions. We should send someone from mgt team. Possibly Charlie or Weber. We have asked them for data on what levels they actually saw in food. Over next couple hours, should have another couple data points in what seeing on West Coast.

Source: PMT

Address/Location:

Attachment:

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Date/Time: 03/20/2011 19:35:21 (ET)

Questionable whether 3 or 4 are most important to do. Everything else pretty unchanged. Some inventory in 1-3. Think there is margin to SFPs boiling off. See steam coming out of 1-2. 5 and 6 in best shape now, some power back, keeping inventory above TAF in SFPs.

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1585

Facility:

Source: RST

Address/Location:

Attachment:

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Date/Time:

Concern is that Unit 4s pool has been dry for a really long time - if hasnt done already,

(b)(5)

Date/Time:	03/20/2011 19:05:25 (ET)	will eventually melt through concrete floor and drop down, hit torus, possibly steam explosion. PMT - when we correlate met data, were checking with AMS data - spike to NW. Correlates perfectly with fire. During that period of time had ESE direction, so went right up that plume. Good possibility of where the activity came from. Sounds like the volatiles are laying on the ground. So what is left in pool now? If NR is right, and you get the molten fuel with concrete, what does that result in?
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1584	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
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Date/Time:	03/20/2011 18:04:33 (ET)	Watches YouTube video NHK interview with workers from plant. Discusses possible extensive damage may already have occurred at U4 and U3.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1583	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
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Date/Time:	03/20/2011 17:40:51 (ET)	Have done supercore calc, so that should be consistent with what was assumed. John: no information really on water levels in units. Best information is steaming (or lack thereof) on TV. They think U3 was dry >48 hours ago. One concern is all runoff from site now with spraying water. John: Japan for years has had really good nuclear program. (b)(5) (b)(5) The issue with Unit 4 dry/not dry, they just grilled us nonstop on issue after all the media hit.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1582	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	

Date/Time:	03/20/2011 17:38:01 (ET)	Would be interested to know what would happen if fuel did go through SFP and dropped down. What would do to access to site? Do they checkerboard? (b)(5) (b)(5) They say they need 72T water per day for losses. U2 only
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Facility:		(b)(5)

(b)(5)

Record: 1581	needs 20T per day. U1 5T/day.
Facility:	
Source: John	

Address/Location:	
Attachment:	

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Date/Time: 03/20/2011 17:19:06 (ET)	Went to TEPCO building with Trapp. They took to emerg. command center. Thought would be like EOF. Place was massive - 20-30 people making decisions, plus teams of people working on projects. 250-300 people. And 1 floor of TEPCO building - lots of engineers running all over. Leads for multiple issues.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1580	

(b)(5)

Facility:	<p>Most of info we have gotten is also available in media. Dave: Bechtel system should work with concrete pumper truck. John: Chuck has met with CEO/CNO of TEPCO. Yesterday CEO said 2 areas of most concern were salt accumulation in reactor, and what to do with rad fields onsite. Brian: Noone understands if found way to get seawater in, where is suction coming from? John: We have asked - they have never said whether stationary fire trucks, or whatever - they should be able to pull suction over to tanker. Shortly after, met with MOD, and they wanted status report on recommendations on 2 topics (that they had just informed us of). Then 18 hrs later, met with CEO/CNO, and they said they were in need of significant dire help on those 2 issues. So arrange meetings with them on 2 issues, and get GE, Exelon, etc for discussion on salt. Get into meeting, and they want to talk about pumping truck. So then get 20 issues on pumping system, because they are not ready to talk about salt yet, that is never discussed. Hopefully today they will be prepared to discuss about salt. And then in next meeting, they say they wont accept pumping system....We have told them we will meet with them at any time, whenever they want to meet. Huge protestors and cameras surrounding TEPCO facility. Design specs were 50m, we think we can meet 58m throttling down - we added margin anyway. Whole issue was that they thought they were getting concrete pumping trucks - even though that was their system, not ours. And there are 2 in Japan anyhow.</p>
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Source: John	
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Address/Location:	
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(b)(5)

Attachment:

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Date/Time:	03/20/2011 16:45:02 (ET)
Position:	EST Chronology Officer
Name:	Rebecca Karas
Record:	1579

Brian: TEPCO focused on U3, but hes worried about U4. Our status says damage to rods expected. Says 6 days to boil-off. They are not seeing steam coming off pool. Hes worried pool is melting down, and at some point will penetrate concrete floor and drop through torus. He says should get Bechtel pumps to Japan ASAP for #4 pool. John: We agree that U4 is definitely priority. Several days ago, #1 priority was U3, and then more to U4. They had done some calcs saying U3 was empty, and we agreed. That was on 3/18. TEPCO had performed calc on 6 days being left, but they said calcs have large uncertainty, and the have no clear level indications (b)(5) but dont know. All pools show at or less than 100C, but with amount of rubble, is difficult to be able to reply on indications. We have been concerned about 4 for a long time also. Initially fire trucks, riot pumps, plus helicopters. All not highly effective - marginally effective. Problem is with shooting from far away, incredible losses. Have been concerned with U4 all along. They came back and said SFP wall was different wall, further in. Skeen: high decay heat due to full core offload, and no steam now. Brian: NR guy made recommendation that we should get pumps in Australia over to site ASAP. Has to be coordinated with TEPCO. John: knowledge of reactor is better than any ability of them to accept equipment into country and use at site. Biggest roadblock is whether it will be allowed in/used. For anything to be brought in, has to be approved by govt. Did not have approval when we started, and had no official request. Since then it changed multiple times. Have approvals now to have it come in. Meeting today- brought in RST with TEPCO, and RST brought in Bechtel, and got hammered with 20 new Qs from TEPCO on system. Jennifer, INPO, Bechtel took Qs. Biggest issue was notion that as being delivered, probably wont be effective - relies on water cannons. All along have known using water cannons. They have now come to conclusion that ground-based method (water cannon, etc) that its not effective means (just yesterday). So they are now saying isnt going to work. They thought we ewre delivering with our system that massive concrete pumping truck. Truck has boom that goes 58m out. They wanted to know when it could be there, etc. We said no, we are not bringing that. That was a system based on concrete pumping trucks, and that was the TEPCO system. Asked if their acceptance was beyond just the Bechtel system - is it for anything, like the aircraft, robotics, etc. They said it definitely includes pumping system, though. MOD meeting said they had not yet accepted it being allowed into country. Unclear where approval

(b)(5)

needs to come from. After meeting, MOFA comes back and says on robots, etc, we now accept those offers also.

(b)(5)

Facility:

One meeting TEPCO has lots of Qs, next meeting they say not using system. Unclear what will happen with the system when it lands in country. Brian: so dont need more pumps now, but concern that was expressed is that if U4 SFP is dry, and it had full core offload, is it a molten mass that is starting to interact with concrete? John: think steaming is good - raised concerns with steaming stopping.

(b)(5)

(b)(5)

One thing reported in media (fire trucks, helicopter),

(b)(5)

(b)(5)

U3 they believe was dry, and was multiple days before got first fire trucks in, thats why priority on U3. They had moved some equip to U4. Weve pushed them significantly on what assessment is. They say we saying everything less than 100C. But then why relying on water spraying??

(b)(5)

One has entire roof on top, others lots of debris. They then mention all water going in. Say fine, but have seen on TV

(b)(5)

Then we ask if fire trucks have rad monitors? Should be seeing huge shine from SFP. We ask if rad monitors have changed after water spraying, where could assess effectiveness. They say no, no change in readings. And no change in rad monitors.

(b)(5)

(b)(5)

RST and Bechtel

are running through all issues.

(b)(5)

so now looking at concrete pumper truck. They have 2 in Japan. ThoUGHT is to get hose right over top of SFP. Water will drop straight down. Need to look at how can we use 90% of system from australia and then hook up to pumping truck. What can be done to put a T connect into pumping truck. One of concerns is whether it is really a system rated for continuous use? One of design concepts was to make sure it could be designed for continued operation - without operator. We agree there is no idea what is going on with U4, and no indication U3 is better. If we mention SFP going through floor, which have thought of also, several have talked about whether rad levels will skyrocket. What will that do to access to site? Dave: GEH had offered to bring system to their facility to train and operate. John: Understand that on airlift from Australia, are 2-3 people who are coming, and were vendors reps for pumps/hoses. They gave us 2

(b)(5)

sheets of paper with laundry list of stuff they would need. But they could not give us the list. TEPCO guy let us write down list. Includes lots of things. Navys hospital ship, heavy lift equip from USACE, incredible what list includes.

Source:	John
Address/Location:	
Attachment:	

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Date/Time:	03/20/2011 15:17:50 (ET)	<p>Brian: Japanese were concerned last night with use of saltwater. Could plug up fuel channels and affect heat transfer. Cant access reactor due to high dose rates. Wanted to reduce dose rates so could get close and access primary systems. Not sure what actual connection to seawater is. Also continuing coordination with other agencies, INPO and Bechtel. Chairman: priorities: 1. continued assessment of situation and dose projections and PARs, 2. technical support to give input. 3. Coordination with industry, TEPCO, etc. Is industry group getting ready to mobilize? Brian: yesterday met at 2pm, they said they would act soon. They are also meeting at 10:00 today. Chairman, update this evening on how 10:00 call went. What is plant status/issues? Brian: 1-3 units appear stable with seawater injection continuing. Containments believed intact. U3 cont. pressure stabilized. TEPCO believes water they sprayed on U3 SFP working, had some effect on dose rates. Focus is on U4 SFP. Plan to put more water in today. U 5-6 on diesels. U5 RHR pump was started and is providing SFP cooling. TEPCO installing HV cables to 1-2. Priority is restoring water to RHR pumps. Skeen: Plan is for first plane to leave Perth tonight, 2nd following next day. Brian: concluded based on discussions with Casto, that while not primary source, it would serve as backup in case anything fails. Chairman: in agreement. If need to change urgency, let Chairman know. Camper: daily call with inpo will be at 2pm tomorrow. Chairman: need to continue to emphasize urgency - has some stability, but not long-term. Need more normal circulation for reactors and stable water level in pools. Brian: even though they have offsite power, we dont know whether equipment will run. Chairman: can you bring in portable pumps? Brian: asked Jack Foster to find out what Japanese know about rad levels in food products. (b)(5) Chairman: if we get slowed in interagency or industry issues, Chairman will engage to restore. Also if changes to PARs, need to know.</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1578	
Facility:		

Source:	Chairman
Address/Location:	

(b)(5)

Attachment:	
This information is Official Use Only - Sensitive Internal Information.	
Date/Time: 03/20/2011 14:21:53 (ET)	Discussion/shift change with Eric Leeds: Status update of all NNPs and SFPs. TEPCO is moving away from water cannon idea. Fire truck with a goose neck seems to be their preferred course of action. Issues remain for 3 & 4 pools. Rad levels are dying off.
Position: EST Chronology Officer	
Name: James Vaughn	
Record: 1577	
Facility:	(b)(5)
	Industry has been engaged regarding analysis. Two people are being identified by industry to send to Japan and interface with the NRC site team.
	Bill Borchardt spoke with Chairman and conclude that we should determine when/how the NRC needs to reduce staff. Transition issues related to industry (INPO) and logistics (TEPCO wants PCs, robotics and detection equipment). INPO has asked who is paying for all of this equipment and logistics.
Source: ET Director	
Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 03/20/2011 13:31:16 (ET)	Plant status: Not much new info. Source: TEPCO/INPO press release (Media News): Focus is on unit 4 SFP. TEPCO expects Defense Force (Fire Dept) to move on unit 4. Possible reduction in rad does in unit 3. Working on power line to units 1 & 2. Hooking up to distribution panel now. Possible couple of days to complete. Rad levels not clear on site. Working on hand off of Rad Equipment with industry team (Randy Rapasso). Closed NEI email data source issue. Share Toshiba drawings with INPO for independent structural analysis.
Position: EST Chronology Officer	
Name: James Vaughn	
Record: 1576	
Facility:	(b)(5)
	EMT Review:
	(b)(5)

(b)(5)

(b)(5)

Facility: We are answering question from DOE. We are looking at real time conditions at SFP. We are comparing available TEPCO field data with event estimates.

New language: "Super Core" versus "Super Source."

Jim Wiggins: Protective action recommendations? Focus on Japan. Real number on site today. May have to work with NARAC if range is greater than 50 miles.

Priorities: (b)(5)

Previous decisions still are correct regarding 50 miles evacuation as no new information suggesting a change.

(Commenter) (b)(5) Daily call list is pending very soon. After they wake up, we will coordinate with on site team (Japan) for morning call. OIS is creating emails groups now.

Discussion regarding downsizing of NRC Ops staff.

Source: RST Review

Address/Location:

Attachment:

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Date/Time: 03/20/2011 11:47:31 (ET)	Discussion with Bill Webster regarding two technical people to Japan. What is logistics? Need to be an urgent action. Would like to move tomorrow. Can we make that part of discussion with TEPCO. 14 hour trip.
Position: EST Chronology Officer	
Name: James Vaughn	
Record: 1574	

Jim Wiggins: Chuck- on site- can begin some of the interface while in the air. Chuck should go to Embassy first. Best if they can get to emergency center.

Bill: I will identify people.

Jim: NRFC staff will contact POC Kapasso for details.

(b)(5)

Facility:	<p>Jim Wiggins: Liaison Team will take lead for coordination. Industry people should go to embassy first.</p> <p>EST Chronology Officer - James Vaughn at 12:16:49 on 3/20/2011</p>
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Source: Mr. Webster	
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Address/Location:	
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Attachment:	
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Date/Time: 03/20/2011 11:47:31 (ET)	<p>Discussion with Bill Webster regarding two technical people to Japan. What is logistics? Need to be an urgent action. Would like to move tomorrow. Can we make that part of discussion with TEPCO. 14 hour trip.</p>
Position: EST Chronology Officer	
Name: James Vaughn	
Record: 1575	

Facility:	<p>Jim Wiggins: Chuck- on site- can begin some of the interface while in the air. Chuck should go to Embassy first. Best if they can get to emergency center.</p> <p>Bill: I will identify people.</p> <p>Jim: NRC staff will contact POC Kapasso for details.</p>
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Source: Mr. Webster	
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Address/Location:	
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Attachment:	
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Date/Time: 03/20/2011 09:56:47 (ET)	<p>Purpose: Discuss follow-up actions from March 19, 2PM kick off meeting and industry plan for providing support to Japan.</p>
Position: EST Chronology Officer	
Name: James Vaughn	

Record: 1566	<p>Participants: NRC/ET, DOE: Jim Vavosa (Naval RXs), Industry, INPO EPRI, GE, Bechtel, Utility Reps. Bill Lessner (Full Team), Pete Lyons, Jim Ellis (INPO CEO) Bill Borchardt (EDO),</p> <p>NRC Overview: ET Dir: Jim Wiggins</p>
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(b)(5)

2247 ops with team on site. Team in Rockville Ops Center
Spt team in Japan and comms with U.S.
Facility status: Positive trend. No new info on RXs. Recovery step underway.
Power lines to 1 & 2. Power 3 & 4 on Monday. Dose rates lower than before.
No current issue with Pools. Unit 3 & 4 are not clear. Unit 3 with water stream based
on TEMPCO. Calculation running. No new info. Hotter area in the northwest of facility
based on wind direction. Wind mostly easterly. Several over flights. Evaluating info now.
Working with DOE regarding impact on west coast of U.S. NARAC running numbers.
U.S. told Friday to evac. 50 miles from site.

INPO:

Industry is in place.

Areva, GE Westing House Betachel, Southern Company, and INPO. 24/7 tech support
and logistics. Effectiveness has been a variable.

Priorities:

- 1) Establish comms with TEPCO industry.
- 2) Develop a product that will define priorities with TEPCO.
- 3) Develop Frame work for engaging TEPCO.

By end of day complete needs analysis and inventory of capabilities. This group can
interact with other groups (France, CEA).

Bill Borchardt: What do need form U.S.> Govt?

Not sure now - will know more next 24 hours.

Pete Lyons: Need to define capabilities of U.S. fed.

How long will it be before industry will have senior people on group?

(b)(5)

Facility: Status Update
Agenda

Pete: Dont know yet.

The on-site team is going to need Chairman and DOE Sec engagement.

NRC on-site team may be a good for opener.

Bill Borchardt: 10 am phone call each day. Working to set up call with pricinples at 2 pm Monday.

Tom Vavosa: Should of RXs representative on the call with plant status. Example call with call TEPCO at 3 am last night - water cannon is not working - not hitting target. Bechtel system needed. They want NICs equipment and UAVs. Who adjudicate those? Who takes the actions> Should be covered in the calls.

Jim Wiggins: Need to establish protocols with Japan. Who does, says, what? Actions may be between the two industries. We can develop it one the next couple of days.

(Commenter) Is USAID the lead POC without technical understanding?

Jim W.

DoD stood up and took the lead.

Bill Borchardt: U.S. Govt lead needs to move to perhaps USAID.

Tom Vavosa. U.S. Govt. needs the be in lead in the technical regards,

(b)(5)

451/707

Also on the call was CMDR Chuck Good, of DoD Joint Staff, J-4. Contact Tom Vavosa who has a buisness card for CMDR Good.
 EST Chronology Officer - James Vaughn at 11:33:32 on 3/20/2011
 EST Chronology Officer - James Vaughn at 11:38:18 on 3/20/2011

Source:	U.S. Govt. Industry Consortium Conference Call
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Address/Location:

Attachment: 

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Date/Time:	03/20/2011 09:56:47 (ET)	Purpose: Discuss follow-up actions from March 19, 2PM kick off meeting and industry plan for providing support to Japan. Participants: NRC/ET, DOE: Jim Vavosa (Naval RXs), Industry, INPO EPRI, GE, Bechtel, Utility Reps. Bill Lessner (Full Team), Pete Lyons, Jim Ellis (INPO CEO) Bill Borchardt (EDO), NRC Overview: ET Dir: Jim Wiggins 224/7 ops with team on site. Team in Rockville Ops Center Spt team in Japan and comms with U.S. Facility status: Positive trend. No new info on RXs. Recovery step underway. Power lines to 1 & 2. Power 3 & 4 on Monday. Dose rates lower than before. No current issue with Pools. Unit 3 & 4 are not clear. Unit 3 with water stream based on TEMPCO. Calculation running. No new info. Hotter area in the northwest of facility based on wind direction. Wind mostly easterly. Several over flights. Evaluating info now. Working with DOE regarding impact on west coast of U.S. NARAC running numbers. U.S. told Friday to evac. 50 miles from site. INPO:
Position:	EST Chronology Officer	
Name:	James Vaughn	
Record:	1573	

(b)(5)

Industry is in place.

Areva, GE Westing House Betachel, Southern Company, and INPO. 24/7 tech support and logistics. Effectiveness has been a variable.

Priorities:

- 1) Establish comms with TEPCO industry.
- 2) Develop a product that will define priorities with TEPCO.
- 3) Develop Frame work for engaging TEPCO.

By end of day complete needs analysis and inventory of capabilities. This group can interact with other groups (France, CEA).

Bill Borchardt: What do need form U.S.> Govt?

Not sure now - will know more next 24 hours.

Pete Lyons: Need to define capabilities of U.S. fed.

How long will it be before industry will have senior people on group?

Pete: Dont know yet.

Facility:

The on-site team is going to need Chairman and DOE Sec engagement.

NRC on-site team may be a good for opener.

Bill Borchardt: 10 am phone call each day. Working to set up call with priciples at 2 pm Monday.

Tom Vavosa: Should of RXs representative on the call with plant status. Example call with call TEPCO at 3 am last night - water cannon is not working - not hitting target.

Bechtel system needed. They want NICs equipment and UAVs. Who adjudicate those?

(b)(5)

453/707

Who takes the actions > Should be covered in the calls.

Jim Wiggins: Need to establish protocols with Japan. Who does, says, what? Actions may be between the two industries. We can develop it one the next couple of days.

(Commenter) Is USAID the lead POC without technical understanding?

Jim W.

DoD stood up and took the lead.

Bill Borchardt: U.S. Govt lead needs to move to perhaps USAID.

Tom Vavosa. U.S. Govt. needs the be in lead in the technical regards,

Also on the call was CMDR Chuck Good, of DoD Joint Staff, J-4. Contact Tom Vavosa who has a buisness card for CMDR Good.

EST Chronology Officer - James Vaughn at 11:33:32 on 3/20/2011

Source:	U.S. Govt. Industry Consortium Conference Call	
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Address/Location:

Attachment:

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(b)(5)

Date/Time:	03/20/2011 11:00:17 (ET)	Need to reach out to NRC/ADMIN Office for non-technical support functions (e.g FOIA request plan).
Position:	EST Chronology Officer	
Name:	James Vaughn	
Record:	1571	
Facility:		
Source:	ET Dir	

Address/Location:	
Attachment:	

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Date/Time:	03/20/2011 10:54:14 (ET)	Chuck and the on site team can serve as the introduction between the two persons from U.S. industry and TEPCO / Ambassador.
Position:	EST Chronology Officer	
Name:	James Vaughn	
Record:	1570	
Facility:		
Source:	ET Dir	

Address/Location:	
Attachment:	

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Date/Time:	03/20/2011 10:38:22 (ET)	Action Items Review:
Position:	EST Chronology Officer	
Name:	James Vaughn	
Record:	1567	
Facility:		<p>1) (b)(5)</p> <p>2) Marty indicated IAEA should take on clearing house functions.</p> <p>Jim Wiggins:</p> <p>Priority goes to the DHS report then to IAEA coordination.</p> <p>EST Chronology Officer - James Vaughn at 10:49:16 on 3/20/2011</p>
Source:	ET	

Address/Location:	
Attachment:	

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(b)(5)

Date/Time:	03/20/2011 10:46:13 (ET)	POC Phone Number:	(484) 437-3541
Position:	EST Chronology Officer	Cell:	(b)(5)
Name:	James Vaughn		
Record:	1568		
Facility:			
Source:	(b)(6)		

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	

Date/Time:	03/20/2011 10:38:22 (ET)	Action Items Review:
Position:	EST Chronology Officer	
Name:	James Vaughn	1) (b)(5)
Record:	1569	2) Marty indicated IAEA should take on clearhouse functions.
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	

Date/Time:	03/20/2011 09:56:47 (ET)	Purpose: Discuss follow-up actions from March 19, 2PM kick off meeting and industry plan for providing support to Japan.
Position:	EST Chronology Officer	
Name:	James Vaughn	
Record:	1572	Participants: NRC/ET, DOE: Jim Vavosa (Naval RXs), Industry, INPO EPRI, GE, Bechtel, Utility Reps. Bill Lessner (Full Team), Pete Lyons, Jim Ellis (INPO CEO) Bill Borchardt (EDO),
		NRC Overview: ET Dir: Jim Wiggins
		224/7 ops with team on site. Team in Rockville Ops Center
		Spt team in Japan and comms with U.S.
		Facility status: Positive trend. No new info on RXs. Recovery step underway.
		Power lines to 1 & 2. Power 3 & 4 on Monday. Dose rates lower than before.
		No current issue with Pools. Unit 3 & 4 are not clear. Unit 3 with water stream based

(b)(5)

on TEMPCO. Calculation running. No new info. Hotter area in the northwest of facility based on wind direction. Wind mostly easterly. Several over flights. Evaluating info now. Working with DOE regarding impact on west coast of U.S. NARAC running numbers. U.S. told Friday to evac. 50 miles from site.

INPO:

Industry is in place.

Areva, GE Westing House Betachel, Southern Company, and INPO. 24/7 tech support and logistics. Effectiveness has been a variable.

Priorities:

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Bill Borchardt: What do need form U.S.> Govt?

Not sure now - will know more next 24 hours.

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How long will it be before industry will have senior people on group?

Pete: Dont know yet.

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Facility:

(b)(5)

Bill Borchardt: 10 am phone call each day. Working to set up call with priciples at 2 pm Monday.

Tom Vavosa: Should of RXs representative on the call with plant status. Example call with call TEPCO at 3 am last night - water cannon is not working - not hitting target. Bechtel system needed. They want NICs equipment and UAVs. Who adjudicate those? Who takes the actions> Should be covered in the calls.

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(Commenter) Is USAID the lead POC without technical understanding?

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DoD stood up and took the lead.

Bill Borchardt: U.S. Govt lead needs to move to perhaps USAID.

Tom Vavosa. U.S. Govt. needs the be in lead in the technical regards,

U.S. Govt. Industry
Source: Consortium Conference
Call

(b)(5)

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/20/2011 04:30:22 (ET)	RST: Spent fuel pool 4 gone, completely destroyed. We already had a release on Unit #2. Should we have 3 options.
Position: EST Chronology Officer	
Name: Cynthia Dorsey	
Record: 1556	
Facility:	ET: Best case scenario, no effects on US. Reactor cooling which is ongoing. Restoration of power is best to re-energize. Generally, we could say normal shutdown. RST: It seems like they stop and start adding more to it. We could have 3 options, Per RST Director: Comments above are hypothetical (not facts). EST Coordinator - Robert Ragland at 10:27:20 on 3/20/2011
Source:	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/20/2011 09:51:12 (ET)	NEI & INPO (GE) information comes from WANO/TEMPCO.
Position: EST Chronology Officer	
Name: James Vaughn	
Record: 1564	
Facility:	
Source: Rx Safety Dir: Laura Dudes	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/20/2011 08:39:29 (ET)	Energy Secretary Steve Chu speaks at 9am, 3/20/2011 on NBC. Correct spelling: Steven Chu EST Chronology Officer - James Vaughn at 08:42:31 on 3/20/2011
Position: EST Chronology Officer	
Name: James Vaughn	
Record: 1562	
Facility:	
Source: ET	

Address/Location:	
(b)(5)	

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/20/2011 08:39:29 (ET)	Energy Secretary Steve Chu speaks at 9am, 3/20/2011 on NBC.
Position:	EST Chronology Officer	
Name:	James Vaughn	
Record:	1563	
Facility:		
Source:	ET	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/20/2011 08:03:32 (ET)	Update to the Chairman:
Position:	EST Chronology Officer	
Name:	James Vaughn	Information coming from NEI on source info.
Record:	1561	1,2,3 are stable, 5 & 6 same.

3 & 4 dumping water in the Rx building. Not much more than a mist over the top.

How is information flow?

(b)(5)) No what we experience during our exercises.

Generators running in 5 & 6 with power line. Installing cables in 1 and 2. 3/4 by Monday. Not sure how helpful it will be.

NEI data rates indicate rates dropping near units.

What is source of high dose rate?

Shine dose from pools.

(b)(5)

What is that?

ET Commenter: Bounding , fuel in 3 RXs, and fuel in SPFs. Assumes release over 4 -5

(b)(5)

Facility: period. Based on % of total core melt.

Bechtel equipment still working due to cost (\$2 Mil). Conference call with USAID last night. Discuss value of one train begin sent. DOD to pay the freight. Bechtel expects to arrive in Dakota in 13 hours. Site team will address latter logistics and training.

Opportunity for industry. Shipment included to vendor techs. Not clear if they will go to site. (b)(5)

Josh: (?)

Timing for getting the runs back? Two runs: 1st run: 5 - 6 hours. 2nd run another 5-6 hours.

USAID made decision to ship equipment (b)(5)

(b)(5) Maybe not need equipment. Possible defense in depth measure. Japan decided to move forward with shipment of equipment. DoD would fund shipment. DoD volunteered all 9.6.

Source: Jim Wiggins

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 03/20/2011 07:30:09 (ET)	Jim Wiggins: Update
Position: EST Chronology Officer	
Name: James Vaughn	No negative events.
Record: 1560	Condition stable for Units 1,2 3.
	Units 5 & 6 stable.
	Unit 3 & 4 water being added. Susnsess not sure
	TEPCO using water cannon on unit 3- effectiveness not clear
	Self Defense force should start adding water to unit 4.
	3rd source to add water from Bechtel is still on plane - cost were a concern and a funding source.

(b)(5)

Bechtel expects to depart in next 12 hours and arrive in Yacoda and then delivered by Defense Forces with associated equipment training. Still in progress with site team and TEPCO discussing how to use the system.

TEPCO making progress with regard to power to unit 5 with HR pump operable. Cables being run to unit 3 and 4. Not clear what is usable in the buildings. More to follow.

Dose rate from NEI: DOE indicating trending down. Off site source terms are being to move down now by NARAC

(b)(5)

Wind changing to the south/southwest.

Support Japan team. Focus has been on the Bechtel system. TEPCO interested in in larging hole in hull of unit 2.

Conducted meeting with industry to stand up an industry support group to Japan. NRC sees it as success with INPO taking a lead roll. This would be helpful. Would place experience in key rolls. We are short on skills regarding logistics.

Mike Franer:

Unit 3: Is pressure in unit 3 going up (50 lbs?) and need to vent? More info? Source was NHK News from TEPCO -not clear why they need to vent. Weather conditions do not support venting at this time.

Chris Miller: Other news source indicate no need to vent. More to follow.

Jim Wiggins: Information flow is challenging due to time zone differences. However NEI has being able to get information. Perhaps they possess a direct relation with TEPCO.

Commenter: What is does rate at the gate. From NEI was 40 rem down to 15 rem/ hour. Plume going to west and out to sea. Further out to sea rates our closer to background.

Commenter: Possible higher rate in northwest quaderant of Japan. More data from DOE

Facility:

(b)(5)

462707

fly-over pending.

Jim Wiggins: More information pending.

Commenter: Need to have rates for tonights call.

Jim Wiggins:

Nothing blowing up now, no steaming, possibly venting later to prevent loss of containment.

Larry Camper: Winds to southwest? Changed?

Current winds from southeast 7 am - 7pm moving to off shore at night.

Pat Kasselam: Stean from units, SPF under 100 degrees? Please clarify. Where is steam comming from?

Where are out NRC people?

Jim Wiggins: Tokyo area not at site.

Please send copy of Isat NEI one sheet statement.

Jim Wiggins: [redacted] (b)(5)

Brain McDormott [redacted] (b)(5)

Brain McDormott: Need to check information from INPO that we could benifiit from. Tasking out to RST 01.

([redacted])

Source:	ET - Commission Update Call
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Address/Location:	
Attachment:	

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Date/Time:	03/20/2011 07:00:13 (ET)	ET conducts shift change.
Position:	EST Chronology Officer	
Name:	James Vaughn	
Record:	1559	
Facility:		
Source:	Chronologist	

Address/Location:	
Attachment:	

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Date/Time:	03/20/2011 06:59:40 (ET)	Assumes duties as ET Chronologist
Position:	EST Chronology Officer	
Name:	James Vaughn	
Record:	1558	
Facility:		
Source:	James Vaughn	

Address/Location:	
Attachment:	

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Date/Time:	03/20/2011 04:40:41 (ET)	RST: 50% spent fuel pool #2 and 100% spent fuel pool #4. Unit 3 is not venting, got a call from TEPCO and they are concerned, with regard to the water in Unit #3, it just didnt hit the spent fuel pool, so, they will try with Unit #4. What is the condition of Unit 4 spent fuel pool, they just want to get water in it. IAEA website has TEPCO are saying that all of the reactors are not all the way covered
Position:	EST Chronology Officer	
Name:	Cynthia Dorsey	
Record:	1557	
Facility:		ET: Looking at realistic worst case scenario, range of options #1 assumes that spent fuel pool (spf) #4 is intact. Units 3 and 4 are both uncovered and thats causing dose rates in the area.

(b)(5)

Source: RST and ET	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/20/2011 04:30:22 (ET)	<p>RST: Spent fuel pool 4 gone, completely destroyed. We already had a release on Unit #2. Should we have 3 options.</p> <p>ET: Best case scenario, no effects on US. Reactor cooling which is ongoing. Restoration of power is best to re-energize. Generally, we could say normal shutdown.</p> <p>RST: It seems like they stop and start adding more to it. We could have 3 options,</p>
Position: EST Chronology Officer	
Name: Cynthia Dorsey	
Record: 1565	
Facility:	
Source:	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/20/2011 02:01:47 (ET)	<p>PMT: Here is a composite of the plant and the ocean is over here, what this represents is best of actual dose rates are on the ground right now, red is greater than 5 rem and gray is greater than 1 rem, 10 miles is here, 35 miles is here, this goes out to 50 miles radius, but, even at 35 miles is conservative. The decision is based on the 50 mile conservative and the conclusion is that there is no impact to the US.</p> <p>ET asked: What is the current conditions of the reactors right now.</p>
Position: EST Chronology Officer	
Name: Cynthia Dorsey	
Record: 1555	
Facility:	
Source: ET	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/20/2011 00:01:45 (ET)	Test
Position: EST Chronology Officer	
Name: Cynthia Dorsey	
Record: 1553	
Facility:	
Source: ET Team	
Address/Location:	
Attachment:	

([redacted] (b)(5))

Date/Time: 03/20/2011 00:01:45 (ET)

Position: EST Chronology Officer

Name: Cynthia Dorsey

Record: 1554

So, where hoping to get more information, Reactor core 1, 2 and 3 seems to be stable. As for Reactor 4 seems havent gotten that information. The temperature in the coolant area, how are we getting that information. Theres a variety of reports, were getting informatoin from federation of NEI, theres this thing called JIF. Im not sure what this is, that all kinds of press releases.

(b)(5)

Facility:

A retreat plan for the 30th of March, a week from Wednesday. I cant say what the strategy would be for next week, we cant leave this with Chuck and team still in Japan, it will all have to happen together. I think that the thing we need to know the most can the pools still hold water in 3 and 4. So, whats the alternative, the one benefit that you can get from shielding, sand and twice water, now that think about using a bucket of sand, one of the problem is when you put water in and the water runs out, Tempco said, unit 4 has loss water, maybe if you put concrete not a lot and water. 4000 rems in unit 2, 7000 rems in unit 3, Constellation Energy C&O saying that Unit 1 is being cooled by ocean water. Unit 3 spent fuel pool, theyre expecting to have coverage by today. Unit 4 theyre expecting to pump cooling water. Unit 5 RHR in service being

(b)(5)

cooled with cooling water, pumps in service but not cooling yet not restored

(b)(5)

Wiggins coming on next.

(b)(5)

Tokyo fire department SATO

mentioned that th. TEMPCO said, they have restored power to units 1 and 2. They are working to restore electrical power to units 3 and 4.

(b)(5)

(b)(5)

extremely low to be detected. Says, new pressure problems, GE and industry size industrial size having get it into the core into the pums right now, they can barely keep it up, the concern is that if it cools down to fast it will crystalize and if it goes solid it couldnt cool. We can pick up the phone in the room, on the ST bridge. Unit 3

Source: RST Director

Address/Location:

Attachment:

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Date/Time: 03/19/2011 23:27:26 (ET)

Position: EST Chronology Officer

Name: Cynthia Dorsey

Record: 1552

Let me ask Brian or Marty, exercise for release whatever I have now, whats the worst case or the West Coast. We were talking now we got Reactor 3 today, if Reactor 3. Tempco has come to our staff in Japan, their worried about the bottom of the core vessel. They would like a conference call 1 hour our time. All the biological sludge is all over the place. Are you thinking it was because of the salt issue. What time is conference call at 1:30. After TMI they brought in flatbeds with water.

(b)(5)

(b)(6)

Discussion on after they brought what was done after chernobyl, they brought in miners, where workers had to work under ground and was massly exposed. A quarter of the miners died, you could see people exactly running. They needed people to drive close enough and the robotics had problems because of the field of exposure. Site team were challenged to keep people on site. Yesterday, were asking Chuck for on the ground dose exposure. What do we do with the dose reading? What will try to do tonight, Tempco will identify equipment would you want to restore the reactor and

(b)(5)

Facility: [redacted] where's that equipment located. Assigned a reactor safety team, spoke with Chuck last night and he will get that word to Tempco. In terms of week 2 opposed we should not. I sent a note to our IP folks the efforts that we got to be wondering didnt we do a . What is IAEA going to do as a lessons learned. [redacted]

[redacted] (b)(5)

[redacted] Bill is going to recommend a 30-day quick view report, they will be scheduling meetings around this milestone and other meetings around guidelines. They may come back and want a meeting and theyre talking at about dropping ITEC, there are 3 meetings there planning on dropping. Discussion of management issues, I want hear from Jim Wiggins, we totally enhanced the ET, Jims got to give me his response, its up to the Chairmans office.

Source: ET

Address/Location: [redacted]

Attachment: [redacted]

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Date/Time: 03/19/2011 21:53:00 (ET)	Need to talk with Marty and ET. Ambassador and staff had arranged meeting with TEPCO. Went to meeting and talked about salt/radiation, wanted to know. Told them there is lots of info, and were working on it. Said would be better for us to give to NISA and NISA give to TEPCO. [redacted]
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1551	

[redacted] (b)(5)

[redacted] They want to discuss details now. Issues are on salt that they are running 3 evaporators effectively. They have UK analysis that shows they are heavily concentrating salt on fuel and bottom head. they are very concerned. He has said this is urgent. Brian, we can get you articles on salt. One from NR - they should switch to fresh ASAP. Desalination - Navy has plant, can do, but how get into reactor. also concerned about rad levels. [redacted]

[redacted] (b)(5)

[redacted] Have to restore a plant that has had a major explosion. Told them pursue multiple options. Get desalination going. Try and get fresh water connection. Told them we could provide robotic equipment to cut gopher holes to key equipment. Understand

[redacted] (b)(5)

(b)(5)

Facility:

Industry said fine to work behind GE-Hitachi, though. Happy to support them. TEPCO CEO not aware about robotics - would love to have all that equipment. Marty - EDF, etc has sent 130T of robotic equipment (in trade press). Chuck: maybe sitting in warehouse in Japan, but not here. He is still pushing for other than Japanese operators of equipment. Told them maybe helicopter, but thats it. we will train people how to use, and then they can use it. SDF said they can transport anything necessary from AFB to site. Told embassy people we are not working the logistics stuff. DOD is good with that. They are fine with getting it to us. TEPCO is interested in unmanned helicopter. Should push that this way. Acceptable compromise to work with TEPCO and NISA. CEO said dont blame us if we dont use all equipment sent. chuck said fine, thats acceptable. Their command center includes NISA, TEPCO, GEH - massive, 250 people. (b)(5)

(b)(5) He said need stuff now. No time to wait. John - they provided us with site map, but rad fields are in huge areas, so would not help personnel access. 30mx30m, said to be 20R - want fine detailed mapping. Need to identify target sets of what equipment to power up. If can access suction for saltwater, can swap to freshwater suction, or put desalination in between. They wanted to open up another hole in U2 reactor building. worried about hole not being big enough. If have any thoughts how to open up bigger hole on Unit 2....Trish: FOF guys were asked to find a way to remove part of roof non-explosively. Hole is a floor lower than SFP, so not sure if is big enough. So still need to find that

(b)(5)

Source: Casto

Address/Location:

Attachment:

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Date/Time: 03/19/2011 21:03:48 (ET) Discusses email: Low level of salt will inhibit ability to keep cooling. Saltwater will

Position: EST Chronology Officer increase corrosion of fuel cladding.

(b)(5)

Name:	Rebecca Karas
Record:	1550
Facility:	
Source:	ET

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 20:58:56 (ET)	DOD just approved all 4 pumps - want Bechtel contact. Brian: have email address for Bechtel. USAID knows phone number, so they know.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1549	
Facility:		
Source:	RST	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 20:40:14 (ET)	(b)(5) Did some tests at Sandia on spraying down aerosol. Had to go to real high flowrates until got an effect. RST: If spray from top, doesnt go all the way down, steam carries it back away. Don: do we know configuration of most recent fuel vs other fuel. Dave: should ask Wilmington emergency center - they were working there all the time. Would make huge difference if they checkerboarded new fuel with old fuel. If couldnt set off zirc fire. If a bunch of release was fuel already broken, and scattered around, and they buried it, then we area already counting it with AMS, and dont have to assume whole pool releases.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1548	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 20:20:04 (ET)	Orders: was report that core was loaded on U5, but there are no parameters. What is margin to boiloff? That is margin to boiloff on SFP. Effort to reach out from Chairmans office to other Cmsrs related to 2pm meeting. Marty: I arranged meeting after getting instruction from Chairman Orders: Seems like policy issues Q: Iodine readings in US
Position:	EST Chronology Officer	
Name:	Rebecca Karas	

(b)(5)

Record: 1547

plants? No updates, just initial readings at west coast plants. Castleman: Heard on news that Fukushima site was designed for 16 tsunami, but they saw 20. Q: ? Brian, (b)(5) But were empty seats on airplanes flying out, etc. Q: what doing with relief team Brian: second team - couple go out Monday. Marty: Ellis (b)(5) Brian: (b)(5) Q: NARAC worst case scenario update? Don Cool: (b)(5) May be as far as Monday morning. Trish: (b)(5)

Facility:

Source: TA questions from call

Address/Location:

Attachment:

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Date/Time: 03/19/2011 20:03:04 (ET) Meeting called at 2 by Bill - brought in reps from industry and other agencies. Purpose to try and discuss with industry the need for them to mobilize and interact with

Position: EST Chronology Officer

Name: Rebecca Karas counterparts in Japan (b)(5)

Record: 1546 (b)(5) Industry has specialized expertise to cope with events, and should take a lead role in interacting with TEPCO and making recommendations or providing other support. Westinghouse and GE said they were interacting through their Japanese owners. When finished, industry stayed and used room. Were planning another meeting

(b)(5)

at INPO on Monday. Their actions would be measured in days. Will have to see what they propose. Call with national security staff with all agencies involved. Was status summary for each agency. At 6pm had call with USAID. Was issue about Bechtel was going to ship 4 trains of pumps and valves to pump seawater into reactor areas. Equipment was in Australia. Loaded on airplane, cost originally \$750k, then Bechtel said

(b)(5)

Facility:

C420 is partially loaded. USAID has lead - when get DOD confirmation, at least 1 train will be initially shopped. Will ship over, set up, test, then will interact with Japan to determine if other 3 trains needed. (b)(5)

(b)(5) No new info on ground doses between buildings. One individuals positioning fire truck got 10R in 2 min. Met conditions shifting - wind out of West is shifting to SW-S and continuing clockwise, so onshore winds in next day or so. Continues to shift in clockwise direction, so will blow towards Tokyo for some period of time before returns back out to sea. (b)(5)

(b)(5) We will work to understand how they did that. U1-3 reactors, cores appear 1/2 covered at least with seawater. Believe U1 SFP still in good shape. In U2, believe pool is also covered. They did get reserve power hooked up to U2 substation, but power not into U2 at this time. Then will have to do checkout of pumps instrumentation, etc. U3 remains point of concern. Fire trucks supplied cooling spray, 40T twice during day. Seemed to have some effect, but not sure how much got into SFP. U4, they announced fire trucks began spraying. U5-6, although not as severely effected, U6 had DGs running, had heard U5 SFP level was lowering, they got power from a U6 DG to restore level in U5. Also ventilated rooftops in 5-6 just in case. U1, 2, 5, 6 still laying electric cables to try and reattach some power. Hoping to get elec power to U3-4 tomorrow.

Source: TA Call

Address/Location:

Attachment:

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Date/Time: 03/19/2011 19:33:04 (ET) Based on 6pm call, robotic equipment - not pursuing anymore. Flyover: John said not

Position: EST Chronology Officer valuable. Pursuing request from DHS to sit with them to facilitate discussions. Seems

Name: Rebecca Karas duplicative since we have FEMA there. NARAC is doing runs with same supercore

(b)(5)

Record:	1545	<p>scenario, but using new meteorology. The case to support press release a couple days ago, 1/3 U2, certain percent spent 3, plus spent fuel 4</p> <p>(b)(5)</p> <p>Trying to get new AMS runs. Marty: Josh says considerable concern at highest levels of DOE that we need to align on initial assumptions/parameters for runs. They want to form a management group to discuss. PMT: Thought we had alignment with them. Josh agreed that Marv will say hes supportive of the 50 mile decision, and then we need to share how we got to the 50 miles. They have 5 trucks spraying, 40T twice a day. Seawater. Units 5 and 6, got some power restored to Unit 5. Had seen drop in U5 level, but recovered now. They also ventilated roofs in 5 and 6. Still laying cable to restore power to 1-6. Hope to get elec back to 3 and 4 tomorrow. But then need to test pumps and cooling systems. 2 DGs operable on U6, nad one of those is used to cool U6. Reactors maintaining level about 1/2 core. They are using core spray with seawater. SFP on 4, heard nothing more. NISA feels still water in 4. Efforts right now are to save 3.</p>
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Source:	ET
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Address/Location:	
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Attachment:	
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Date/Time:	03/19/2011 19:19:08 (ET)	Need list of equipment? National Security Staff briefing - they asked for list of equipment.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1544	
Facility:		
Source:	Sheron	

Address/Location:	
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Attachment:	
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Date/Time:	03/19/2011 18:45:11 (ET)	Need to talk about charter before Commission meeting. Last bullet on making recommendations has been difficult.
Position:	EST Chronology Officer	

(b)(5)

Name:	Rebecca Karas
Record:	1543
Facility:	
Source:	John
Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/19/2011 17:45:23 (ET)	Conf. call with USAID, NR, Japan NRC team, etc. Kathleen: got request yesterday for pumps -
Position:	EST Chronology Officer	(b)(5)
Name:	Rebecca Karas	(b)(5) Also, did not appear to be urgent need on the ground. Heard might be secondary/tertiary need. Decision is not USAID. Up to NRC to say what needs are. Our perspective - we had been told we just needed to find out from DOD that they have authority to approve more. DOD has gone ahead and said with consultation to NRC that it was a need on the ground. So DOD has authorized. This is not USAID funding, do not have authority, etc. We just link up different parties and say we dont object. \$750k was communicated to NRC by Bechtel, but was never a full figure. Q: has this been communicated to Perth? (b)(5)
Record:	1542	Brian: understand Japanese dont need pumps as primary, but would be secondary. Didnt say werent needed, just not primary anymore. Have copy of email from 9:26 from Bechtel that material should be offloaded and await further direction. State: not sure can say is actually backup if they dont have primary system up and running. USAID: Paycom, Michael Schiffer, has been coordinating. Main question is whether NRC and DOE are onboard and validate this. (b)(5)
Facility:		(b)(5) John: there is technical and political aspect. Tech aspect changes over time as govt and TEPCO take action. Last week, when talked to Japan govt, they were very interested in this system. Since then, theyve been continuing with fire trucks, have remote fire truck (last couple hours), and also have concrete pumping truck plan. From political point of view, we offered equipment, and they have accepted it. State: endorsed by defense minister and chief cabinet secretary. Should not pull out. Suggest go ahead getting first system here, get staged, put together, turn over and then await further request if they want more. C-17 is on ground in Perth, second one on way. Ready to send 2 sorties today. First 6 hours from now. Second 8 hours from now. Australians are confused, and just want formal go-ahead. Need to call Bechtel and tell them to get other systems ready. Brian: need help with robotics or IR flyovers? John:

(b)(5)

have talked to them about using robotics to characterize site. They have been non-committal in wanting to accept that. Have also used inside building. also mentioned lead from hq about lockheed martin remote helicopter that can lift 5000lbs. Merits of using something like that for installing pumping systems. (b)(5)

(b)(5) State: But, Japanese seem now willing to accept any and all aid. John: heard lockheed might have offered helicopter for free. right now not pursuing anything more?? State: heard last night they will transmit response to offers as soon as can arrange MOFA to do that. Can clarify what acceptance is for that was received. John: remote helicopter would actually probably be of most value. (b)(5) Japanese have been doing overflights. They shared some of that info. HQ: do we still need BWR overflights in US? John: no LT: helicopter is in Bloomfield, CT. USAID would have to pay for/negotiate. John: next step is we would want additional feedback from MOFA - was yes limited to cooling system, or was for remote equipment also. Q: if we fund cost, need to find out price tag - dont want to run into same issue with USAID. John: Considerable consideration needs to go into who would operate helicopter. HQ: NASA has robot on platform with wheels. Can move things. John: might not be able to get through security doors (b)(5) which are in refuel, so can use that to compare. Meeting with Chairman of TEPCO at 10am.

Source: Conf. Call with USAID, etc

Address/Location:

Attachment:

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Date/Time: 03/19/2011 17:15:15 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1541

Facility:

Source: ET

Someone committed us to come up with list of how many people, what equipment they need. Not sure where request came from.

Address/Location:

Attachment:

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Date/Time: 03/19/2011 17:06:29 (ET)

(b)(5)

NISA is asking for

(b)(5)

Position:	EST Chronology Officer	(b)(5)
Name:	Rebecca Karas	
Record:	1540	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 16:42:36 (ET)	Call setup at 6 to talk about pumps. Could be useful for defense-in-depth	(b)(5)
Position:	EST Chronology Officer	(b)(5)	
Name:	Rebecca Karas		
Record:	1539		
Facility:			
Source:	ET		

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 16:36:01 (ET)	<p>Ultimate funding would be DOD, not USAID. Dyer: Issue is who is paying for our travel. Chairmans office says that USAID agreed that they would pick up the tab for our Japan team, but never got down past director of USAID. So USAID said they would facilitate Dans travel, that is all, then need to get issue resolved. Our position is USAID should pick up funding for travel, as it is humanitarian. We provided the info to their general council, and they are going to work it. If we use our money, it gets billed to the industry. When we do lessons learned, then it should be funded by industry. But as long as on humanitarian effort, then should not be funded by industry. Whenever we pull back, then we find another source of funding.</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1538	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 16:30:53 (ET)	Annie had already provided answers to Chus questions - probably crossed in the email.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1537	

(b)(5)

Facility:	
Source:	ET

Address/Location:	
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Date/Time:	03/19/2011 15:57:01 (ET)	Chu going on talk show tomorrow. We provided 1 page summary. Secretary had 2 questions: 1. What is multiplier we use once we pick the ground acceleration, and on what earthquake basis (10-5, 10-6?) for conservatism. 2. What is the SSE (10-4 or what?). Email to pete lyons.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1536	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
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Date/Time:	03/19/2011 15:53:54 (ET)	Teams turn over.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1535	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
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Date/Time:	03/19/2011 15:43:32 (ET)	AMS data shows path to NW, which is indicative of wind direction early on.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1534	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
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Date/Time:	03/19/2011 15:24:08 (ET)	Discussion of TEPCO press release - restoration of RHR to Unit 5. Yesterday when talking about skills for replacement team, wanted civil/structural and explosive people. If
Position:	EST Chronology Officer	

(b)(5)

Name: Rebecca Karas	put too much sand/water in there, could do more damage. Calc done for adding sand to pool. Experts are thinking that it is built so robustly that it should still be OK even with blast. Wiggins: could explosion have weakened structure? Laura - got off news that firefighting was successful. Was firefighters reporting. Skeen: doing flyovers with our folks? Trish: supposed to do another flyover today. NR people have data from DOE. Laura - have numerous agencies putting data together. Skeen - been trying until Sat to get them to agree to let us help, and now finally they will let us, and
Record: 1533	
Facility:	
Source: ET	(b)(5)

Address/Location:	
Attachment:	
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Date/Time: 03/19/2011 15:01:15 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1532	
Facility:	
Source: ET	

Address/Location:	
Attachment:	
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Date/Time: 03/19/2011 14:41:11 (ET)	Trish Hollahan explained that NRC was to give the source term for dose calcs in Japan; DOE to use the source term for calcs in Hawaii, Guam, Alaska.
Position: EST Chronology Officer	
Name: Vanice Perin	
Record: 1531	
Facility:	
Source: ET	

Address/Location:	
Attachment:	
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Date/Time: 03/19/2011 14:34:48 (ET)	Jim Wiggins briefing Bruce Boger.
Position: EST Chronology Officer	
Name: Vanice Perin	

(b)(5)

Record:	1530
Facility:	
Source:	ET

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 13:27:36 (ET)	Bill Borchardt explaining that 2PM brief is for industry, not directed by NRC - we may facilitate.
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	1529	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 13:10:54 (ET)	Jim Wiggins briefing Brian Sheron.
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	1528	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 13:07:37 (ET)	Phone call scheduled for 6PM EST.
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	1527	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 12:49:12 (ET)	Jim W requesting Liaison Team, Tom Bergman, to prepare phone call on AID decision,
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(b)(5)

Position:	EST Chronology Officer	diplomatic consequences (DOS), Naval Reactors, Tokyo embassy.
Name:	Vanice Perin	
Record:	1526	
Facility:		
Source:	ET	
Address/Location:		
Attachment:		
This information is Official Use Only - Sensitive Internal Information.		
Date/Time:	03/19/2011 12:06:59 (ET)	Phone call Josh: Jim W explaining Bechtel equip (2nd or 3rd layer defense) situation, and Australia/Japan situation.
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	1525	
Facility:		
Source:	ET	
Address/Location:		
Attachment:		
This information is Official Use Only - Sensitive Internal Information.		
Date/Time:	03/19/2011 11:28:11 (ET)	Bill Borchardt calling about 2 PM mtg at ACRS mtg room. Industry to meet among themselves but NRC is not the lead. Request from industry to use NRC meeting room - need to see if that is possible. However, they may have already something with the Marriott.
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	1524	
Facility:		
Source:	ET	
Address/Location:		
Attachment:		
This information is Official Use Only - Sensitive Internal Information.		
Date/Time:	03/19/2011 11:04:54 (ET)	Jim W briefing Naval Reactors rep, Dave Herman, on latest decisions by USAID and NRCs situation.
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	1523	
Facility:		
Source:	ET	
Address/Location:		
Attachment:		
This information is Official Use Only - Sensitive Internal Information.		

(b)(5)

480/707

Date/Time:	03/19/2011 10:54:19 (ET)	Discussing press release: spent fuel, sf casks, tsunami analysis for NPPs on the coast.
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	1522	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 10:52:30 (ET)	Jim W: The system is a third option for the Japanese and shipment may be reevaluated.
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	1521	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 10:38:19 (ET)	Phone call with DOS Coordinator of Japan Effort, Chuchart, to discuss decision related to equip: handled by Jim W - political, and tech (priority) considerations.
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	1520	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 10:36:21 (ET)	Joe Young reports that the Australian crew will rest for the night; may continue tomorrow.
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	1519	
Facility:		
Source:	ET	

(b)(5)

Address/Location:	
Attachment:	
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Date/Time:	03/19/2011 10:30:22 (ET)	Phone call with Joe Young: Jim W explains that the system was a backup; also, direction for USAID to hold on.
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	1518	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
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Date/Time:	03/19/2011 10:22:00 (ET)	Phone Conf: Brian McD is on phone with Jim Dyer, to discuss Tokyo, Tri-lateral agreement, Austratija, ref. Bechtel equip: Huge impact on Trilateral with Australia/Japan, (Jim Dyer arriving), (b)(5)
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	1517	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/19/2011 09:37:40 (ET)	Phone call from Joe Anderson asking for instr about the situation in Australia and Bechtel President is calling for demobilization (b)(5)
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	1516	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
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Date/Time:	03/19/2011 09:29:40 (ET)	Need to get assurance from Japanese the equip will be used when it is in Japan. Jim W: per TEPCO and other sources, (b)(5)
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	1515	
		(b)(5)

(b)(5)

Facility:	
Source:	ET

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 09:22:45 (ET)	Nader updating (Bill Borchardt, Josh (talking with Chairman) on line): DOD has
Position:	EST Chronology Officer	authorized funds, but after that price went up. Questions: (b)(5)
Name:	Vanice Perin	(b)(5)
Record:	1514	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 09:17:10 (ET)	Jim W on the phone with Bill Borchardt about plane in Australia waiting to take Bechtel
Position:	EST Chronology Officer	equip (train) to Japan.
Name:	Vanice Perin	Jim W on the phone with Josh: summarizing issue; tech point of view (b)(5)
Record:	1513	(b)(5)
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 09:06:49 (ET)	Jim W talking Chuck in Japan: Jim W describing situation and significant cost increase.
Position:	EST Chronology Officer	(b)(5)
Name:	Vanice Perin	
Record:	1512	(b)(5)
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 08:56:27 (ET)	Nader reporting: Chairman to contact USAID to get funds.
Position:	EST Chronology Officer	Bill Cook at Embassy: get equipment on the ground is not urgent. (b)(5)
		(b)(5)

Name: Vanice Perin	(b)(5)
Record: 1511	
Facility:	
Source:	
Address/Location:	
Attachment:	

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Date/Time: 03/19/2011 08:24:46 (ET)	Call with Jim Dyer and Nader - Bill Borchard is here; airplane waiting to go with a train from Bechtel but cost is much higher. Nader to call USAID
Position: EST Chronology Officer	
Name: Vanice Perin	
Record: 1507	
Facility:	<p>EST Chronology Officer - Vanice Perin at 08:52:17 on 3/19/2011</p> <p>Call with Jim W and Nader - Bill Borchardt is here; airplane waiting to go with a train from Bechtel but cost is much higher. Nader to call USAID.</p> <p>EST Chronology Officer - Vanice Perin at 08:53:49 on 3/19/2011</p> <p>Call with Jim W and Nader - Bill Borchardt is here; airplane waiting to go with a train from Bechtel but cost is much higher. Nader to call USAID.</p> <p>EST Chronology Officer - Vanice Perin at 08:54:59 on 3/19/2011</p>
Source: ET	

Address/Location:	
Attachment:	

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Date/Time: 03/19/2011 08:24:46 (ET)	Call with Jim Dyer and Nader - Bill Borchard is here; airplane waiting to go with a train from Bechtel but cost is much higher. Nader to call USAID
Position: EST Chronology Officer	
Name: Vanice Perin	

(b)(5)

Record:	1510
Facility:	EST Chronology Officer - Vanice Perin at 08:52:17 on 3/19/2011 Call with Jim W and Nader - Bill Borchardt is here; airplane waiting to go with a train from Bechtel but cost is much higher. Nader to call USAID. EST Chronology Officer - Vanice Perin at 08:53:49 on 3/19/2011
Source:	ET

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/19/2011 08:24:46 (ET)	Call with Jim Dyer and Nader - Bill Borchardt is here; airplane waiting to go with a train from Bechtel but cost is much higher. Nader to call USAID
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	1509	
Facility:		EST Chronology Officer - Vanice Perin at 08:52:17 on 3/19/2011
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/19/2011 08:24:46 (ET)	Call with Jim Dyer and Nader - Bill Borchardt is here; airplane waiting to go with a train from Bechtel but cost is much higher. Nader to call USAID
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	1508	
Facility:		
Source:	ET	

Address/Location:	
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(b)(5)

Attachment:

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Date/Time:	03/19/2011 08:16:13 (ET)	Discussing List:	(b)(5)
Position:	EST Chronology Officer		(b)(5)
Name:	Vanice Perin		
Record:	1505		
Facility:		EST Chronology Officer - Vanice Perin at 08:23:41 on 3/19/2011	
Source:			

Address/Location:

Attachment:

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Date/Time:	03/19/2011 08:16:13 (ET)	Disussing List:	(b)(5)
Position:	EST Chronology Officer		(b)(5)
Name:	Vanice Perin		
Record:	1506		
Facility:			
Source:			

Address/Location:

Attachment:

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Date/Time:	03/19/2011 07:52:33 (ET)	Marty V: leadership role - NRC x DOE. Need Chairman to help with NRC role. How about funds? To be discussed later. Meeting at 2:00 PM.	
Position:	EST Chronology Officer	Bill:	(b)(5)
Name:	Vanice Perin		
Record:	1502	Marty V: 1) look for info - roles and responsibilities and wording (assistance). May need to do a press release today. We have rooms at Marriott, need security.	
Facility:		EST Chronology Officer - Vanice Perin at 08:01:00 on 3/19/2011	
		EST Chronology Officer - Vanice Perin at 08:02:04 on 3/19/2011	
Source:			

Address/Location:

Attachment:

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(b)(5)

Date/Time:	03/19/2011 07:52:33 (ET)	Marty V: leadership role - NRC x DOE. Need Chairman to help with NRC role. How about funds? To be discussed later. Meeting at 2:00 PM.
Position:	EST Chronology Officer	
Name:	Vanice Perin	Bill: (b)(5)
Record:	1504	Marty V: 1) look for info - roles and responsibilities and wording (assistance). May need to do a press release today. We have rooms at Marriott, need security.
Facility:		EST Chronology Officer - Vanice Perin at 08:01:00 on 3/19/2011
Source:		

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 07:52:33 (ET)	Marty V: leadership role - NRC x DOE. Need Chairman to help with NRC role. How about funds? To be discussed later. Meeting at 2:00 PM.
Position:	EST Chronology Officer	
Name:	Vanice Perin	Bill: (b)(5)
Record:	1503	Marty V: 1) look for info - roles and responsibilities and wording (assistance). May need to do a press release today. We have rooms at Marriott, need security.
Facility:		
Source:		

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 07:49:13 (ET)	Marty V: industry and gov agencies to look into solutions.
Position:	EST Chronology Officer	Discussion about ET participating on afternoon briefing.
Name:	Vanice Perin	
Record:	1501	
Facility:		
Source:		

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 07:42:50 (ET)	7:45 briefing with Japan:
Position:	EST Chronology Officer	Jim W: Japanese ambassador request: how many people?
Name:	Vanice Perin	Offices represented: RES, NRR, OPA, IP, OCA, OEDO, OGC, EDO.
Record:	1500	Marty V: providing info on team: Naval Reactors, DOE, AREVA, INPO: Technical and political issues.
Facility:		

(b)(5)

Source:

Address/Location:

Attachment:

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Date/Time: 03/19/2011 07:33:47 (ET)	Larry C: calculations being done; San Onofre; Japanese calculations; more on site data
Position: EST Chronology Officer	from on site team and TEPCO; weather forecast: winds on shore.
Name: Vanice Perin	Jim W: release to team in Japan; Dan D to go. Commission mtg on Monday to discuss
Record: 1499	b5b. Operators in Japan: TEPCO concerns with sea weather in components and RES
Facility:	looking into it. May have parallel effort focus on vessels not pool. Charima and INPO rep
	consortium industry and gov - preliminary mtg at 7:45. (b)(5)
	(b)(5) EPRI, AREVA, eng experience to analyze.
	Question: is there water in the pool? Jim W: we assume there is none.
Source:	

Address/Location:

Attachment:

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Date/Time: 03/19/2011 07:25:24 (ET)	Briefing now: Jim W by phone.
Position: EST Chronology Officer	At 7:45 another briefing.
Name: Vanice Perin	Brain M: facilities status; unit 2 - Unity 2: power restored, control room; unit 3: spraying
Record: 1498	water from fire trucks; unit 4, 5 no change: fire fighting equipment. Diesel generator in
Facility:	unit 6; sfpool: inspections and no problems also with dry storage.
Source:	

Address/Location:

Attachment:

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Date/Time: 03/19/2011 07:23:09 (ET)	weather forecast.
Position: EST Chronology Officer	Chairman or ET director to participate in briefing today.
Name: Vanice Perin	
Record: 1497	
Facility:	
Source:	

Address/Location:

Attachment:

(b)(5)

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Date/Time:	03/19/2011 07:21:22 (ET)	Marty V: who are the decision markers? Jim W: have a TA briefing. Larry C: trying to get info from site.
Position:	EST Chronology Officer	
Name:	Vanice Perin	
Record:	1496	
Facility:		
Source:		

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 06:50:09 (ET)	Briefings
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1495	
Facility:		
Source:	Shift Turn-Over	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 06:16:26 (ET)	Is calculation for 3 reactors and 4 SFPs for release is required over a 24-hour period realistic? Does this answer Chairman? Provide calculation to Chairman.
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1494	
Facility:		
Source:	Kathy Gibson	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 06:01:19 (ET)	PMT believes that source term should be calculated over a 24 hour period and not over longer time period. Chairman asked for realistic does rates.
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1493	
Facility:		
Source:	Cathy Gibson	

(b)(5)

Address/Location:		
Attachment:		
This information is Official Use Only - Sensitive Internal Information.		
Date/Time:	03/19/2011 05:52:36 (ET)	Winds are expected to shift towards Toyko on Sunday 3/20/11
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1492	
Facility:		
Source:	Scott Moore	
Address/Location:		
Attachment:		
This information is Official Use Only - Sensitive Internal Information.		
Date/Time:	03/19/2011 05:49:57 (ET)	Websites are available to concerned citizens who want to know radiation levels in West.
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1491	
Facility:		
Source:	Cathy Gibson	
Address/Location:		
Attachment:		
This information is Official Use Only - Sensitive Internal Information.		
Date/Time:	03/19/2011 05:24:34 (ET)	E-mails sent from ET ET web can be easily identified for latter FOIA request. Rebecca provided email guidance to fwd: emails to FOIAresourc.hoc@nrc.gov
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1490	
Facility:		
Source:	Brian McDermott	
Address/Location:		
Attachment:		
This information is Official Use Only - Sensitive Internal Information.		
Date/Time:	03/19/2011 04:40:06 (ET)	Marty to David Herman (b)(5)
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1487	
		David Herman, Naval Reactors
		(b)(5)

Facility: EST Chronology Officer - Dennis Gordon at 05:23:50 on 3/19/2011

Source: Marty V.

Address/Location:

Attachment:

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Date/Time: 03/19/2011 05:13:18 (ET) Phone call. Brief from marty to Brian. Consortium meeting.

Position: EST Chronology Officer

Name: Dennis Gordon

Record: 1488

Facility:

Source: Brian McDermott

Address/Location:

Attachment:

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Date/Time: 03/19/2011 04:40:06 (ET) Marty to David Herman. (b)(5)

Position: EST Chronology Officer

Name: Dennis Gordon

Record: 1489

Facility:

Source: Marty V.

Address/Location:

Attachment:

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Date/Time: 03/19/2011 04:28:34 (ET) Available guidance identifies 10 REM for evacuation.

Position: EST Chronology Officer Roy: Early evac, advisable

Name: Dennis Gordon

Record: 1486

Facility:

Source: Scott Moore

Address/Location:

Attachment:

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Date/Time: 03/19/2011 04:15:00 (ET) 7:45am phone conference. attendees EDO, Deputies, Office Directors, others. Send

Position: EST Chronology Officer email of topics of discussion at 7:00am.

(b)(5)

Name:	Dennis Gordon
Record:	1485
Facility:	
Source:	Marty

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 04:14:24 (ET)	Closing out action item record #1562 - estimate altitude of possible plume the reactors can reach. Answer = 2.5 km. Source: NARAC
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1484	
Facility:		
Source:	Protective Measures Team	

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/19/2011 04:10:51 (ET)	Closing out action item record #1562 - estimate altitude of possible plume the reactors can reach. Answer = 2.5 km. Source: NARAC EST Chronology Officer - Dennis Gordon at 04:14:06 on 3/19/2011
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1482	
Facility:		
Source:	Protective Measures Team	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 04:10:51 (ET)	Closing out action item record #1562 - estimate altitude of possible plume the reactors can reach. Answer = 2.5 km. Source: NARAC
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1483	
Facility:		
Source:	Protective Measures Team	

(b)(5)

Address/Location:	
Attachment:	
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Date/Time:	03/19/2011 03:37:05 (ET)	Sensitive briefing and documents.
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1481	
Facility:		
Source:	Wayne	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	

Date/Time:	03/19/2011 03:24:09 (ET)	(b)(5)	Fine powder remains. Sand may hold powder together. Water fission products into solution. 1 bundle used for test. Red glow and grey smoke result during zirc fire. More tests planned.
Position:	EST Chronology Officer		
Name:	Dennis Gordon		
Record:	1480		
Facility:			
Source:	Jennifer Uhle		

Address/Location:	
Attachment:	
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Date/Time:	03/19/2011 03:16:52 (ET)	New Zirc fire information. No answer on robotics. Call made to NASA last night.
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1479	
Facility:		
Source:	Jennifer Uhle	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	

Date/Time:	03/19/2011 02:55:37 (ET)	Consortium team member list provided (not yet complete) and logistics coordinated.
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1478	

(b)(5)

Facility:	
Source:	Tom Blount

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 02:30:59 (ET)	Agenda for 2pm meeting on Saturday. Send to 3 team leads for comment.
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1477	
Facility:		
Source:	Marty	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 02:12:35 (ET)	USAID Bob Kayler NRC Employee calling. Kara Cristie - Response Manager on ERT.
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1476	

Kara made a request for information on projections beyond what we have currently on wind shifts on Sunday. Best and worst case scenarios, and the most probable scenarios. At the high level...

How would the humanitarian effort be affected, specifically with evacuations. They want to anticipate humanitarian effort within the next few days. Is this something that we can support?

Roy - Are you looking for real time dose information over time or are you trying to get projections for the future?

Kara - Less emphasis on dose information to date, and more of a step back and current situation at the plant, and what it might elevate to over the next several days or weeks. The humanitarian people are not used to aiding with nuclear problems. They are asking for help in what issues they should consider.

Roy - It sounds like what you need is actual dose information to decide where you can get to and where you cant get to...

(b)(5)

(b)(5)

(b)(5)

(b)(5)

(b)(5)

(b)(5)

Facility:

(b)(5)

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Call ended.

Source: Phone Call

Address/Location:

Attachment:

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Date/Time: 03/19/2011 01:50:04 (ET)	New information	(b)(5)
Position: EST Chronology Officer		
Name: Dennis Gordon		
Record: 1475		
Facility:		
Source: Jennifer Uhle		

Address/Location:

Attachment:

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Date/Time: 03/19/2011 01:29:30 (ET)	Question: Who NRC participants for tomorrow 2pm meeting.
Position: EST Chronology Officer	
Name: Dennis Gordon	
Record: 1474	
Facility:	

(b)(5)

Source:	Marty
Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 01:08:38 (ET)	Source Term Comparison. One report sent to NARAC last night. New report to NARAC 3 reactors and 4 SFP. Lower ST for reactors based on station blackout v. LOCA. Preparing narrative. SFP release fractions based on age of fuel. Releases 16 hour durations. This report taking place of previous. Think task from last night realistic/optimistic source term v. worst case. Releases starting on March 12th.
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1473	
Facility:		
Source:	Cathy	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 01:03:13 (ET)	Two reactors resume cooling.
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1472	
Facility:		
Source:	NNK World (TV)	

Address/Location:	
Attachment:	

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Date/Time:	03/19/2011 00:39:00 (ET)	Met with Japan Ambassador. Communicated plans to have consortium (sat. meeting with industry at 2pm) to Ambassador. Ambassador suggested meeting/phone call to discuss roles and responsibilities. Requested Chairman should call Ambassador to discuss. Call before next SIBITS(?) call. Purpose to ask Prime Minister who primary point-of-contact should be in Japan gov. to ensure effective coordination of US support. Marty thought site map was being developed showing dose. NRC working does projections for Tokyo.
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1471	
Facility:		
Source:	Chuck	

Address/Location:	
Attachment:	

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Date/Time:	(b)(5)
(b)(5)	

Date/Time:	03/19/2011 00:30:04 (ET)	experts at Saturdays 2pm meeting to help make decisions.
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1470	
Facility:		
Source:	Roy	

Address/Location:

Attachment:

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Date/Time:	03/19/2011 00:22:52 (ET)	Logistics for Saturday meeting with industry reps. Need map of radiation boundaries around reactors. Situation reports. Develop agenda. Eng. diagram from Bechtel. Rad conditions. Extra security.
Position:	EST Chronology Officer	
Name:	Dennis Gordon	
Record:	1469	
Facility:		
Source:	Marty	

Address/Location:

Attachment:

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Date/Time:	03/19/2011 00:14:51 (ET)	Meeting with Industry tomorrow. Not in ET room. Question
Position:	EST Chronology Officer	(b)(5)
Name:	Dennis Gordon	
Record:	1468	
Facility:		
Source:	Marty	

Address/Location:

Attachment:

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Date/Time:	03/18/2011 23:45:37 (ET)	Meeting between Chairman and Japan Ambassador. NRC will provide detailed info regarding water, 1-pager Marty provided, Bechtel schematics, and other info.
Position:	EST Chronology Officer	Ambassador asked does US have robotic capabilities, Radiation suits that are not available to Japan, TEPCO wants to know what affects salt has on cooling
Name:	Dennis Gordon	
Record:	1467	
Facility:		
Source:	Chairman TA	

Address/Location:

(b)(5)

Attachment:		
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Date/Time:	03/18/2011 22:57:55 (ET)	<p>Marty: Understanding told admirals is that we would form consortium to get industry to industry support like Deepwater Horizon. DOE, Bechtel, Areva, others. GEH, etc. Who can identify and implement solutions. Have team from Exelon, GEH, EPRI, Bechtel, Areva and B&W. If need, QRS, Westinghouse, etc. Most people can be here tomorrow. 2pm for kickoff meeting. Will email names of people tomorrow morning. Will start moving through diplomatic channels in-country to make sure implementable. also get idea of rad fields. as of this pm, TEPCO folks have new concerns of reactor vessel and we can talk about that tomorrow - longer-term effects of putting seawater in reactor. Impacts on material or fuel. Have shifted their priorities often, though.</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1466	
Facility:		
Source:	Bill (industry)	
Address/Location:		
Attachment:		
This information is Official Use Only - Sensitive Internal Information.		
Date/Time:	03/18/2011 22:52:10 (ET)	<p>Need block of rooms at Marriott. Guards primed and parking. Get in touch with Bill in morning. Shoot for around 2pm for kickoff meeting. Need 8 rooms. Plus conference room here for 30 people. Mondays commission meeting will be important. Not sure if roll out over weekend with press release, or at commission meeting. Public will get good view of how this will work and our plans. Commission meeting: Phase 1: what were doing in Japan, Phase 2: JCO for our plants, Phase 3: Looking forward, what look at? b5b? severe accident management? training of operators? Then closed Cmsn meeting Mon afternoon on how sequence this (planning). Schedule future commission meetings on topics. (b)(5)</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1465	
Facility:		
Source:	Marty	
Address/Location:		
Attachment:		
This information is Official Use Only - Sensitive Internal Information.		
Date/Time:	03/18/2011 22:26:47 (ET)	<p>Been working with Chairman and his counterparts in industry and other agencies. How Deepwater Horizon was finally brought to conclusion was an industry-to-industry consortium, so tomorrow will have kickoff meeting with reps from industry. INPO will organize. GE, AREVA, those types of people that well bring to bear on problem on more organized way. Will set up kickoff meeting for sometime tomorrow. will engineer solutions that can be implemented. Key will be to get Japan to accept - will come</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1464	
Facility:		
(b)(5)		

through TEPCO. (b)(5)

Facility: Chucks input will be critical. PMT has been asked to explain rad levels at site. Will help engineer solutions that will work. Over next several days, consortium details will evolve. Now shifted around to reactors cooling, so says that TEPCO does not have firm set of priorities. (b)(5) Opportunity for us to move in with right technical skills. This group will transition and evolve from recovery phase to another subset that will take over cleanup.

Source: Marty

Address/Location:

Attachment:

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Date/Time: 03/18/2011 22:10:57 (ET) Bechtel, NR, INPO - PM team, getting people here tomorrow am, gathering in NRC building. Tim is on his way back. There are satellite trucks everywhere at TEPCO. May shut embassy down tomorrow switching to another diesel. Going to stand up hotel conf room hopefully. TEPCO recovery manager wants us back at TEPCO. Quickly running out of soldiers - need to move people this way. Need people that are more - get things done, coordinate, carry out plans, etc. Monninger is perfect. HQ should pump ideas, and PM people should help logistically. More like base team management thing. Maybe go to BC level. Bruce - hard to maintain presence in this facility (ops center) - what if we have an event at our facility. Conf room isnt working. Someone at agency is working on 6 month lease here. Needs to be accelerated. AMS info went to Jack Foster. 2 admirals, 1 retired, 1 active. Matrix sending out - good feedback from govt. (b)(5)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1463

Facility: (b)(5) Maybe add a little more explanatory info in boxes. Product is for ambassadors.

Source: Casto

Address/Location:

Attachment:

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Date/Time: 03/18/2011 22:00:30 (ET) INPO, NR - PM team

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1462

Facility:

(b)(5)

Source: Chairman

Address/Location:

Attachment:

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Date/Time: 03/18/2011 21:56:25 (ET)	Seawater may react into NaOH and HCl?? Should have chemist check. Blast in Unit 3 much bigger (at least twice) from Unit 1. Can see chunks of things falling back down, possibly fuel debris found by Unit 4.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1461	
Facility:	
Source: ET	

Address/Location:

Attachment:

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Date/Time: 03/18/2011 21:28:25 (ET)	Think it might need to be under our flag, this consortium. USAID already has ticket for Tim. Marty: (b)(5) Thaggard: But Marty: get him on a plane and then well work it. Bruce: embassy can get him in charter plane in 1.5 hours (b)(5) (b)(5)
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1460	
Facility: (b)(5)	
Source: Burnell	

Address/Location:

Attachment:

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Date/Time: 03/18/2011 21:25:29 (ET)	If we get Bechtel, GE, industry, do they support TEPCO or MOD or who? (b)(5) If we leverage technical expertise of industry, then we can provide oversight. Someone who can build confidence and communicate - what team needs.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1459	
Facility:	
Source: ET	

Address/Location:

Attachment:

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Date/Time: 03/18/2011 20:56:10 (ET)	Chairman gave assignment to get dose needs. Ruland - we are working on statement, but team is telling us they will get the dose rates. Casto - met with TEPCO chairman and CNO. Their concern and priorities is reduction of radiation and the reactors (b)(5)
Position: EST Chronology Officer	
Name: Rebecca Karas	

(b)(5)

Record: 1458

(b)(5)

Impacts of sea water on

the vessels - talked about bottom head and reduction in heat transfer. Had immediate concern about seawater impacts on the reactors. Not thinking about cooling of SFPs. They said they were concerned with seawater in the reactors. They said very concerned with seawater deposition and impacts on the bottom head with salt and heat transfer on the fuel. They want to get in there and run systems to recover. Corrosion of bottom head. Need to establish EOC-based team. Going to have to stand up cooling water org on SFPs. Rad org, Research org, and projects org. Chairman: dont think we can stand up all those things. Casto: need research on vessels and seawater and consequence management. Research team at HQ. Projects team in Japan. Chairman: who? Chuck: RES and INPO on reactor vessels. Dont know who on rad levels, maybe DOE. And someone to manage all this. Major change in mission. EPA for dose projection. Chairman: well figure out who will do what. Need: Strategies for reducing rad at site, look at seawater impacts on vessel, projects group, dose projections and calculations. We promised AMF data. He promised to get us dose info off self-defense forces. Sample doses. Chairman: got from GE that its OK, pool may be lower elevation. Could still be intact but at lower level. Casto:

(b)(5)

Facility:

Chairman: do you need people for pm team? Yes, diplomacy, pm, need office space and facility. Bill: we talked to Paul Clifford - had no concerns about corrosion of zirc fuel. Chuck: ask multiple sources. Not corrosion, its heat transfer rate. Bill: concern is you essentially have evaporator, putting in boric acid, salt, boiling steam. They want to get off of seawater and get to something else. Bill, can hit core spray in different direction. Could have fuel on bottom head. (b)(5) said that unit is at different elevation than Unit 1. They pointed out rail for crane on top of RB. Chuck: debris bed could have punched hole through bottom. Bill: will forward assessment to team. Trish: will forward ams results. Chuck: how can get through RB through keyhole to find connection to RCS to pump in fresh water. Not going to be able to start pump. Need to drill gopher hole through plant to get connection to RCS - borated water connection. Might want to sarcophagus at this point. Would have to borate vessels first. Probably need lab to work on that. Bruce: Are they seeking boron? Chuck, have 38K pounds from Diablo, plenty of boron.

(b)(5)

Embassy has constant charter

(b)(5)

flights, so we can lift back. Chuck: standby on replacement team - will talk directly - with mission shift, skill set will change.

Source: Casto

Address/Location:

Attachment:

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Date/Time: 03/18/2011 20:45:29 (ET)

Goes over action items.

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1457

Facility:

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/18/2011 20:03:28 (ET)

Continue to coordinate with various agencies. Status of units remains fairly unchanged.

Position: EST Chronology Officer

Reports back from local team is that water sprays dont seem to have any effect. (They

Name: Rebecca Karas

(b)(5)

) Trying to

Record: 1456

collect more information on doses around site.

(b)(5)

All other doses fairly low. Should have other projections done next half hour or hour. Will share with NARAC and can do calculations. Got AMS flyover results. NW of site had greatest concentration of contamination. 1 rem integrated 4 day doses. Has been some reports that San Onofre and Diablo have seen a small sample slightly above minimum detectable activity level for I-131. Have been contacted and they have increased their sampling. Dont know if was random sample. Being confirmed 2 places at Diablo and 1 at SONGS. Just received

(b)(5)

From

West looking east, they are showing quite a bit of damage couldnt see before. Working through the night to get some better understanding of elevations. Ruland: Got photos from TEPCO provided to in-country team. Unit 3 photos show significant damage to structure. Provided to GE. Turns out that U3 elevations are different from U1. What you

(b)(5)

Facility:

can see exposed is refueling drywell head crane rides on. Building constructed at level below other structures. Hard to see drywell head. Asked them to provide their assessment of what they see. Cannot rule out or rule in whether SFP is still intact. Site teams initial impression was that SFP might not be here. Also will talk to site to make sure they know that initial view is different than what they might have thought. Still working logistics for system with Bechtel, GE, and in-country NRC team - INPO on call, including Japanese Defense Forces and NISA. Beth Hayden: expecting huge press presence at Cmsn meeting Monday. Hopefully can pull feeds to TVs. Created a place on web for Japan-related info. Castleman: flyover results? Trish: narrow band to nw beyond 13 miles where integrated 4 day doses approach or exceed 4 rem. Havent completely mapped extent of concentration. Castleman: yesterday asked for list to USAID of equipment that could be provided, based on b5b - havent gotten list yet. Need to know for Mondays Commission meeting. Do we have info on health effects - occupational and public? Do we know of fatalities? No. No confirmed info or data. Just from media. Do we still believe U4 pool is dry? Yes. Why still dry, since we have 2 indications is not? Japan and France say is not. Bruce, rad levels from helicopters significantly more than if water in pool. Josh - [redacted] (b)(5) [redacted] Next call tomorrow am 730.

Source: TA call

Address/Location:

Attachment:

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Date/Time: 03/18/2011 19:49:48 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1455

Facility:

Source: ET

Looking at photos of U3 from TEPCO - looks like pool elevation may be gone, and doesnt look like drywell head is where we would expect. but when look where cars are, looks like not many feet. Looks like drywell may be not where we would think.

Address/Location:

Attachment:

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Date/Time: 03/18/2011 19:27:50 (ET)

Position: EST Chronology Officer

[redacted] (b)(5) Need to raise to Casto.
 [redacted] (b)(5) May need to send new team member sooner and [redacted] (b)(5)

[redacted] (b)(5)

Name:	Rebecca Karas	(b)(5)
Record:	1454	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/18/2011 19:02:52 (ET)	<p>Think there is at least a leak or rupture on Unit 4 SFP. Thinking about using mining mud. Not sure how much could put in without collapsing pool. If side or bottom has massive rupture, what do then? Think high volume water supply is good attempt. Other problem is worrying about zirc fires and making matters worse. Have equipment to put out if start? Finally at midnight got TEPCO guy in charge of pumping and discussed until 4am discussing design of system. Got together - doesnt matter whose system, just make sure it works. Also timing, which can get in place first? Dilemma is system they want to use - only have 2 in country, other 2 in china. They can remote control operate them - used in Chernobyl. Bechtel system is sitting in Australia in 2 pieces. 3rd path is that we broadcasted to Japanese companies to see if have.</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1453	
Facility:		<p>(b)(5)</p> <p>Bruce: NR guy is interested in helping with logistics. DART responsible for logistics in embassy. They move lots of stuff everywhere. Can we point NR guy to someone in organization? Bill Berger in embassy. Someone might need to go into China to get the trucks. They should talk to Berger. Chuck passes naval rep number.</p>
Source:	Chuck	

Address/Location:	
Attachment:	

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Date/Time:	03/18/2011 18:51:30 (ET)	Going to send photos and design diagram. Trish: have real-time dosimetry data from
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(b)(5)

Position: EST Chronology Officer	site? Chuck: talk to DOE. On CMWEB is all the results. Brandon has access to CMWEB.
Name: Rebecca Karas	Rad levels onsite - not sure anyone has done more flyovers on updated dose. Bruce:
Record: 1452	presuming too hot for people to even do surveys. Chuck 1R or more at gate. Will try and
Facility:	find out from TEPCO. Meeting with CEO and CNO - will put it in list of info we need. Trish: Chairman has asked if 50 mile is ok and we need doses. (b)(5) (b)(5) ambassador has asked because French and Germans are closing embassy. Jack working with DOE and PMT. Need to have by 6 tonight Japan time. Need those thresholds. There are questions also on whether seawater fill is still working or stable.
Source: Casto	

Address/Location:	
Attachment:	
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Date/Time: 03/18/2011 18:43:22 (ET)	Have latest aerial monitoring results on EMWEB. Can see more contamination to west.
Position: EST Chronology Officer	Going to fly more west today. (b)(5)
Name: Rebecca Karas	(b)(5) In process of having someone scan those and send to us. Angle they took from
Record: 1451	West side. (b)(5)
Facility:	(b)(5) Preliminary - hard to see that there is a U3 SFP at all - appears like rubble. Does not appear to be integrity. But should look at first. Looks like severe damage on that side. Can only see vertical pillars there. Chairman: conveys conversation with Japanese ambassador to Chuck. NR: need plant technical data (Dont (b)(5) Chuck: would like to coordinate first: NR: do you get detailed info on plants? Chuck: adding water with guns is not helpful. They have no instrumentation there. Best data is (b)(5) and AMS. There is nothing that they have. They cant get near or fly over.
Source: Casto	

Address/Location:	
Attachment:	
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Date/Time: 03/18/2011 18:38:51 (ET)	Want to emphasize with team - just met with Japanese ambassador. He said if there is
Position: EST Chronology Officer	anything we need, just to tell him directly. He asked that any equipment that could help,
Name: Rebecca Karas	robotics, remote equipment and/or anything for people to be able to get closer....He
	gave us his home and personal cell number. No delay on anything they need. Also give

(b)(5)

Record: 1450	(b)(5)
Facility:	
Source: Chairman	

Address/Location:	
Attachment:	

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Date/Time: 03/18/2011 18:33:44 (ET)	People here in RST burning a lot of time on logistics. Site team has been connected with a Major at the AFB, so team feels like they have someone, so not sure if they can track down things like the boron in Kansas, etc. Maybe can turn more logistics over to military folks.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1449	
Facility:	
Source: NR	

Address/Location:	
Attachment:	

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Date/Time: 03/18/2011 18:18:49 (ET)	Working on summary for Congressionals. Talked to Margerie Doane on unclassified cables - working to communicate to State (b)(5) Call last night was just western states. Today expanded to all of them. Communicating with states: been trying to funnel information to RSLOs. MJ: what about pushing state communications to DOE since they are responsible now.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1448	
Facility:	
Source: Liaison Team	

Address/Location:	
Attachment:	

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Date/Time: 03/18/2011 18:18:12 (ET)	Should see if WNP-2 sampled anything. Or Humboldt Bay.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1447	
Facility:	
Source: ET	

Address/Location:	
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(b)(5)

Attachment:
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Date/Time:	03/18/2011 18:07:40 (ET)	Talked to PMT before on DOE runs with iodine in Alaska, and we have good answer that there is no grass in Alaska right now. Trish, had call with WH, DOE and NARAC, and discussed. But since cows are not now eating grass, and housed internally, including water.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1446	

(b)(5) Trish

- we will ask NARAC about availability of cows eating outside. Give Chairman call ff before 9. Trish -

(b)(5) Not

going to volatilize everything in core? Bruce, some should stick to sides of wall, and some would still be solid. Iodines and CS would be what youd worry about. Trish - also thinking about MOX. But should not be significantly contributing to dose. Chairman do worst case physically possible. Dont think you can eject entire core. Think the agency ruled out as physical possibility.

Source: Chairman call

Address/Location:

Attachment:

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Date/Time:	03/18/2011 18:05:47 (ET)	Evaluating dose rates for various cities in Japan. Diablo Canyon detected iodine - only 1 of 4 air samplers picked up. SONGS also got on 1 air sample, a little lower - on border of ability to detect. AMS flyovers not very useful because they flew on side of site where wind was not blowing (west side of plant), so they will fly again, not sure when.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1445	

Facility:

Source: PMT

Address/Location:

Attachment:

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Date/Time: 03/18/2011 18:00:06 (ET) (b)(5)

Position: EST Chronology Officer

(b)(5)

Name:	Rebecca Karas
Record:	1444
Facility:	
Source:	PMT
Address/Location:	
Attachment:	

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Date/Time:	03/18/2011 17:42:45 (ET)	<p>Were questions on how to approach dry SFP - have completed tech analysis of going forward. Different scenarios for wet/dry. Also sand slurry scenario. Also info on SFP loading if have to go to sand slurry solution. Assessment on recriticality - no concern there from experts. Info is out with site team. Main activity was doing logistics support with Bechtel, INPO, NR, GE-Hitachi. Have the system drawing, equipment list that went to USAID. As of this am, Bechtel was given email from USAID to go forth. Staging at Royal airforce base in Australia. Awaiting status of American Airforce C-17 that is supposed to pick up from Australia. Talking about getting logistics team getting from AFB to GE-Hitachi in Japan (where will test and train personnel who will execute onsite). Lots of logistics so we can execute equipment arriving onsite. Goes beyond to MOD. Have contact at Yokoda AFB. DART has given approval. Boger - Do we have sense of relative effectiveness of fire trucks? Laura - We dont think successful at all. Assuming 3+4 are dry. Site team was with TEPCO and they are sending us info on pumper truck. We have agreed to look at and send back any recommendations we have. No info on electric power. They had to bring in a temporary 6.9kV distribution panel, and had some problems getting that onsite. We dont know status. Going to make sure we have diesel fuel - multiple supplies - for pumps. Annie Caputo called, and she has a boron firm who would like to give Japanese boron. Shes working with NEI to pay for it if AF can move it from Tulsa, OK to Japan. Laura - They have mountains of boron. Mike - No, it is the Areva boron that is in OK. They pulled out - were unable to get funding for boron. Trish - heard they already had the Areva boron. NR - we can make it happen if we determine we need it. Mike, need to ask site team if need, and then get back to Annie. Steve Troutman called.</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1443	
Facility:		<p>(b)(5) Suggested a call should happen. Mike, we have been trying to get INPO involved in DART team in Japan. boger - thought John said INPO engineer might be in Japan?? Laura - RST have been working with INPO on pumping process.</p>

(b)(5)

Source: RST

Address/Location:

Attachment:

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Date/Time: 03/18/2011 17:42:08 (ET)	Question of who will pay is now being discussed, even though had authorization from USAID.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1442	
Facility:	
Source: ET	

Address/Location:

Attachment:

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Date/Time: 03/18/2011 17:37:15 (ET)	Would like status of event (written product) from NRC since Congress is in recess next week. To be shared with constituents. Probably any products we have already are way too detailed. Could write something up in general - any concerns we have, what we are doing generally, etc. More than whats in OPA book, though. Then would send that out on a daily basis. Need draft by tomorrow.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1441	
Facility:	
Source: ET	

Address/Location:

Attachment:

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Date/Time: 03/18/2011 17:21:23 (ET)	There is actually no green grass in Alaska right now, that the 35 rem is based on.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1440	
Facility:	
Source: PMT	

Address/Location:

Attachment:

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Date/Time: 03/18/2011 16:59:59 (ET)	We want to provide what we think is potential story behind questions. Bechtel worked design with HQ and NRC likes design. We moved forward with design through DTRA, etc. Embassy and DTRA and all - said stuff looks like it can be procured locally.
Position: EST Chronology Officer	
Name: Rebecca Karas	

(b)(5)

<p>Record: 1439</p> <p>Facility:</p>	<p>Happened about 5-5:30 with ambassador here. The various agencies at embassy took list and started making phone calls. We dont know who they talked to. (b)(5)</p> <p>Commerce attache in Tokyo called many suppliers. Contacted one company who put together pumping system for Tokyo fire dept. They said they were also working for TEPCO on system. Not sure if TEPCO - could have been requested by Japanese govt. In end it was determined we cannot rely on doing it locally - have to go with sure thing - Australia, and they gave go-ahead for Australia. (b)(5)</p> <p>Our guidance to Bechtel was that you have to drive the system in and get out. Was meant to be very low manpower to install. Also, the helicopter in NE that can lift 5000# was mentioned. Were going to mention is available through Lockheed Martin, and if they take advantage of it, fine. We handed summary list to MOD yesterday, but discussions were that we were proposing to bring the assets in. Their idea is massive concrete pumping trucks. 65m boom. Have 2 in-country that are proposing to use. We told them try and get 4 here. They will have to move with dose, otherwise. They said 2 new ones in China with private company. We said we would see what we could do about that. Has been offer of assistance from Navy to use their assets to move things around. Embassy usually prefers to use DART. Bruce: heard TEPCO system might be ready sooner? John: probably because its in-country and TEPCO is working it. Going to pump water instead of concrete. Casto: we have minister of trade and CNO/TEPCO, CEO/TEPCO meeting today. Also Japan general forces general. Vonna: heard Japanese ministry was going to give us dose rates. if can ask them. John: are many ministries. Can ask team. though. Had dose rates. but in a 40m x 40m area. Not fine granularity (b)(5) Need robots with rad sensors to map site. Chuck: before meet with CNO, CEO, minister, should have what we think message is to them.</p>
<p>Source: Monninger</p>	
<p>Address/Location:</p>	
<p>Attachment:</p>	
<p>This information is Official Use Only - Sensitive Internal Information</p>	
<p>Date/Time: 03/18/2011 16:40:34 (ET)</p>	<p>Need to get better updates of dose and put in status update.</p>
<p>Position: EST Chronology Officer</p>	
<p>Name: Rebecca Karas</p>	
	<p>(b)(5)</p>

Record:	1438
Facility:	
Source:	ET
Address/Location:	
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Date/Time:	03/18/2011 16:35:57 (ET)	Need to identify set of experts for any of the subjects that might come up that can come to the microphone during Commission meetings. Need to make sure individuals identified are right people.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1437	
Facility:		
Source:	ET	
Address/Location:		
Attachment:		
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Date/Time:	03/18/2011 16:20:23 (ET)	Alaska - 1 year child dose 0.5 rem - 35 rem thyroid dose if all lands in pasture, child drinks from that one cow. Source term for bounding analysis: (b)(5) Need Chairman to review, then provide to DOE/NARAC. Josh wants electronic version of document given to Borchardt immediately. Diablo found 6.9 e-13 microCi iodine. Notifying EPA and DOE. San Onofre apparently picked something up on sampling. State dept just put out (b)(5) Correcton (b)(5) EST Chronology Officer - Rebecca Karas at 16:35:21 on 3/18/2011 EST Chronology Officer - Rebecca Karas at 16:35:45 on 3/18/2011
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1432	
Facility:		
Source:	ET	
Address/Location:		
Attachment:		
This information is Official Use Only - Sensitive Internal Information.		

Date/Time:	03/18/2011 16:20:23 (ET)	Alaska - 1 year child dose 0.5 rem - 35 rem thyroid dose if all lands in pasture, child drinks from that one cow. Source term for bounding analysis: (b)(5) Need Chairman to review, then provide to DOE/NARAC. Josh wants electronic version of document given (b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:		
Facility:		
Source:	ET	
Address/Location:		
Attachment:		
This information is Official Use Only - Sensitive Internal Information.		

Record:	1436	to Borchardt immediately. Diablo found 6.9 e-13 microCi iodine. Notifying EPA and DOE.
Facility:	(b)(5)	San Onofre apparently picked something up on sampling. State dept just put out
	Corrector:	(b)(5)
		EST Chronology Officer - Rebecca Karas at 16:35:21 on 3/18/2011
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/18/2011 16:33:34 (ET)	(b)(5)	Going to talk to State Dept.
Position:	EST Chronology Officer		
Name:	Rebecca Karas		
Record:	1434		
Facility:			
Source:	ET		

Address/Location:	
Attachment:	

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Date/Time:	03/18/2011 16:32:41 (ET)	Never got 1-pager - needs email directly to him immediately.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1433	
Facility:		
Source:	Chairmans office	

Address/Location:	
Attachment:	

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Date/Time:	03/18/2011 16:20:23 (ET)	Alaska - 1 year child dose 0.5 rem - 35 rem thyroid dose if all lands in pasture, child drinks from that one cow. Source term for bounding analysis:
Position:	EST Chronology Officer	(b)(5)
Name:	Rebecca Karas	(b)(5)
Record:	1435	Need Chairman to review, then provide to DOE/NARAC. Josh wants electronic version of document given to Borchardt immediately. Diablo found 6.9 e-13 microCi iodine. Notifying EPA and DOE.

(b)(5)

Facility:	San Onofre apparently picked something up on sampling. State dept just put out (b)(5)
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Source:	ET
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Address/Location:	
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Attachment:	
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Date/Time:	03/18/2011 16:13:18 (ET)	We have transitioned to be more directive to what MOD needs to do. 4 is presumed dry. No steam coming out. On super-source scenario - begs question about missing units. Currently 5 units with fuel in reactor, plus pools for 1-6 and common pool. Is staging area for getting into dry cask storage. Should be old fuel. Vonna: what is cooling common pool? Wiggins: havent seen any problem in common pool.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1431	
Facility:		
Source:	ET	

Address/Location:	
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Attachment:	
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Date/Time:	03/18/2011 16:03:36 (ET)	In call earlier, Cong. staffers talked about individuals who are MIA in Japan - asking to help out. Ruland - need to get NR working with us on logistics. Tom/NR - can get ahold of his contact to make that happen. Need to check if the 2 individuals ever got embedded with NR team.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1430	
Facility:		
Source:	ET	

Address/Location:	
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Attachment:	
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Date/Time:	03/18/2011 16:00:38 (ET)	DOE/Budnitz sent email saying should do PRA on Bechtel system. RST assessed at very low value. Closing action.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1429	
Facility:		
Source:	ET	

Address/Location:	
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Attachment:	
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(b)(5)

Date/Time: 03/18/2011 15:42:21 (ET)	Shared Bechtel system. Japanese also shared their system. Discussion surrounded merits of both designs. In end, TEPCO said first time they had heard about US proposed system. Shared with them that last 4-5 days, had been shared.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1428	
Facility:	<p>Did not give them any hardcopy pieces of paper. They gave us paper of proposed design. We talked them through ours.</p> <p>They understand all equipment coming from Australia. We told them includes 4 pumps, piping, etc, but didnt tell them they had to supply. We offered to provide assistance to them. We said in our opinion, it makes sense for them to continue their design, and us to continue to get equipment up. On Bechtel design, were no discussions on number of people required or where come from. Jim: we guess at low hundreds. John, previously got info from ET on remote-control helicopter. We mentioned that that helicopter may be of interest to anyone. Chuck - told them theyd have to put up rad shield, and stage people to put up sections of pipe. Did talk to them about lead-lining fire trucks</p> <p>(b)(5)</p> <p>John: First system that has any potential of being put in place is the TEPCO design. There is not much market difference between TEPCO and Bechtel designs. Tim</p> <p>(b)(5)</p>
Source: Monninger	

Address/Location:	
Attachment:	
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Date/Time: 03/18/2011 15:32:39 (ET)	Wiggins: Chairman wants to know list of equipment - what told Japanese. What activities told japnese they should do, and how many people necessary to execute. Chuck: John and Jack met to go over details of design - dont know if provided list or not. We told them they need to implement design. Dont know if they told them number of people. Told Japanese that SFP activities are primary - getting water in.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1427	
Facility:	
Source: Chuck	

Address/Location:	
Attachment:	
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((b)(5))

Date/Time:	03/18/2011 15:24:33 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1426	
Facility:		
Source:	Chairman telecon	

Address/Location:	
Attachment:	

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Date/Time:	03/18/2011 15:21:20 (ET)	Need to know what Chuck has told Japanese is needed to execute recommended option - equipment specifics of what is needed. We have Bechtel list, but what has	
Position:	EST Chronology Officer		
Name:	Rebecca Karas		(b)(5)
Record:	1425		
Facility:			
Source:	Japan team		

Address/Location:	
Attachment:	

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Date/Time:	03/18/2011 15:15:00 (ET)	Michelle is working on replacement team. Dorman will be on plane tomorrow to replace Chuck. Rest of team is partial right now. Admiral Donaldson, NR, has offered to use Navy connections to facilitate logistics support by US assets in Pacific area.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1424	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/18/2011 15:11:41 (ET)	Discuss what Chairman needs. Bill will get Ambassadors secys email address.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1423	
Facility:		
Source:	Borchardt	

Address/Location:	
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(b)(5)

Attachment:

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Date/Time:	03/18/2011 15:08:55 (ET)	Equipment list, what tasks Chuck told him to do, and how many people to do it.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1422	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
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Date/Time:	03/18/2011 15:06:21 (ET)	Need to know: What equipment, exactly what Chuck is telling people in Tokyo to do.
Position:	EST Chronology Officer	Very specific list of things that needs to be done. (b)(5)
Name:	Rebecca Karas	(b)(5) Need to know how many. Wiggins: appx low several hundreds.
Record:	1421	Chairman: Need on piece of paper saying this so can get to Japanese ambassador, and it needs to be consistent with what Chuck is telling them. Meeting is at 4pm.
Facility:		
Source:	Chairman on bridge	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	

Date/Time:	03/18/2011 14:55:28 (ET)	MOD appears to be assuming primary lead now. They are interested in NRC views and recommendations. They were offered to go to EOC, and it ended up being a meeting with TEPCO. (b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1420	
Facility:		(b)(5) NRC is doing in-country work, and DOE is doing US impact. Chairman has indicated he wants to see assumptions. Need to figure out how many TEPCO people would need to pull off recovery functions. Could figure out how many just do field ops. Minimum of 60 to just put the 4 trains in. Need people to erect, operate and maintain. Need tag team of HPs. Need management out there, not just workers. Also people to monitor 5 and 6. We can tell would expect couple hundreds of people. May get AC power Saturday Japan time. May be able to do something with 5 and 6.
Source:	ET turnover	We have one from night shift.

Address/Location:	(b)(5)
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Attachment:

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Date/Time: 03/18/2011 14:33:12 (ET)
 Position: EST Chronology Officer
 Name: Jessica Kratchman
 Record: 1419

(b)(5)

Facility:

(b)(5)

TEPCO reported to John that Unit 3 is the priority and then they will reevaluate.

(b)(5)

Source: John Monninger

Address/Location:

Attachment:

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Date/Time: 03/18/2011 14:18:31 (ET)
 Position: EST Chronology Officer
 Name: Jessica Kratchman
 Record: 1418
 Facility:
 Source: Sally Billings

If we need there is a compounding company that can produce KI for us.

Address/Location:

Attachment:

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Date/Time: 03/18/2011 14:07:33 (ET)
 Position: EST Chronology Officer
 Name: Jessica Kratchman
 Record: 1416

Trish Milligan is going to contact State of Pennsylvania to get a supply of KI. Op Center to send a courier.

In an emergency they can advise staff who need KI to take a multi vitamin with hi dose of KI.

(b)(5)

Facility:	Correction- multi vitamin should have high dose of iodine. EST Chronology Officer - Jessica Kratchman at 14:10:54 on 3/18/2011
Source:	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/18/2011 14:07:33 (ET)	Trish Milligan is going to contact State of Pennsylvania to get a supply of KI. Op Center to send a courier. In an emergency they can advise staff who need KI to take a multi vitamin with hi dose of KI.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1417	
Facility:		
Source:		

Address/Location:	
Attachment:	
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Date/Time:	03/18/2011 13:46:59 (ET)	(b)(5)	May need to FedEx it to him
Position:	EST Chronology Officer		
Name:	Jessica Kratchman		
Record:	1415		
Facility:			
Source:			

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/18/2011 13:45:40 (ET)	Need KI suppy for Headquarters because we will be sending people to Japan every two weeks.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1414	
Facility:		
Source:		

Address/Location:	
Attachment:	
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(b)(5)

Date/Time:	03/18/2011 13:44:48 (ET)	6.35e-13 level detected. This is the lower limits of detection.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1413	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/18/2011 13:42:36 (ET)	Detectors in Sacramento showed trace amounts of radiation.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1412	
Facility:		
Source:	Media	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/18/2011 13:39:12 (ET)	France has shared technical data with us.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1411	
Facility:		
Source:	France	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/18/2011 13:13:58 (ET)	PRA ANALYSIS EMAIL. See attached.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1410	
Facility:		
Source:	Email	

Address/Location:	
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(b)(5)

520707

Attachment: 

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Date/Time:	03/18/2011 13:11:28 (ET)	SOURCE TERM ASSUMPTIONS Email: between Chairman, PST, Wiggins. See attached.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1409	
Facility:		
Source:	PMT	

Address/Location:

Attachment: 

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Date/Time:	03/18/2011 13:09:39 (ET)	Moscow is feels that SFP3 is disintegrating. They are concerned about MOX fuel.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1408	
Facility:		
Source:	Moscow	

Address/Location:

Attachment:

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Date/Time:	03/18/2011 13:07:02 (ET)	Chairman wants final assumptions before they are finalized.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1407	
Facility:		
Source:	Chairman	

Address/Location:

Attachment:

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Date/Time:	03/18/2011 12:39:40 (ET)	ET reviews an EDO ticket pertaining to a FIOA request for current NRC operations, related to staffing, teams, emails, and shifts.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1406	

(b)(5)

Facility:	
Source:	EDOs Office
Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	
Date/Time:	03/18/2011 12:36:12 (ET)
Position:	EST Chronology Officer
Name:	Jessica Kratchman
Record:	1405
Facility:	
Source:	Commenter PAO
Requested ET review NRR press release in the form of an Information Notice (IN).	
Address/Location:	
Attachment:	
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Date/Time:	03/18/2011 12:13:28 (ET)
Position:	EST Chronology Officer
Name:	Jessica Kratchman
Record:	1404
Facility:	
Source:	Brain McDermott
Indicated a large attendance at the recent basic reactor concepts. people were standing along the walls and all chair were filled..	
Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	
Date/Time:	03/18/2011 11:30:58 (ET)
Position:	EST Chronology Officer
Name:	Jessica Kratchman
Record:	1399
Meeting with TEPCO and Regulator:	
(b)(5)	
TEPCO/ regulator very interested and very impressed with the pump system.	
There were also talks about use of sand. Chuck requested the calculations of how filling SFPs with sand will effect structural integrity of SFP enclosures; he believes that the NRC did these calculations and feels it is easiest for NRC to get it to him- he is going to email request to HOO.HOC@nrc.gov	
Overall message: TEPCO/ regulator willing to work and much more accepting of the situation.	
(b)(5)	

Facility:

Thinks a flyby near (over?) the plant may be very useful if it is equipped with IR cameras, hi quality video, etc.

Chuck feels remote control helicopters would be very useful; can lift pumping system.

Mark-update- helicopter is available in Massachusetts, will be fitted with a hi quality camera, and IR camera. Can be there by the weekend.

Chuck said there is some confusion with about the equipment and whether Tokyo FD already purchased; we will not slow our efforts either way.

Trying to get Dan Doorman on the next flight; also working on long-term staffing.

Chuck- update- NR voluntary departure; not an evacuation.

Corrected spelling: Dan Dorman

EST Chronology Officer - Jessica Kratchman at 12:12:16 on 3/18/2011

Source: Chuck Casto

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/18/2011 12:06:30 (ET)

Getting ready for routine call to DOE.

Position: EST Chronology Officer

Name: Jessica Kratchman

Record: 1402

Facility:

Source: PMT

Address/Location:

Attachment:

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Date/Time: 03/18/2011 11:58:35 (ET)

DOE Moscow just sent NRC Op Center a review of US-Russia meeting, held today in Japan.

Position: EST Chronology Officer

Name: Jessica Kratchman

(b)(5)

Record:	1401
Facility:	
Source:	DOE

Address/Location:	
Attachment:	
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Date/Time:	03/18/2011 11:55:55 (ET)	FOIA request
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1400	
Facility:		
Source:		

Address/Location:	
Attachment:	
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Date/Time:	03/18/2011 11:30:58 (ET)	Meeting with TEPCO and Regulator:
Position:	EST Chronology Officer	(b)(5) TEPCO/ regulator very
Name:	Jessica Kratchman	interested and very impressed with the pump system.
Record:	1403	

There were also talks about use of sand. Chuck requested the calculations of how filling SFPs with sand will effect structural integrity of SFP enclosures; he believes that the NRC did these calculations and feels it is easiest for NRC to get it to him- he is going to email request to HOO.HOC@nrc.gov

Overall message: TEPCO/ regulator willing to work and much more accepting of the situation.

Thinks a flyby near (over?) the plant may be very useful if it is equipped with IR cameras, hi quality video, etc.

Chuck feels remote control helicopters would be very useful; can lift pumping system.

Mark- update- helicopter is available in Massachusetts, will be fitted with a hi quality camera, and IR camera. Can be there by the weekend.

(b)(5)

Chuck said there is some confusion with about the equipment and whether Tokyo FD already purchased; we will not slow our efforts either way.

Trying to get Dan Doorman on the next flight; also working on long-term staffing.

Chuck- update- NR voluntary departure; not an evacuation.

Source: Chuck Casto

Address/Location:

Attachment:

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Date/Time: 03/18/2011 11:07:39 (ET)

May want to consider having Chuck remain "the face of the NRC" in Japan. That way we have a consistent person involved who has an established relationship.

Position: EST Chronology Officer

Name: Jessica Kratchman

Record: 1398

Facility:

Source: Jim Wiggins

Address/Location:

Attachment:

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Date/Time: 03/18/2011 10:51:40 (ET)

(b)(5)

Position: EST Chronology Officer

Name: Jessica Kratchman

Record: 1397

Facility:

(b)(5)

Source: NR

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information~~

Date/Time: 03/18/2011 10:44:48 (ET)

(b)(5)

Position: EST Chronology Officer

Name: Jessica Kratchman

Record: 1396

Facility:

(b)(5)

Source:

Address/Location:

Attachment:

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Date/Time:	03/18/2011 10:39:30 (ET)	Suggests having an alignment meeting. Next step-have commission meeting.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1395	
Facility:		
Source:	Marty	

Address/Location:

Attachment:

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Date/Time:	03/18/2011 10:38:45 (ET)	C17 left and is on its way to Perth.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1394	
Facility:		
Source:	RST- Laura Dudes	

Address/Location:

Attachment:

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Date/Time:	03/18/2011 10:34:36 (ET)	located a helicopter that is remote and can lift up to 5000 lbs; John said this was not one of our initial requests for robots, however this would be something very useful to have; ET will loop back through the DART team to request remote helicopter.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1393	
Facility:		
Source:	Lockheed-Martin	

Address/Location:

Attachment:

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Date/Time:	03/18/2011 10:28:41 (ET)	Spoke with Admiral Donald (USFJ)- USFJ can support logistical efforts. Jaczko accepted and asked them to begin efforts
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	

(b)(5)

(b)(5)

Record: 1392	(b)(5)
Facility:	(b)(5)
Source: Chairman	

Address/Location:

Attachment:

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Date/Time: 03/18/2011 10:24:19 (ET)	Could not get through to Chuck Casto; John Monninger provides update.
Position: EST Chronology Officer	In-country NRC staff were initially offered to be embedded in the EOF, but it turned out to be a meeting with the TEPCO president; they will try to have this meeting tomorrow, but are still interested in embedding in EOF. John does not think there is any change in plant status; (b)(5)
Name: Jessica Kratchman	
Record: 1391	
Facility:	
Source: John Monninger	

Address/Location:

Attachment:

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Date/Time: 03/18/2011 10:19:41 (ET)	(b)(5)
Position: EST Chronology Officer	Working on providing in country replacements. CAs had numerous questions regarding the conflict between media reports and US AID/ NRC information.
Name: Jessica Kratchman	
Record: 1390	
Facility:	
Source: CA briefing	

Address/Location:

Attachment:

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Date/Time: 03/18/2011 10:10:51 (ET)	Priorities:
(b)(5)	

Position:	EST Chronology Officer	(b)(5)
Name:	Jessica Kratchman	
Record:	1389	PMT is working on the input parameters; NRC is the lead for the in-country models; *In-country team is working with Bechtel operation; Bechtel is coming up with a pumping scheme also; there are signs that Japanese are moving to this end as well, however this is not confirmed.
Facility:		
Source:	CA Briefing	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information	

Date/Time:	03/18/2011 09:16:12 (ET)	<p>Update: Units 1,2,3 situation is the same. Seawater is attempting to be injected. There is a focus on SFPs, esp Unit 3; New reports- better success from fire truck water cannons- this is not confirmed. In-country team had questions about characteristics of zirc fires. The answer from NRC experts is that "if you had a zirc fire you would know it"; zirc fires are characterized with very bright light, so there would be no confusing it with steam; mitigation of zirc fires- water. Wind direction- east- out to sea.</p>
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1388	
Facility:		
Source:	CA Briefing	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information	

Date/Time:	03/18/2011 09:06:36 (ET)	<p>Brian wants the roster play back; Op officer informs there is no monitor phone to do a play back.</p>
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1387	
Facility:		
Source:	Op Officer	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information	


(b)(5)

Date/Time:	03/18/2011 08:58:41 (ET)	CA briefing to occur shortly, ET staff deciding where in the Op Center to take call.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1386	
Facility:		
Source:	CA	

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/18/2011 08:49:20 (ET)	US NRC DART Team: Response Update
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1385	
Facility:		
Source:	NRC DART Team	

Address/Location:	
Attachment:	

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Date/Time:	03/18/2011 08:27:06 (ET)	List of replacements for in country staff- Do not forget a dose expert! This person may need to advise on protective measures. As we shift to recovery, we may want to phase the in-country staff from primarily reactor experts to health physics experts.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1384	
Facility:		
Source:		

Address/Location:	
Attachment:	

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Date/Time:	03/18/2011 08:21:55 (ET)	There is indication that the Tokyo Fire Department has some of the equipment we are shipping in from Australia; however, we will not slow out efforts down because the possibility exists that there can be significant aftershocks; if that is the case we want multiple trains in place, in which case having the extra equipment could be important.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1383	
Facility:		
Source:		

(b)(5)

529707

Address/Location:	
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Date/Time: 03/18/2011 07:59:37 (ET)	Australia is coordinating getting equipment to the port in Perth, and then the US military will fly there, pick it up and bring it to Japan.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1382	
Facility:	
Source: RST	

Address/Location:	
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Date/Time: 03/18/2011 07:56:28 (ET)	RST focus for today: once supplies arrive in Japan, an operational plan needs to be determined; also, focus on the hand off of equipment in Japan; looking into if there is a point at which flooding it with water will be ineffective/ detrimental.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1381	
Facility:	
Source: RST- Laura Dudes	

Address/Location:	
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Date/Time: 03/18/2011 07:45:27 (ET)	By 9am Chairman wants a list of the replacement team for in-country staff.
Position: EST Chronology Officer	
Name: Jessica Kratchman	Charlie suggests talking to Chuck about the skill sets that he need. Brian said that he needs people with dose assessment skills, liaison skills, (b)(5)
Record: 1380	
Facility:	
Source: Chairman	

Address/Location:	
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Date/Time: 03/18/2011 07:44:03 (ET)	Considering the benefits of a PRA analysis. Consensus- there is little use for this type of analysis and it would not be a good use of time/ resources.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1379	

(b)(5)

Facility:	
Source:	

Address/Location:	
Attachment:	
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Date/Time:	03/18/2011 07:42:58 (ET)	NEI is concerned with the 50 mile evacuation and how this will undercut the USA 10mi EPZ.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1378	
Facility:		
Source:	NEI	

Address/Location:	
Attachment:	
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Date/Time:	03/18/2011 07:14:13 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1377	
Facility:		<p>33% core melt; 25% core available to release; no containment.</p> <p>2 SFP; 100% inventory for release; no containment.</p> <p>NARAC is providing met data for Hawaii and Alaska.</p> <p style="text-align: center;">(b)(5)</p>
Source:	PMT	

Address/Location:	
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Date/Time:	03/18/2011 06:27:37 (ET)	RST reports that Unit 3 SFP considered to have been dry when initially sprayed with water by fire trucks today because of large steam plume shown in photos. Pat indicated that John Monninger of NRC team in Japan agrees that Unit 3 SFP had
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	
(b)(5)		

Record: 1376	been dry based on photos of water spraying operation.
Facility:	
Source: Pat Hiland	
Address/Location:	
Attachment:	
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Date/Time: 03/18/2011 05:53:45 (ET)	Chuck Casto will attend meeting with Minister of Commerce and CEO of TEPCO.
Position: EST Chronology Officer	US Embassy is contingency planning in the event that they need to evacuate embassy.
Name: Thomas Scarbrough	Japan relief effort characterization changed from rescue to life sustaining.
Record: 1375	Changed from "peace" to "war" strategy.
Facility:	(b)(5)
	French and German Embassies moving out of Tokyo.
	NRC team needs to work with Ambassador on protective action thresholds for US Embassy.
	(b)(5)
	ET indicates French IRSN website discusses prediction of 10 mrem to thyroid based on 24-hour inhalation dose using collected air sample data.
	NRC team receiving suggestions from local Japanese organizations for actions to cool core. NRC team reviews suggestions and sends them to DOE or other groups as appropriate.
	Tokyo Fire Department purchased equipment similar to equipment that NRC team designed. NRC team will check to determine if Tokyo Fire Department will use equipment for Fukushima recovery.
Source: Chuck Casto	

Address/Location:	
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Date/Time: 03/18/2011 05:04:22 (ET)	Provided detailed sketch of pumping system being designed to provide cooling flow for 4 units at site.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	

(b)(5)

Record:	1374
Facility:	
Source:	Pat Hiland

Address/Location:	
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Date/Time:	03/18/2011 04:21:15 (ET)	Telecon with French:
Position:	EST Chronology Officer	French shared their analysis results on projecting site source term to Tokyo. Prediction result consistent with actual data.
Name:	Thomas Scarbrough	
Record:	1373	French offered to provide additional analyses assistance.
Facility:		
Source:	PMT	

Address/Location:	
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Date/Time:	03/18/2011 04:11:53 (ET)	Leigh Trocine (NRC staff member at US-AID):
Position:	EST Chronology Officer	Working on Bechtel pump system.
Name:	Thomas Scarbrough	US-AID needs confirmation from Bill Berger of use of equipment in Japan.
Record:	1372	ET indicated that costs include design, manufacture, transport, and operation of equipment.
Facility:		
Source:	Leigh Trocine	

Address/Location:	
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Date/Time:	03/18/2011 04:02:52 (ET)	Provided update on IAEA discussion:
Position:	EST Chronology Officer	(b)(5) IAEA supports MOD taking control of effort in Japan.
Name:	Thomas Scarbrough	
Record:	1371	
Facility:		
Source:	Marty Virgilio	

Address/Location:	
Attachment:	
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Date/Time:	03/18/2011 03:31:09 (ET)	USAID indicates paperwork problem with funding for pumping system.
		(b)(5)

Position: EST Chronology Officer	<p>RST indicates Bill Berger in Japan needs to send approval to USAID for funding. John Monninger in Japan joins discussion: USAID wants confirmation from MOD and TEPCO that equipment will be used in emergency response. NRC team trying to get confirmation from MOD and TEPCO within a couple of hours. ET agrees to proceed with pump system effort while USAID is obtaining confirmation from MOD/TEPCO. NRC Team Status update (John Monninger): Russian representatives to meet with NRC team at 7 pm Japan time and will link in RST by telephone. No word back from US General regarding telephone call with ET.</p>
Name: Thomas Scarbrough	
Record: 1370	
Facility:	
Source: Pat Hiland	

Address/Location:	
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Date/Time: 03/18/2011 02:33:28 (ET)	<p>DOD has requested US General providing logistics support to participate in telecons with Chairman and ET. ET believes most effective to have calls with US General separate from ET briefings for Chairman. ET will inform Chairman of planned calls with US General. For initial call, ET ready right now to talk to US General. John Monninger will inform DOD.</p>
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1369	
Facility:	
Source: John Monninger (NRC Team)	

Address/Location:	
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Date/Time: 03/18/2011 01:48:03 (ET)	<p>Source term discussion: Each unit evaluated separately. PMT assumed 33% reactor core melt in Unit 2. PMT assumed 50% melt of fuel in Unit 3 SFP. PMT assumed 100% melt of fuel in Unit 4 SFP. RASCAL only calculates up to 48 hours duration. Use multiplier for longer time periods. Considered reasonably worst case assumptions without containment. ET asked that PMT perform another calculation for comparison.</p>
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1368	
Facility:	

(b)(5)

Source: PMT Briefing		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/18/2011 01:34:37 (ET)	Results of RST telecon with NR, Bechtel, and others:	
Position: EST Chronology Officer	Significant progress in effort.	
Name: Thomas Scarbrough	Bechtel will send detailed sketch.	
Record: 1367	Bechtel indicated that about a week needed for completion effort because of difficulty of procuring material from vendors.	
Facility:	GE Hitachi will pickup and assemble pump system on site. Prestage to minimize on-site assembly time.	
	ET directs RST to ask Bechtel to begin calling vendors now with NRC calling if necessary.	
	RST needs updated dose map to provide to GEH for planning on-site work.	
	ET asked about verification of cooling success. RST will follow-up.	
	4 separate rigs with 3 pumps each.	
	500 gpm at 150 psi spec	
Source: Pat Hiland		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/18/2011 01:07:12 (ET)	NHK television shows water cannons spraying water on Unit 3. Steam appears to be rising from Unit 3 as water sprayed on building.	
Position: EST Chronology Officer		
Name: Thomas Scarbrough		
Record: 1366		
Facility:		
Source: News Outlets		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/18/2011 00:36:34 (ET)	ET and Casto discussed IAEA team coming to Japan.	
Position: EST Chronology Officer	NRC team stated that, during a recent meeting, TEPCO focused on its historic safety culture in support of its capability to respond to this event.	
Name: Thomas Scarbrough		

(b)(5)

535/707

Record: 1365	<p>NRC team believes that offsite power effort might cause problems from electrical safety and questionable SFP pump/water availability. Also, power will be difficult to connect because of high radiation levels. NRC team does not consider offsite power effort to be a solution.</p> <p>Casto going to meeting with Ambassador. Might be with IAEA Amano.</p>
Facility:	
Source: Chuck Casto	

Address/Location:	
Attachment:	
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Date/Time: 03/17/2011 23:48:56 (ET)	<p>MOD appears to have taken over operation. Positive development.</p> <p>Changes dynamic of interactions.</p> <p>Green light from DART and AID for equipment from Perth.</p> <p>MOD working to daisy-chain fire trucks to fill SFPs. If works, could help reduce dose to allow setup of hard piping system.</p> <p>MOD starting with Unit 3 SFP for fire trucks. MOD asking for any intel to help them.</p> <p>MOD thinks Unit 1 and 2 SFPs have 100 days and 40 days of water, respectively. Unit 3 SFP dry. MOD thinks Unit 4 SFP has water but uncertain.</p> <p>NRC team cannot tell if SFPs have lost integrity. Do not believe that any SFP has severe structural damage. Team believes that all SFPs can hold water, but might have cracks.</p> <p>MOD staging 8-12 trucks on site now. NRC team alerted MOD to potential energetic reaction when water sprayed on SFPs with significant source term.</p> <p>Casto leaves for meeting.</p> <p>Jim Trapp: No plume coming off Unit 3.</p> <p>Team told MOD that helicopters did not appear effective from photos. Told MOD to recognize that fire truck approach will also have significant inefficiency.</p>
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1364	
Facility:	
Source: Chuck Casto	

Address/Location:	
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Date/Time: 03/17/2011 23:43:06 (ET)	<p>RST will have a telecon at 1 a.m. with Bechtel, NR, INPO, and USAID to discuss status of pumping system. RST will brief ET after call.</p>
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1363	
Facility:	

(b)(5)

Source: Pat Hiland	
Address/Location:	
Attachment:	
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Date/Time: 03/17/2011 23:24:59 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1362	
Facility:	
Source: David Hermann (Naval Reactors)	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/17/2011 22:28:07 (ET)	Need status of equipment from Bechtel. Fred: waiting for Chuck to talk to Dart to get USAID to give authorization to Bechtel to move it. Need to get Chuck success criteria he needs. Need to assign manager to help make that call, given the uncertainties in the SFP information.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1361	
Facility:	
Source: ET	
Address/Location:	
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<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/17/2011 22:15:36 (ET)	Jack: Weve concluded water is right answer, but we need to get people information on whether they are succeeding or not. Jennifer: Need to know loading for SFP. Jack: have strong believe that putting water on is right thing. Industry and govt folks getting together to talk about whether this is the right thing. Jennifer: Need to know how fuel is racked and how old, then we can tell if you get to a zirc fire. Jack: If TEPCO says hot fuel is in a certain configuration, why would we believe that it is in any configuration similar to what it was before. Fred: have to shield fuel in Unit 4 so we can get to 1-3. Jack, dont even know if Unit 4 will hold water.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1360	
Facility:	
Source: Uhle	
Address/Location:	
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Date/Time: 03/17/2011 22:02:58 (ET)	Still need info on zirc fire - what looks like, how stop, how stop if we start one. Need from RES. Need to devise a list of top priorities. Actually ran tests at Sandia and burned up fuel bundle to get research on zirc fires. Unit 3 doesnt look like a zirc fire. Thought is it is water vapor. If we put in a solution that sends out massive plume, need to know before we do it. Have stable environment now, dont want to disrupt. Jack: Dont have stable situation - its slowly degrading. Need to know isotopes, etc, if start a zirc fire. Dont want to put in solution that makes matters worse. Marty: have you seen gaps in NRC program that need to address in near term? Chuck: no, not with B5B. May need to be rethought a little in terms of where we store equipment, etc. Lots of lessons learned on SAMGs. Nothing urgent, though. Also need list of people for relief. Strategy is that each individual team member look at list, and make a couple recommendations.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1359	
Facility:	
Source: Casto	

Address/Location:	
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Date/Time: 03/17/2011 21:26:53 (ET)	Brooke is typing up a matrix of status of SFPs and Rx vessels. We need to update matrix at least once a day. Brief summary table of status of reactors and SFPs. Russians and French are here. Trying to get meeting with them to coordinate our activities. Russians bringing in heavy decon equipment. Not sure what assets French are bringing. Everyone wants to help. Need to give each nation a mission. Have 3 IP people going to that meeting. Will think about whether we need additional resources. Ambassador is calling CEO of TEPCO. He also thought Chairman should call or visit TEPCO Washington DC. Trying to decide if Chairman visit would help. Also suggested that Prime Minister has not flown over site. Prime Minister gave military direction to take lead. Deeply embedded in military hierarchy - good relationship. If doing water for SFPs, need to know if that is helping or hurting. Need to know what zirc fire looks like. Cant try any strategy that doesnt have verifiable success criteria. After helicopter drops, dose didnt change at all. Cannons also ineffective. They picked up 10R in 2 minutes with water cannon. Fatal doses in control room and around facility. TEPCO thinks bringing power lines back in will work. Casto says after explosions, no way equipment would likely work in buildings. Grobe: people here trying to figure out what type of equipment they need to get water into SFPs. Have concluded water is right answer for all conditions. Lots of water. 3 fire tugs will be pulled up to plant site and docked and
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1358	
Facility:	

(b)(5)

abandoned. Maybe put lead on a Humvee to reduce dose during transit times to where equipment would be hooked up. Between 2 and 3 is 450-600R/hr. The embassy is helping a lot. Anything we ask for is here immediately. Solution paths, equipment status tables - need.

Source:	Casto
Address/Location:	
Attachment:	
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Date/Time:	03/17/2011 21:16:02 (ET)	6.9V cable will be installed, including temp distribution panel to 1 and 2 reactors.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1357	
Facility:		
Source:	TEPCO	

Address/Location:	
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Date/Time:	03/17/2011 20:40:56 (ET)	Told IAEA to talk to Pete, and that Casto doesnt really want to take on more staff right now.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1356	
Facility:		
Source:	Sheron	

Address/Location:	
Attachment:	
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Date/Time:	03/17/2011 19:59:15 (ET)	Unit 1, core damage, fuel being cooled, but not completely covered, U2, fuel might be 1/3 uncovered. prim cont some damage. SFP 1 and 2, no indication of problem. U3, core damaged, 1/2 uncovered, prim cont some damage. Greatest concern U3 SFP - visually observed large plume, appears steam plume. Appears spent fuel is boiling water. U4, all fuel in SFP, substantial damage to rx bldg, and damage to rods. Attempted to drop water in by helicopter - not successful. Working on method to spray water in. 100mr - 1R/hr at site boundary. Closer, ranges from 30-300R/hr in immediate vicinity. Aerial monitoring systems - ran back and forth in serpentine pattern. Shows radioactive deposition to
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1355	

(b)(5)

Facility:

west and south of plant. Did not go into area of plume (blowing out to sea), 10-30 mR/hr 1 m above soil, E and S of plant. N about 1 - 0.1 - 0.01 mR/hr. Believe substantial ground deposition from explosions and material becoming airborne from material going inland instead of out to sea. PAGs not exceeded beyond 5 miles. Guidance US provided for evacuation is sufficient and conservative. 2 RASCAL runs attached to press release - based on best info we had at the time. Not what was happening, but of what were 2 sets of reasonable things that could happen. Team closely connected with Japanese govt and MOD. Having phone calls multiple times per day. Holding with variety of experts in U.S. on dealing with SFPs. Have seen TV reports of workers suffering radiation effects.

(b)(5)

Clear evidence on U4 of very significant hydrogen explosion, so must have been very high temp zirc reacting with water. Were areas of debris around U4, which are contributing to very significant dose rates...were bulldozed under soil and dose rates went down substantially...must have been fuel (We are getting

(b)(5)

and have no indication of water in Unit 4.

Source: CA call

Address/Location:

Attachment:

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Date/Time: 03/17/2011 19:48:35 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1354

Facility:

Source: RST

Tinkler, etc, say no real reason not to put water on the pool. NRR with NR is working on white paper. Their thought is to put water on pool. If you can put boron, too, great, but if not probably wont have critical geometry anywhere. Should be water regardless of situation. More upside than downside. Once you start with a zirc fire in progress, will have steam explosion.

Address/Location:

Attachment:

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Date/Time: 03/17/2011 19:29:55 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1353

(b)(5)
(b)(5) After our press release, all of a sudden lots of other countries reaching out to us, and we have been able to cooperate on dose projections.

(b)(5)

Facility:	
Source:	ET

Address/Location:	
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Date/Time:	03/17/2011 17:44:19 (ET)	Bechtel/INPO status call: What they worked on will not get water where we need to get it. But have 3 fire boats motoring to site that will tie up to the site and have high capacity pumps. Will abandon once hooked up. Bechtel will run hose from discharge point from boats. They are laying out series of pumps, but missing how get to top of building without operator. Working to see what is available in Japan to do that.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1352	
Facility:		
Source:	RST	

Address/Location:	
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Date/Time:	03/17/2011 17:43:00 (ET)	NNSA PA group working on setting up call now with Governors. Will keep us plugged in.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1351	
Facility:		
Source:	Summary of DOE call	

Address/Location:	
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Date/Time:	03/17/2011 17:28:54 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1350	
Facility:		
Source:	ET	
		We would be in on the call with Governors for informational purposes only.

Address/Location:	
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Date/Time:	03/17/2011 17:12:17 (ET)	We will continue with CA briefings twice daily, currently scheduled for 0730 and 2000. Should CAs need additional information outside of those briefings, they should contact
Position:	EST Chronology Officer	

(b)(5)

Name: Rebecca Karas	the Chairmans office (Josh Batkin).
Record: 1349	
Facility:	
Source: Grobe	

Address/Location:	
Attachment:	

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Date/Time: 03/17/2011 16:56:29 (ET)	During the 4pm Chairman briefing to the Commissioners, the Chairman requested assistance from the Commissioners to not visit the ops center, which would result in duplicative effort by the ops center staff in updating them. He will keep them informed on whats going on with the emergency response situation.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1348	
Facility:	
Source: Grobe	

Address/Location:	
Attachment:	

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Date/Time: 03/17/2011 16:46:12 (ET)	U3 SFP is more problematic than U4 now. Some steam - boiling off. TEPCO continues to maintain there is water in 4. On ground there may be reason to question status of pools in 1 and 2. Concrete/steel construction. Unit 1 roof fell on SFP - no idea if has water. Unit 2, cant see through roof, so could be just as bad as 4, plus steam coming out of 2 - hole in side of building. Pushing to ensure mitigating strategies viable and likely to be successful. Team preparing for call. NRC will continue to protect US citizens in Japan. DOE will focus on protecting US citizens in US territories and states. Also need to know if sand/soil or water would work. Also asking what tell military when they fly drone over. How do they tell steam release vs. zirc fire. Grobe: should see thermal plume if zirc fire.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1347	
Facility:	
Source: ET	

Address/Location:	
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Date/Time: 03/17/2011 16:42:09 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1346	

((b)(5))

Facility:	
Source: PMT	

Address/Location:	
Attachment:	

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Date/Time: 03/17/2011 16:05:40 (ET)	EDOs office is getting requests from Cmsrs offices (b)(5)
Position: EST Chronology Officer	Should discuss with Chairman.
Name: Rebecca Karas	Question for Chuck on what expertise should next team in Japan have? CBS truck behind building for Commission meeting. Will be some discussion about rad levels, Mark I containment enhancements, integrated CEDE of 1 rem at 230 km (DOE projection) - so what dose are sheltered people getting. Apostolakis - RASCAL run - 0.5 miles shows 1000R. French are also posting video simulation of what they think happened. NEI wants to know basis/assumptions for 50 mile press release. We are going to convey those.
Record: 1345	
Facility:	
Source: ET	

Address/Location:	
Attachment:	

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Date/Time: 03/17/2011 15:58:39 (ET)	Shooting for Mon at 9am for Cmsn meeting.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1344	
Facility:	
Source: Chairman call	

Address/Location:	
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Date/Time: 03/17/2011 15:55:01 (ET)	(b)(5)
Position: EST Chronology Officer	2pm USAID call. 11:00 call - ESF8
Name: Rebecca Karas	call.
Record: 1343	
Facility:	
Source: ET	

(b)(5)

Address/Location:	
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Date/Time:	03/17/2011 15:46:08 (ET)	EMS are at 1000 ft projected to 1m above ground 20mR/hr, less than 4 miles west of reactor. Got request from UK on Tokyo numbers. We are showing background levels. UK has asked we be able to share information. We have agreements with France, Canada and UK to share source terms. Canada came up with similar numbers. France has only done simulated modeling. They plan to post simulated data on website. They are planning to post showing high values for inhalation to infant. ET; (b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1342	
Facility:		
Source:	PMT	

Address/Location:	
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Date/Time:	03/17/2011 15:43:01 (ET)	Had NOAA information - originally coming from Japan to Aleution chain. Now changed, and coming back, turning around and going south. EMS runs - very low.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1341	
Facility:		
Source:	PMT	

Address/Location:	
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Date/Time:	03/17/2011 15:36:04 (ET)	bringing all available resources to bear to monitor situation; (b)(5)
Position:	EST Chronology Officer	(b)(5) Made 50 mile recommendation. Beyond 50 miles, authorized voluntary
Name:	Rebecca Karas	departures of family members. All US citizens in Japan should monitor situation
Record:	1340	carefully. We do not expect harmful levels to reach US. CDC do not recommend people
Facility:		in US take precautionary measures. Nuclear power important here. Our NPPs have
Source:	Pres. Obama	undergone exhaustive studies, but have responsibility to learn from event. Have asked
		NRC to do comprehensive review of safety of NPPs. Working aggressively to support
		ally. S&R teams on ground in Japan. Disaster assistance team working. US military
		working round clock. Deployed some of our leading experts.

Address/Location:	
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(b)(5)

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Date/Time:	03/17/2011 15:32:00 (ET)	Heard on news that NHK website showing mSV is actually microSV. Talked to NARAC and agreed on source term. Would like to see NARAC runs.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1339	
Facility:		
Source:	PMT	

Address/Location:

Attachment:

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Date/Time:	03/17/2011 15:28:30 (ET)	Confirmed external power line to U2.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1338	
Facility:		
Source:	IAEA	

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/17/2011 15:19:30 (ET)	300R/hr field by units. Priorities for PMT: worst-case scenario, coordinate with DOE on modelling and measurements. RST is pushing to determine that strategies are viable and could be successful. Also how to tell if its a zirc fire. Have email says firefighting foam might work for Unit 4.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1337	
Facility:		
Source:	ET turnover	

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/17/2011 15:01:04 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1336	
Facility:		
		ET- that is consistent.

(b)(5)

Source: Chairman	
Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	
Date/Time: 03/17/2011 14:45:40 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1335	
Facility:	
Source: Chairman via Josh via Jim Wiggins	
Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	
Date/Time: 03/17/2011 14:39:49 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1334	
Facility:	
Source: Charlie	
Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	
Date/Time: 03/17/2011 14:37:50 (ET)	Update: Mike Dudek and USAID.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1333	
Facility:	
Source:	
Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	
Date/Time: 03/17/2011 14:00:48 (ET)	(b)(5) move as fast as possible; MODs plans are based on
Position: EST Chronology Officer	what we advise them, so we want supplies in place, in-country for as soon as they
(b)(5)	

Name:	Jessica Kratchman	decide to implement.
Record:	1332	
Facility:		<p>DRT needs to pick up tab for equipment shipping (Bill Burger- head of DRT).</p> <p>RST- Bechtel is almost ready- all equipment has been located/ ready to deploy- however, US AID needs the nod for the team leader. This needs to happen.</p> <p>Obama told PM "we are ready". So when we can move, we need to. I.e. get equipment to Japan as soon as possible (b)(5)</p>
		(b)(5)
		(b)(5)
		<p>Chuck wants to make sure this is an inter agency effort. All the "best minds" are included-- this should be an American nuclear effort, not just an NRC effort.</p>
		(b)(5)
		<p>Japanese news is finally reporting that spent fuel pool has no water.</p> <p>(b)(5)</p> <p>(b)(5)</p>
Source:	Chuck Casto	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information</i>		

(b)(5)

Date/Time:	03/17/2011 13:55:36 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1331	(b)(5)
Facility:		
Source:	RST update	

Address/Location:	
Attachment:	

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Date/Time:	03/17/2011 13:49:49 (ET)	IAEA wants an NRC BWR technical expert and HP to go to Vienna.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1330	
Facility:		
Source:		

Address/Location:	
Attachment:	

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Date/Time:	03/17/2011 13:42:11 (ET)	Liaison team tasked to coordinate dose projections assumptions with NEI.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1329	
Facility:		
Source:		

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/17/2011 13:28:41 (ET)	Commissioners main questions/ concerns:
Position:	EST Chronology Officer	(b)(5)
Name:	Jessica Kratchman	*Interested in how water is being restored.
Record:	1328	*Site boundary radiation levels.
Facility:		*Other agency employees in our Op Center.
	Commissioner	(b)(5)

(b)(5)

Source: Ostendorf

Address/Location:

Attachment:

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Date/Time: 03/17/2011 13:18:25 (ET) Commissioner Ostendorf meets for a briefing.

Position: EST Chronology Officer

Name: Jessica Kratchman

Record: 1327

Facility:

Source:

Address/Location:

Attachment:

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Date/Time: 03/17/2011 13:07:38 (ET) (b)(5)

Position: EST Chronology Officer

Name: Jessica Kratchman

Record: 1326

Facility:

Source:

Address/Location:

Attachment:

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Date/Time: 03/17/2011 12:54:29 (ET) DOE tasked to create a message for governors offices.

Position: EST Chronology Officer

Name: Jessica Kratchman (b)(5)

Record: 1325

Facility: (b)(5)

Under NRF DOE is responsible for dose projection effects reaching US soil.

((b)(5))

Source: Mike Webber

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 03/17/2011 12:31:01 (ET) Would like to be included on distribution list. EmbassyNuclearEnergyTeam@nrc.gov

Position: EST Chronology Officer

Name: Jessica Kratchman

Record: 1324

Facility:

Source: Chuck

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 03/17/2011 12:24:18 (ET) Requested two research-type items:

Position: EST Chronology Officer 1. Look over/ provide advice on b.5.b. air oxidation research in BWRs. Anything usable?

Name: Jessica Kratchman 2. Wants some research about zirc fires. I.e. how to tell the difference between steam

Record: 1323 versus a zirc fire; if they put water on a zirc fire will it make matters worse?

Facility:

Source: Chuck Casto

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 03/17/2011 12:06:44 (ET) Ministry of Defense (MOD) is receptive to getting US help; (b)(5)

Position: EST Chronology Officer

Name: Jessica Kratchman SFP1 is having cooling issues (b)(5) dont know rad

Record: 1322 concentration.

Unit 4- SFP structurally still there.

(b)(5)

(b)(5)

Facility:

((b)(5))

(b)(5)

NRC in-country have a good relationship with MOD;

(b)(5)

(b)(5)

(b)(5)

Source: Chuck Casto

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/17/2011 11:42:11 (ET)	UK wants source term data to compare to their modeling results.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1321	
Facility:		
Source:		

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/17/2011 11:33:40 (ET)	Before sending recommendations to Japan, they will first be sent to US industry reps for review.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	Status of Plan 1: Equipment and logistics are included; all equipment are available in Perth, Australia; can be airlifted via US or Australian military; embassy will coordinate receipt; training will need to be provided to Japanese; needs to be like a kit; questions about who has robotic equipment are still relevant.
Record:	1320	
Facility:		
Source:	RST	Have to consider who can train on equipment.
		Other strategies: fire boats; concrete booms can be pumped with water; b5b spray pumpers available if needed.

Address/Location:

(b)(5)

Attachment:

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Date/Time: 03/17/2011 11:24:10 (ET)

Position: EST Chronology Officer

Name: Jessica Kratchman

Record: 1319

Facility:

Update on mitigative strategies- there are 4 plans; they are being refined based on equipment needs/ logistics. Chuck received an initial briefing; we are also working with industry for solutions.

(b)(5)

Source: Chairman

Address/Location:

Attachment:

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Date/Time: 03/17/2011 11:22:36 (ET)

Position: EST Chronology Officer

Name: Jessica Kratchman

Record: 1318

Facility:

Having difficulty getting trucks on site.

Source: RST

Address/Location:

Attachment:

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Date/Time: 03/17/2011 11:22:06 (ET)

Position: EST Chronology Officer

Name: Jessica Kratchman

Record: 1317

Facility:

Runs in press release are acceptable.

Source: Cyndi

Address/Location:

Attachment:

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Date/Time: 03/17/2011 11:19:19 (ET)

Position: EST Chronology Officer

Name: Jessica Kratchman

(b)(5)

(b)(5)

(b)(5)

Record:	1316	(b)(5)
Facility:		
Source:	Charlie	
Address/Location:		
Attachment:		
This information is Official Use Only - Sensitive Internal Information.		

Date/Time:	03/17/2011 11:16:12 (ET)	Department of Justice is establishing a group of lawyers, NRC needs to find a representative for this group.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1315	
Facility:		HHS- came out with a fact sheet on health risks from radiation in Japan
		DHS using passive detectors at airports
		Jet in TX- 267 microR/hr; Packages received in NY, CA that had elevated levels, but it is unclear if this is just normal background.
Source:		

Address/Location:		
Attachment:		
This information is Official Use Only - Sensitive Internal Information.		

Date/Time:	03/17/2011 11:12:00 (ET)	Suggestion- NR, INPO, DOE, NRC meet once a day to discuss/ coordinate offers of assistance.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1314	
Facility:		Chairman wants OCA to organize a consistent congressional outreach.
		Confirmation of boron shipment from Diablo Canyon will arrive at 17 0900 March.
Source:	Chairman	

Address/Location:		
Attachment:		
This information is Official Use Only - Sensitive Internal Information.		

Date/Time:	03/17/2011 10:46:50 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	

(b)(5)

Record: 1313	Monitoring of people who flew back from Japan; no significant dose.
	(b)(5)
	(b)(5)
Facility:	Weather forecast has not changed from what was predicted yesterday.
	(b)(5)
	(b)(5)

Source: Mike Weber- briefing	
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Address/Location:	
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Attachment:	
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Date/Time: 03/17/2011 10:41:31 (ET)	Our understanding is that direction we given by NRC is what the Japanese military is going to do. NRC is putting themselves in a position of responsibility. Wants to be clear that any plans we provide should be considered advisory, it is up to the Japanese government to make a final decision.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1312	
Facility:	
Source: Op Center	

Address/Location:	
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Attachment:	
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Date/Time: 03/17/2011 09:52:26 (ET)	There are four plans on how to move water; Japan wants a a priority list, but RST is concerned providing this because we do not have complete information.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1311	
Facility:	

(b)(5)

Source: Laura Dudes-RST	
Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	
Date/Time: 03/17/2011 09:32:57 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1310	
Facility:	
Source:	
Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	
Date/Time: 03/17/2011 09:29:37 (ET)	Confirmation from NR representatative in NRC Op Center, that pumps have been delivered yesterday are been used. This has not been confirmed by the NRC.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1309	
Facility:	
Source: Laura Dudes	
Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	
Date/Time: 03/17/2011 09:24:20 (ET)	The US Embassy needs a general path forward.
Position: EST Chronology Officer	
Name: Jessica Kratchman	(b)(5)
Record: 1308	
Facility:	
Source: Tim kolb	
Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	
Date/Time: 03/17/2011 08:55:47 (ET)	There are reports that power can be restored Units 3,5,6 today, and Units 1,2,4 by tomorrow. Where did we get this information?
Position: EST Chronology Officer	
Name: Jessica Kratchman	
(b)(5)	

Record: 1307	Answer: Laura spoke with Kolb at Embassy, he said they expect to get one power source on in Unit 2 and expect a possible second source tomorrow. This is not confirmed. The source is TEPCO. There is switchgear in the control building (basement) that is reportedly intact, but lower level may have been flooded.
Facility:	Safety related switchgear may be OK. Uncertain.
	(b)(5)

Source: Josh	
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Address/Location:	
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Attachment:	
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~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 03/17/2011 08:47:13 (ET)	PMT has received word to stop MAXX runs.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1306	
Facility:	
Source:	

Address/Location:	
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Attachment:	
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Date/Time: 03/17/2011 08:22:03 (ET)	Request to have RES stop running MAXX codes.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1305	
Facility:	
Source:	

Address/Location:	
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Attachment:	
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Date/Time: 03/17/2011 08:12:22 (ET)	Commissioner Ostendorf Office- wants more information associated with the dose projections from the press release.
Position: EST Chronology Officer	

([redacted])

Name:	Jessica Kratchman	(b)(5)
Record:	1304	
Facility:		
Source:	CA Briefing	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/17/2011 08:03:29 (ET)	Unit 3 SFP- possible zirc fire -helicopters dropping water- no help. Unit 1,2,3 Reaction and containment- same condition Seawater is being injected.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1303	
Facility:		
Source:	CA Briefing	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/17/2011 07:30:49 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	Japanese are allegedly looking working with water cannons, but this is not confirmed. Radiation is 150 millirem- 1 rem at the Fence. Units 1,2,3- Focus on SFP Zirc rxn- no significant signatures on Units 1, 2.
Record:	1302	
Facility:		
Source:		

([redacted])

Sea water still being injected.
 Japanese trying to bring AC power back to unit but NRC not sure about how they are going to achieve this.

NRC recommends sand for SFPs with no geometry; (b)(5)

(b)(5)

Facility: Unit 4- debate if SFP is dry.
 -Chuck could not see any water in the photos that the Japanese are basing their position on.
 -There is no conclusive information that there is water in there and the heat signiture is such that we dont think water is there.
 Unit 3- vapor, but cannot tell if it is steam or smoke.

Lots of US citizens are interested in the flights back to the US.
 Situation is reasonable calm.
 No change in the 50 mi recommendation.

(b)(5)

(b)(5)

Source: Chairman briefing

Address/Location:

Attachment:

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Date/Time: 03/17/2011 07:21:53 (ET) The Focus in on Units 3-4 SFP.

Position: EST Chronology Officer We recieved drone infrared imagry; shows hot spots.

Name: Jessica Kratchman Indication that SFP 5,6 temperature drop.

Record: 1301 Focus should be on Unit 3, more so than Unit 4.

Facility: We do not yet have some of the data points that the Chairman requested; expected by the end of the day.
 RES and Sandia are working on getting 1000+ mile projections.

Result of the Presidents call with Japans PM: there is more engagement with the Japanese military.

Source: Chairman briefing

(b)(5)

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	

Date/Time:	03/17/2011 05:51:02 (ET)	Press release yesterday for evacuation up to 50 miles attached a detailed RASCAL analysis. Discussed multiple assumptions for the analysis.
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	
Record:	1300	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	

Date/Time:	03/17/2011 05:45:10 (ET)	Liaison Team has arranged interaction between John Monninger of NRC team with contacts in Japan for logistic issues.
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	
Record:	1299	
Facility:		
Source:	Tom Blount	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	

Date/Time:	03/17/2011 05:31:21 (ET)	<p>ET provided summary of Fukushima status to Brian McDermott: No significant changes in status. TEPCO continuing efforts to restore offsite power. TEPCO continues to believe water in Unit 4 SFP. NRC team not sure about water in SFP. ET supporting NRC team in Japan. RST working on developing Bechtel pumping system for site. Japan continues to believe that helicopter water drops and water cannon are preferred to establishing pump systems on site in light of potential personnel exposure. Drone flyover might provide site map for dose.</p>
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	
Record:	1298	
Facility:		
Source:	ET brief to Brian McDermott	

Address/Location:	
Attachment:	

(b)(5)

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Date/Time: 03/17/2011 05:24:50 (ET)
Position: EST Chronology Officer
Name: Thomas Scarbrough
Record: 1297
Facility:
Source: Chris Miller

Chris reported that he had sent an e-mail to INPO indicating that the NRC team in Japan would appreciate INPO providing a severe accident expert to participate on the team.

Address/Location:

Attachment:

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Date/Time: 03/17/2011 03:35:22 (ET)
Position: EST Chronology Officer
Name: Thomas Scarbrough
Record: 1296
Facility:
Source: Chuck Casto

(b)(5)

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 03/17/2011 02:50:03 (ET)
Position: EST Chronology Officer
Name: Thomas Scarbrough
Record: 1293

ET has list of needs from NRC team in Japan. Tom Blount will e-mail list of needs to INPO.

Marty indicated that NRC team in Japan would appreciate embedded INPO assistance in Japan. ET will ask Chuck Casto to provide skill-set list to send to INPO.

Facility:

Marty said that Jim Ellis of INPO offered to help to obtain better access. Marty asked that INPO to check to see if Jim Ellis was successful with access effort.

EST Chronology Officer - Thomas Scarbrough at 03:19:28 on 3/17/2011

Source: INPO (Fred Raid)

Address/Location:

Attachment:

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(b)(5)

Date/Time: 03/17/2011 03:09:29 (ET)	Chuck reported that DOE has offered to supplement NRC team in Japan.
Position: EST Chronology Officer	Chuck asked that Marty interact with DOE to discuss possible later team support.
Name: Thomas Scarbrough	Chuck considers that current DOE personnel in Japan providing significant assistance to NRC team.
Record: 1294	
Facility:	Chuck believes that team is still activating so additional DOE support might be helpful later during response. <div style="border: 1px solid black; width: 400px; height: 20px; margin: 5px auto;">(b)(5)</div> Flyover dose data should be available within an hour.
Source: Chuck Casto	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/17/2011 02:50:03 (ET)	ET has list of needs from NRC team in Japan. Tom Blount will e-mail list of needs to INPO.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1295	Marty indicated that NRC team in Japan would appreciate embedded INPO assistance in Japan. ET will ask Chuck Casto to provide skill-set list to send to INPO.
Facility:	Marty said that Jim Ellis of INPO offered to help to obtain better access. Marty asked that INPO to check to see if Jim Ellis was successful with access effort.
Source: INPO	

Address/Location:	
Attachment:	

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Date/Time: 03/17/2011 01:13:24 (ET)	TEPCO remains focused on helicopter water drops and water cannons. Water drops do not seem effective and dose rates not reduced.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	Team told 5 pumps delivered to site with piping and tanks.
Record: 1292	Lethal dose rates outside unit buildings.
Facility:	Trying to get dose rates down so that workers can assemble pumping systems. TEPCO priority is Unit 3. TEPCO believes water in Unit 4 SFP.
	<div style="border: 1px solid black; width: 500px; height: 20px; margin: 5px auto;">(b)(5)</div>

(

(b)(5)

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Facility:

Unit 4 SFP stopped steaming so might be dry.

24 hours ago Japan took images from helicopter that Japan believed that showed water. NRC team could not see water.

NRC team told Unit 2 primary containment intact. Some team members believe loud boom indicated possible loss of primary containment. Team not sure if status of Unit 2 primary containment matters at this point. NISA says pressure decreased in chamber following loud noise. Could say containment integrity uncertain.

NISA reports Unit 6 DG providing power to Units 5 and 6. Japan working on providing offsite power to site. NRC team says effort not interfering with water supply effort.

Chuck believes we should turn over logistics to US forces.

Mike Case indicated his group working on Bechtel pump supply and will talk separately with NRC team in Japan.

Chuck not sure if embedding in EOC necessary at this point based on team now directly interacting with Japan govt.

NRC team believes spent fuel pellets scattered around plant site from building explosion. 20 rem/hour dose rates might suggest scattered fuel. Dose rates significantly reduced after bulldozer work to clear debris.

Japan resources strained because of tsunami and earthquake recovery.

(b)(5)

Chuck believes nuclear situation might be at its worst case at this time based on severe damage to reactors and buildings.

Numerous flights underway to evacuate embassy personnel and US citizens.

Chuck believes Japan working hard under difficult circumstances.

Chuck requests IR image of Mark I BWR during outage for comparison.

Dose report from this morning indicated 30 to 40 rem/hr between buildings.

Japan requested NRC team for help with site monitoring to allow personnel to work onsite.

Japan requests drones, robotics, and project management.

Liaison Team will work with NRC team in Japan to help with US forces on logistics.

Chuck said list of needs sent to WHO last night. Chuck will update list.

Chuck indicated Ambassador OK with evacuation of embassy dependents and US citizens based on interactions with embassy personnel.

(b)(5)

Source:	Chuck Casto and NRC Team
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Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/17/2011 00:27:49 (ET)	Bill provided status of Bechtel portable supportable pump system (4 pumps) for supplying sea water to SFPs. Logistics for delivery of pumps, fuel oil, and boron (boron supply at Diablo Canyon) being worked. Naval Reactors has provided report on sand vs. water. Eva Brown indicated that RST has recommended sand to NRC team for dry SFP. She stated NUREG-1353 recommends sand for this type of problem. RST continuing efforts.
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	
Record:	1291	
Facility:		
Source:	Bill Ruland	

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/17/2011 00:26:14 (ET)	2354:
Position:	EST Chronology Officer	Liaison Team reports that their Japanese interpreter has seen reports that TEPCO working on restoring offsite power to site
Name:	Thomas Scarbrough	
Record:	1290	
Facility:		
Source:	Liaison Team	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 23:59:04 (ET)	23:34 Telecon:
Position:	EST Chronology Officer	Chuck met with Japan Minister of Defense and Joint Chiefs. (b)(5) (b)(5) Japan govt will become involved to provide assistance. Chuck will ask DOD to help with logistics in providing pumps and other equipment. Chuck concerned that current TEPCO response focused on dropping water from helicopters. (b)(5)
Name:	Thomas Scarbrough	
Record:	1289	
Facility:		

(b)(5)

Facility:	Chuck asked Japan to fly drones to obtain better information on building integrity and water. Japan said drones are unavailable. (b)(5) NRC team will meet to discuss need for additional team support. Chuck will meet with Ambassador.
Source:	Chuck Casto

Address/Location:	
Attachment:	
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Date/Time:	03/16/2011 23:55:16 (ET)	Telecon at 23:31
Position:	EST Chronology Officer	(b)(5)
Name:	Thomas Scarbrough	Thursday morning.
Record:	1288	Josh relayed appreciation to ET for timely information
Facility:		
Source:	Josh (Chairmans assistant)	

Address/Location:	
Attachment:	
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Date/Time:	03/16/2011 22:32:16 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1287	
Facility:		

(b)(5)

authorities. Reporter: US embassy in Japan has issued evacuation notice to evacuate 80km - what are thoughts? Official: if there are circumstances that require such evacuation, including anything besides nuclear, it is to be understood that us govt has taken a more conservative approach to protect its nationals. As for radius, we have conducted monitoring nad have continued to gather data which will later be disclosed by science and tech agency. We conduct and issue advisories as appropriate. reporter: ines scale official: understand based on parameters that these institutions and countries have that is their assessment, but we are interested in protecting our people.

Source: JP cab. secy

Address/Location:

Attachment:

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Date/Time: 03/16/2011 22:25:32 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1286

Facility:

TV: Conducted helicopter operations dumping water. Water cannon trucks will inject water from ground. Yesterday am, didnt conduct because rad levels too high, however ground could not be done because of high rad on ground. Now cannot delay so have no choice. #3, decided early in morning that plan would be executed. Proliferation of rad would be funneled in SFP and would help cool down fuel. We can verify if it is successful by the taskforce. Those are our expectations. More aerial operatoins will be considered as necessary. Water sprayed into #3.

Source: Japanese Defense Minister

Address/Location:

Attachment:

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Date/Time: 03/16/2011 22:13:20 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1285

Facility:

Heard Admiral wants clarity in evacuation. Discussion on clarity.

Source: Naval Reactors/Boroughs

Address/Location:

Attachment:

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(b)(5)

Date/Time:	03/16/2011 22:08:30 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1284	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 22:04:38 (ET)	Top priority trying to restore power with power lines from outside. Also cool down #3 and #4 SFPs. With power, can restore system using seawater. But have to install temporary pumps to resume supply of water. Pressure rising and water level lowering in #5. Have to secure the conditions of pools for #5 and 6.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1283	
Facility:		
Source:	Japanese official via TV	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 21:55:00 (ET)	(b)(5)	Vonna: just heard from Casto that he is very convinced there is no water in #4. Chairman: Jennifer Uhle said RES was going to run max worst case. Give call at home with worst case results.
Position:	EST Chronology Officer		
Name:	Rebecca Karas		
Record:	1282		
Facility:			
Source:	Chairman		

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 21:39:50 (ET)	Military has pumps on way. DOD moving equipment.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1281	
Facility:		
Source:	Casto	

(b)(5)

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 21:38:11 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1280	
Facility:		
Source:	Brenner/OPA	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 21:29:26 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1279	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 21:27:01 (ET)	Still trying to get hard piping, etc, to identify pumping system. Pushing hard to get equipment out there. Casto: problems with permits/licensing (b)(5) Bruce: we may need Berger there to sign procurement for Bechtel.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1278	
Facility:		
Source:	Casto	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 21:08:03 (ET)	Getting busy signals going into ops center. We viewed the video. It is not very clear. Helicopter in field. Tried to scan all 4 units. They claim reflection of water. Dont know if steel or water. But we do know it is steaming. That was at 5pm yesterday Japan time. Unit 3 is steaming at much greater rate. They are continuing to try helicopter drops (b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	

Record: 1277

which are highly ineffective. They are trying to shoot water with crowd control tanks. Believe also ineffective. No way to have effective cooling that way. Either way this is temporary fix. Cant drop enough efficiently into SFP. Still need to work on quasi-permanent fix of hard-piped system. Need to let Bill and Chm know that yesterday thought that with explosion, structural damage, we really dont know if there is integrity in SFP. Know as of 5pm yesterday, there is some water, because it is steaming (b)(5)

(b)(5)

Kicks off authorized departure, etc. (b)(5)

Ron/DOE was standing with us - just a split-second shot as helicopter flying by. Couldnt tell a thing. Bill: do we know Unit 4 SFP. Chuck: we dont even know it is SFP. Govt says TEPCO told them it is SFP. We cant tell anything. U3 steaming even louder. Chairman: what is source of believe of no water? Casto: govt showed us snapshots after explosion, and it looked like pool had lost structural integrity. Now they say pool is not associated with outer wall, so could be intact. Video was 14 hours ago. Chairman: have any view of change in condition of pool. Casto: 14 hours ago, had some water in it, today cant tell you. Their recovery methods are drop water from helicopter, and bring in crowd control tanks (b)(5)

Were not even sure pump can pump to top of building. (b)(5)

Marty: (b)(5)

Recording dose rates in rem/hr, so at minimum significant amount of fuel exposed. Latest is 30 rem between 3 and 4.

Source: Casto

Address/Location:

Attachment:

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Date/Time: 03/16/2011 21:01:28 (ET) **USAID - they are trying to make sure we get everything in the right place to pay Bechtel.**

Position: EST Chronology Officer **They have asked us to put together an extremely simplified procurement plan with just companies and simple list of what we need. Then Bill Burger onsite will approve it**

Name: Rebecca Karas

Record: 1276 **(USAID team). (b)(5)**

((b)(5))

Facility: (b)(5) USAID would pick up tab. Need someone to draft procurement plan. 250 engr hours, 22 seawater strainers, etc. Bill: have them develop procurement plan. They can make proposal, and we can put cover letter on it. Have them do RFP list, but we should not distract them: (b)(5)
 We should have our contracts person interface with USAID and Casto and the Bechtel person. MJ: Just get the list and get it over there in simplified form.

Source: RST

Address/Location:

Attachment:

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Date/Time: 03/16/2011 20:53:40 (ET) Shows news story of helicopter dropping water on one of the reactor buildings.
 Position: EST Chronology Officer
 Name: Rebecca Karas
 Record: 1275
 Facility:
 Source: NHK World TV

Address/Location:

Attachment:

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Date/Time: 03/16/2011 20:43:35 (ET) Bill: very likely if they are showing video it is right that pool is wet on U4. RST: who is (b)(5) should call USAID.
 Position: EST Chronology Officer
 Name: Rebecca Karas
 Record: 1274
 Facility:
 Source: ET

Address/Location:

Attachment:

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Date/Time: 03/16/2011 20:28:31 (ET) People are in conte - they are planning to show us video of U4 SFP. We believe they will show us video that it has water and has had water. Believe status is 1-2 are boiling. U3 Zr-water reaction. Meeting with NISA this morning. We are going to ask to be embedded in EOC. We dont know where it is. We will ask though. We will meet with TEPCO to talk about SFP cooling system. We want to tie in RST. Bruce: (b)(5)
 Position: EST Chronology Officer
 Name: Rebecca Karas
 Record: 1273
 Facility:
 Source: (b)(5) John: we would follow NRC guidelines for emergency

(b)(5)

Facility: response. The 25 rem limit? We have dosimetry and KI. Bruce (b)(5)

(b)(5) Bill: you would preclude us from assembling and operating equipment. John: absent dose issue, there are explosions out there too. Bill: raise the issue with tepco on their need to assemble and operate the equipment. John: we will raise it. They havent asked for equipment or personnel support yet. Bill: we had report from air base - Ocota - soldiers from defense forces at 0600 picked up 5 pumps and are driving them 196 miles. John: Difficulty is if they show up at plant, may not accept it. Have not asked for help yet. Turned down prior help by turning away truck. Bill: military forces of Japan are bringin it, so they have accepted it. Major Mattuseck said personnel from defense forces of japan picked up 5 pumps. Equipment is incomplete. We are looking for where they are taking it - staging area - so Bechtel has cartoon drawing and is engineering it. Also in parallel, Jim Trapp is trying to find out what else Air Base can supply. Monninger: last night they asked for personnel - they said knobs, gauges all in English. But that should be pretty basic. Bill: we will assemble it in staging area. We could have Americans assemble it with Japanese who will assemble at site. Japanese can write their own procedure. They can reassemble and operate it. John: we will find out staging area. Other issue is high rad field. Bill (b)(5)

(b)(5) they have to have it on truck and trailer, just unhook and get out (b)(5)

(b)(5) Some areas 20R/hr. Bill: we will make sure Bechtel understands this is design requirement. John: if go with hard pipe, really whacked on dose. Bill: engineers at Bechtel are working problem.

Source: Monninger

Address/Location:

Attachment:

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Date/Time:	03/16/2011 20:25:42 (ET)	in 40 minutes we will have call with Monningers team to listen in. Bechtel has no contract - we just told them to work it (b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1272	
Facility:		
Source:	Bill	

Address/Location:

Attachment:

(b)(5)

Date/Time: 03/16/2011 20:01:06 (ET)
Position: EST Chronology Officer
Name: Rebecca Karas
Record: 1271

Bruce: Unit 1 still has seawater injected, and stable cooling, functional cont. SFP level unknown, 2, seawater injecting, secondary cont hole cut, primary intact, u3, seawater injected, primary functional, sfp level maybe drained, some steam, u4 sfp likely dry with structural integrity in doubt, u5 sfp heating up, ac from DG. same for U6. Wind direction from west, and expected to continue until weekend, then front may change it. people continue to provide support. been in contact with team. priority is to continue to keep info flowing. getting better info at this time. would like to get closer to site. mindful of hazards. (b)(5)

have maybe 100 people now. Mike Franovich: U2 - containment intact - but thought heard last night tepco verified torus breach. nisa reported. wondering about unit 2 status - have we verified? Bruce, no - well get back to you. Priority shifted to getting equipment, not plant status. U3 we mention doses at site post, 60mR/hr - still current? that we can verify, yes. (b)(5) U5: note says we believe reactor defueled. Another report says not defueled. nisa report says water dropped 1/2 meter. RST is verifying. Bill: key is to supply pumping system. Have to finalize list and get suppliers to collect equipment, do engineering and pre-assembly, then move to site, assemble and operate. know some equip - 5 pumps left air base about 6:00, 196 miles to Fukushima, defense forces are delivering, and it is just the pumps. Have been in contact with NR helping coordinate. Trying to locate truck. Bechtel has taken drawing, taken equip list and is doing engineering and procurement work to get it to site. Monninger says Japanese have asked for installers and operators (b)(5)

Would argue need to work out in near term. Need help to identify people to talk to to resolve. Trish, USPS and CBP - gave information, have identified packages in Hawaii, SF and JFK coming from Japan with contamination. Gave them state information. (b)(5)

so we resent - hoping to get info soon. Aerial flyover by doe at 8:00 tonight. Waiting to hear from NARAC. Thaggard: getting lots of calls on press release. Trish: we have Q&A; As. Marshall: (b)(5)

Franovich: instead of water using

(b)(5)

sand? is that still part of approach? Bill: still under discussion, pros and cons of both. Bill: the onsite team is recommending water. They are still in Tokyo. Mike: Japanese govt increased worker dose limit yesterday. (b)(5) Are we working to 25 rem limitation? Bill: NRC staff has not approached. (b)(5)

(b)(5) they have talked to tepco. Mike: (b)(5)

(b)(5)
Trish: got NARAC info and are analyzing now. Asked them to do run beyond 50 miles, and asked them to do West Coast projections. Bruce: Casto says power would not help, need to get water in. Mike: heard there had been 5 lethal doses. Bruce: we dont have any info on fatalities. Would like to have this call at 7:30 tomorrow, plus 8pm tomorrow.

Source: TA brief

Address/Location:

Attachment:

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Date/Time: 03/16/2011 19:53:56 (ET) Bill: Dont worry too much about Commission meeting on Monday. 4 OD communication

Position: EST Chronology Officer team, probably dont need. (b)(5)

Name: Rebecca Karas (b)(5) We need a bunch of people to talk to subcommittees and staffers on the hill.

Record: 1270 The 4 ODs are home studying background info. Probably Friday not tomorrow we will

Facility: need them. Pete Lyons sent email about 1pm meeting at DOE tomorrow - bunch of people to talk about possible support. Approaches to solve problem - looking for high level NRC people to go. Bill may go if Chairman doesnt need him - otherwise need someone in standby, maybe Sheron or Uhle.

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/16/2011 19:49:57 (ET) (b)(5)

Position: EST Chronology Officer Bill: they were delivered 2 pumps and

Name: Rebecca Karas they turned them away. There was US fire truck that they would not let drive on the

Record: 1269 streets because it didnt have right certification. Marty: (b)(5)

(b)(5)

(b)(5)

Facility:	(b)(5)
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Source:	ET
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Address/Location:	
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Attachment:	
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Date/Time:	03/16/2011 19:42:42 (ET)	<p>Chairman: U1-3 seawater injection? yes U3 SFP has crack and possible loss of inventory? yes. U4 SFP has no water and possible zirc fire? We feel no water and structural integrity in question. Do not know about zirc fire. Any change to those 4 talking points? Bill: #4 valid, but previously removed. We still believe reasonable basis for #4. Bill: Casto says ops center #1 priority should be facilitating delivery of equipment. (b)(5) Scott: NR received request for hoses and DD pumps. They processed request and delivered to Ocon, as of 6 hours ago, TEPCO picked it up on flatbed and drove away. Dont know when or if material arrived. No govt officials escorting. But equipment did not include suction strainers, nozzles, etc. working with Bechtel who has engineered solution. Last bit still working on facilitating. Chairman: interagency coordination issue. Will still have people to monitor plant status, but management team has to focus on equipment. Chairman agrees.</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1268	
Facility:		

Source:	Chairman on bridge
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Address/Location:	
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Date/Time:	03/16/2011 19:41:05 (ET)	<p>Scott: made contact with DOD. They delivered equipment to AFB as of 5-6 hours ago. TEPCO picked it up, but we dont know where it is. Was loaded onto flatbed. Those were just pumps and hoses. Still need strainers.</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1267	
Facility:		

Source:	ET
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Address/Location:	
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Date/Time:		Casto and others will be within 50 miles, but he believes they will be OK. We need to (b)(5)
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Date/Time:	03/16/2011 19:35:11 (ET)	know where it is to be sure he will be OK.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1266	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
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Date/Time:	03/16/2011 19:23:11 (ET)	60 Minutes wants to interview Casto. OPA needs to work that. Chuck cannot be interviewed. He is busy.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1265	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
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Date/Time:	03/16/2011 18:55:02 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1262	
Facility:		(b)(5)
Source:	Weber email	

4th item should be lined out.
EST Chronology Officer - Rebecca Karas at 19:22:47 on 3/16/2011

Address/Location:	
Attachment:	
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Date/Time:		Q: how was 50 miles determined? Marty: Dose projections based on 4 SFP and 1
	(b)(5)	

Date/Time:	03/16/2011 19:04:56 (ET)	reactor melt with containment failure for typical US BWR. Monninger heard no integrity in 4 this morning.
Position:	EST Chronology Officer	(b)(5)
Name:	Rebecca Karas	
Record:	1263	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 18:55:02 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1264	
Facility:		(b)(5)
Source:	Weber email	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 18:52:07 (ET)	Bill: what need to know for this evening. Bruce: water still going into vessel, no more explosions.
Position:	EST Chronology Officer	(b)(5) they are adamant about us being able to get equipment into Japan so it can get to site when accepted and ready to go (Admiral
Name:	Rebecca Karas	
Record:	1261	(b)(6)
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 18:46:07 (ET)	Smoke going N to S from photos. Bill: lots of press in rotunda
Position:	EST Chronology Officer	(b)(5)
Name:	Rebecca Karas	

(b)(5)

Record:	1260
Facility:	
Source:	ET

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 18:44:48 (ET)	(b)(5)	Q&A updated	(b)(5)
Position:	EST Chronology Officer			
Name:	Rebecca Karas			
Record:	1259			
Facility:				
Source:	(b)(5) State, DOD, etc			

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 18:37:44 (ET)	Want to re-emphasize need for equipment.	(b)(5)
Position:	EST Chronology Officer	(b)(5)	Ruland: have
Name:	Rebecca Karas	Rechtel online. hooking them up with USAID. Casto:	(b)(5)
Record:	1258	(b)(5)	
Facility:			
Source:	Casto		

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 18:20:04 (ET)	Liaison Team: trying to set up call with DOE and team to coordinate flyover. wanted to do before 9:00 japan time when flight would take off. Going to try and figure out what going to do about Daini. Newspaper says 60mR at gate of Daiichi. Flew over and got 25 rem, but we dont know how high they flew.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1257	
		(b)(5)

(b)(5)

Facility:

(b)(5)

We can mock up equipment at American installation, and then let the Japanese install it. John: will we have info in next hour or less on what equipment is available? ET: dont know. Casto: get with DOD or whoever. INPO offered resources also. Told them to get equipment to nearest US facility possible - there is AFB on island of Japan. Someone needs to make sure everything fits together perfectly. ET: we have Oconee who has special spray nozzle to spray down SFP. John: people who know details have to get together. Need 2-3 miles of piping, 8 diesel-driven pumps. Nozzle wont do good if dont have pipe. Everything has to be transportable on truck. Cant have to play with it due to dose rates. Trish: Are we talking about doses? Casto: DOE is doing flyovers from Tokyo to site. When they get info, they have to download from laptop and get it to us. Areva is flying over boron, etc. Jack: we will collect data and get it to you when we hear something.

Source: Casto/team

Address/Location:

Attachment:

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Date/Time: 03/16/2011 17:59:46 (ET)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1256

Have teams assembled: U4 SFP is likely dry, but structural integrity uncertain - not sure if will hold water. Can maybe do steam cooling. Other units have water, but dont know how much

(b)(5)

They seem to be confident that it may be structurally sound, but dont know if it can hold water. Gave Conte briefing - lots of people there, NISA, TEPCO. Trying to go through chronology. In general, open and forthcoming.

(b)(5)

On Unit 4, access road is blocked. An hour ago, they probably have started activity to remove debris around access. If goes as planned, will start to try and inject water into SFP. Were looking for NRCs feedback on risk issues that they should be considering. After consultation with ET and team, we are communicating that at this point, bottom line is to get pool cooled with water, and there are risks and potential criticality or hydrogen, but they should proceed as planned. They want to share more details on dose at 10:00 today. Strategy to get water in is right, but depending on amount of exposure and temp, could result in fuel damage as a result of cooling. Fragmentation of cladding. Some could be already melted. Bill: asks if sand would be more effective. team: they have not done analysis

(b)(5)

Facility:

probably - trying to do anything they can. With sand, youre helping shine, but not cooling. U1 SFP, dont know status. But noone has been adding water, and probably doesnt have automatic makeup, but probably take a long time to evaporate - havent seen steam out of U1. John: Joe Williams sent out conceptual design for equipment. Looking for update on equipment. Have 10am meeting to talk about design/equipment. Have 4 submersible pumps and diesel-driven pump at AFB. Scott: earlier today, request on U2, looking for ideas to remove walls to enable air drop/spraying. John: Weber tasked NSIR. Scott: concern is as other pools steam, rad levels go up, so could consider making sure inventories in 1 and 2 dont go below a certain point to keep rad levels stable. John: dont know level. right now only 1 blowout panel out. They need large hole to target. They need to vent reactor building to prevent hydrogen explosion. Thought about shooting rocket-propelled grenade. Scott: would be wise to work on pools that still have level Chuck: need to get stuff designed and there. Bill: what is water status going into cores. John: 6 hours ago, they said they had good injection through CS headers. diesel-driven pumps to all 4 units past 48 hours. Tony: At conte meeting, (b)(5) but indicating 1/2 fuel uncovered at 1 and 3. Unit 2 is maybe couple days behind. With half uncovered, seawater injection stable. For unit 4, shutdown happened in November.

Source: Casto/team

Address/Location:

Attachment:

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Date/Time: 03/16/2011 17:55:01 (ET)

FAA issuing statement of what they are doing for things coming into the country.

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1255

Facility:

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/16/2011 17:51:12 (ET)

Trapp providing RST more info on SFPs.

Position: EST Chronology Officer

Name: Rebecca Karas

(b)(5)

Record:	1254
Facility:	
Source:	RST

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 17:34:53 (ET)	6 DOE people coming to help at ops center.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1253	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 17:30:39 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1252	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 17:16:11 (ET)	Chairman: What is the source of our info? Chuck: TEPCO and Conte (govt). SFP
Position:	EST Chronology Officer	indications coming from TEPCO. They have requested us to help with systems. (TEPCO
Name:	Rebecca Karas	(b)(5) Chairman: we believe pool #4 is dry, and
Record:	1251	another potentially structurally damaged? Chuck: yes, and #4 pool walls have
		collapsed. Cant maintain inventory at all. Mike: had call with John, and he said pool
		intact. Chuck: last we were told, walls were not there. We did not suggest sand, RST
		suggested sand. So decided prepare for water and sand. Ruland: (b)(5)
		(b)(5) he believes floor is actually bottom of pool. So it is dry.
		No pool left. Unit 3, top of fuel you can see and everything else is gone. His opinion is
		there is no water in pool. Unit 2, believes drying out. Top of building has hole they

(b)(5)

Facility: created with steam coming out. Only pool might be OK is Unit 1. Daini has declared emergency evacuation. May want to help them maintain those units. Chuck: was talk on U3 of trying to get hole bigger so can push water in from outside. Not sure how make hole bigger. Tom: know about getting power line to site? Chuck: havent heard. His understanding is not going to do any good. In some cases, switchgear damaged, and in other cases, cant get in there to manipulate anything. Power will help in Daini, but not Daiichi. [redacted] (b)(5) [redacted] But they have asked for help designing and putting together/installing spray systems. Will work with ambassador to get whatever authority we need.

Source: Bill, Chairman, Casto

Address/Location:

Attachment:

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Date/Time: 03/16/2011 17:06:56 (ET) **ET:** Chairman and Borhardt have been before both houses and fielded many questions. Asked if we have anyone on site. Chuck: We are all in Tokyo. trying to get to EOF outside Tokyo. Chuck trying to get to site [redacted] (b)(5) [redacted] Want our people deeply embedded. Tony said he got a lot from govt yesterday at Conte. Conte and govt need to step up. TEPCO has been more receptive to us with advice and help [redacted] (b)(5) [redacted] Vonna: asks if familiar with doses at site. Chuck: local EOC is what hes talking about going to. Dont know where it is at.

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1250

Facility:

Source: Casto

Address/Location:

Attachment:

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Date/Time: 03/16/2011 16:59:55 (ET) **Should call IAEA and tell them we issued PAG for US citizens in foreign country.**

Position: EST Chronology Officer

Name: Rebecca Karas

[redacted] (b)(5)

Record:	1249
Facility:	
Source:	ET

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/16/2011 16:48:54 (ET)	San Francisco, Hawaii and JFK - have detected contamination on cargo. We told them to coordinate with DHS. Areva chartering plane with boric acid, neutron absorbers, charcoal filters, protective equipment, etc.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1248	
Facility:		
Source:	PMT/ET	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 16:41:10 (ET)	Our team shouldnt be there more than 2 weeks, and if they have to move, they will.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1247	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 16:37:50 (ET)	Canadians asked about INES level - do we agree? Last official from Japan is 4. Also asking why we picked 50 miles? Referred to PMT.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1246	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 16:34:36 (ET)	Request out to DTRA and ARAC is to look at full core melt for all units and fuel pools.
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(b)(5)

Position:	EST Chronology Officer
Name:	Rebecca Karas
Record:	1245
Facility:	
Source:	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 16:32:25 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1244	
Facility:		
Source:	NY times	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 16:30:03 (ET)	Detecting contamination on incoming aircraft. Screening all packages - detected iodine on packages, plus airplane filter had iodine in it. Are rad monitoring stations - fixed - also doing car monitoring.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1243	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 16:27:48 (ET)	Quite a few other countries in contact with us - lots of questions. French asking us for SFP info. Heard Chairman mention one was dry. RST was non-specific in answer.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1242	
Facility:		
Source:	Liaison Team	

Address/Location:	
Attachment:	

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(b)(5)

Date/Time:	03/16/2011 16:25:47 (ET)	Getting lots of interview requests - turning down now, because going to have Chairman available in rotunda after briefing ends.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1241	
Facility:		
Source:	OPA	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 16:19:49 (ET)	Currently have FEMA and DOE embedded with us. DOE indiv is requesting conf call with team members in Japan - they probably doing 8am or earlier flyover. Wants conf call between our staff and DOE staff over there to coordinate - probably later this pm. Going to keep our state liaison people on staff until 11pm, and will have contact # after that. Getting lots of questions now - asking for RASCAL input data - saying no so far. Asking how 50 mile evac compare with our normal 10-20 mile radius. Call going on with HHS now. They want to talk about steps they are taking about allowing stuff back into the country that has been in Japan.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1240	
Facility:		
Source:	Liaison Team	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/16/2011 16:15:09 (ET)	Following up with NARAC on questions. Also following up with NR on information they were working on. Sent RASCAL run to NARAC and asked if they could assess beyond 50 miles. Asked about doses on CA coast. Sent same info to DTRA (b)(5) (b)(5) DOD wants to know where they can fly safely over site. Preparing Q&As for press inquiries on press release. JAIF info - trying to assess credibility. They noted at 5pm Japanese time, 3 rem outside U2, 40 rem by Unit 3, 10 rem besides Unit 4.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1239	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 16:01:50 (ET)	About ready to transfer diagrams of systems to USAID. Know Diablo Canyon has 20,000
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((b)(5))

Position: EST Chronology Officer	pounds of boron. Need to get on flight. Need to get question answered for Weber on status of SFPs (depending on status - liner or no, put water or sand in it). 20-30R/hr around buildings. At least one control room has 200mR/hr. Working with DTRA to provide us dose calcs. Working on structural integrity of SFPs. Working with Quad Cities, which has similar SFP. Unit 2: Secondary cont is intact, and working with GE on trying to find out where to put hole in top of containment to pour water or sand into top of SFP. Weve asked Casto to get technical drawings from site. Sent action items list to (b)(5) Havent had any feedback yet on what list was. Was equipment and action items. Brian: Was list discussed between INPO, DOD, etc. DOD was going off to get equipment. Second list - request from our USAID people on what else could we use.
Name: Rebecca Karas	
Record: 1238	
Facility:	(b)(5) TEPCO is trying to install 60kV temp power supply to site, plus cubicle and offsite line. Want to supply high pressure CRD pump to Unit 2 and RHR pump for Unit 4. Getting about 1 email/5 minutes to respond to. Huge effort. This is fixed now with HOOs. NRR post-911 was comm team put together. NRR trying to establish. Nelson (DORL) is trying to establish whole framework on how answer/structure questions. Working for Commission meeting on Monday.
Source: RST	

Address/Location:	
Attachment:	

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Date/Time: 03/16/2011 15:20:02 (ET)	(b)(5)	Our people are advising
Position: EST Chronology Officer	ambassador, meeting with various folks to understand plant status and troubleshoot. Had 3 meetings early this am. No info from IAEA all shift. Chairman has asked we continue to focus on whether the protective action recommendations are appropriate, and if not coordinate and move up chain. Medical/health subgroup will be set up with DHS/HHS on advise to states. Will be a protocol developed for interagency sharing. They are cooling all 4 units using LPCS wiht sea water. Got SRVs open and are maintaining pressure below mPA. Reactors in better shape than SFPs. 1, 3, 4 and SFPs open to air. 3 and 4 fuel exposed. TV: says almost have electrical line into site.	
Name: Rebecca Karas		
Record: 1237		
Facility:		
Source: ET		

Address/Location:	
Attachment:	

(b)(5)

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Date/Time:	03/16/2011 14:03:02 (ET)	Chairman testimony in progress.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1236	
Facility:		
Source:		

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 13:50:13 (ET)	PRESS RELEASE DATED WRONG.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1235	
Facility:		
Source:		

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/16/2011 13:47:48 (ET)	NRC PRESS RELEASE IS ISSUED.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1234	
Facility:		
Source:	OPA	

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 13:43:11 (ET)	20-30 millirem between Unit 3 and Unit 4.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	Flew over Unit 4- 247 milliSv.
Record:	1233	
Facility:		There are still people in the control room, and still people in staging area; 200 millirem background.
Source:		

(b)(5)

Source: TEPCO via Tony

Address/Location:
Attachment:

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Date/Time: 03/16/2011 13:39:57 (ET) Preparing to enter the Unit 4 SFP to remove rubble; clearing debris field so they can get the fire trucks in. Discussing risks: high radiation fields; hydrogen rich environment.
 Position: EST Chronology Officer
 Name: Jessica Kratchman
 Record: 1232
 Facility:
 Source:

Address/Location:
Attachment:

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Date/Time: 03/16/2011 13:31:06 (ET) State department is issuing their press release, and we are in the process of issuing ours.
 Position: EST Chronology Officer
 Name: Jessica Kratchman
 Record: 1231
 Facility:
 Source:

Address/Location:
Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/16/2011 13:25:15 (ET) Email Rebecca Schmidt and Amy Powell a very quick summary on PAGs. Need quickly, and accurately.
 Position: EST Chronology Officer
 Name: Jessica Kratchman
 Record: 1230
 Facility:
 Source: Josh

Address/Location:
Attachment:

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Date/Time: 03/16/2011 13:23:17 (ET) Asked if a fire in the SFP would effect the primary containment. Answer: that is very unlikely based on the location of the SFP.
 Position: EST Chronology Officer
 Name: Jessica Kratchman

([redacted])

Record:	1229	CDC still wants to talk to our experts.
Facility:		
Source:	CDC	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	

Date/Time:	03/16/2011 13:19:44 (ET)	Robots are available; RST asked if there are GE contractors willing to help, however all GE contractors have left; may be some local GE workers who can be tapped.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1228	
Facility:		
Source:	RST to GE	

Address/Location:	
Attachment:	
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Date/Time:	03/16/2011 13:17:00 (ET)	NR representative on his way here (Tom Roberts).
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1227	
Facility:		
Source:	RST	

Address/Location:	
Attachment:	
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Date/Time:	03/16/2011 12:46:09 (ET)	on phone: Mike, Cathy, Brian, and Eric
Position:	EST Chronology Officer	Chairman wants to put together a group of Senior Managers who can communicate the basis of the press release that is about to be put out.
Name:	Jessica Kratchman	
Record:	1226	
Facility:		
Source:	conference	

Address/Location:	
Attachment:	

(b)(5)

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Date/Time:	03/16/2011 12:40:11 (ET)	Offered to send 1-2 staff and some of the lab staff to our Op Center; they have been brainstorming some options.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1225	
Facility:		
Source:	Steve Troutman, NR	

(b)(5)

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 12:36:09 (ET)	Attach SFP run and reactor runs, dont need context. Want data to show that we have been continually working on this.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1224	
Facility:		
Source:		

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 12:32:21 (ET)	It is our understanding that we are the lead in coordinating technical resources.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1223	
Facility:		
Source:		

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 12:16:11 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	

(b)(5)

Record:	1222	Mike Weber to Chairman	(b)(5)
Facility:		Chairman- need within 10 minutes.	
Source:	Josh		

Address/Location:	
Attachment:	
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Date/Time:	03/16/2011 12:05:03 (ET)	Concern: need to talk with NSIR Safeguards Team on how to knock a hole into the Unit 2 SFP so we can get water into it. Need to accomplish this from a distance. CORRECTION: knock a hole in SFP BUILDING. EST Chronology Officer - Jessica Kratchman at 12:09:37 on 3/16/2011
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1220	
Facility:		
Source:	John Monninger	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	

Date/Time:	03/16/2011 12:05:03 (ET)	Concern: need to talk with NSIR Safeguards Team on how to knock a hole into the Unit 2 SFP so we can get water into it. Need to accomplish this from a distance.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1221	
Facility:		
Source:	John Monninger	

Address/Location:	
Attachment:	
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Date/Time:	03/16/2011 12:01:04 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1219	
Facility:		
Source:		

Address/Location:	
(b)(5)	

Attachment:
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Date/Time: 03/16/2011 11:59:56 (ET) **Confirmation- there are no changes to are four key recommendations.**
Position: EST Chronology Officer
Name: Jessica Kratchman
Record: 1218
Facility:
Source: EDO

Address/Location:
Attachment:
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Date/Time: 03/16/2011 11:56:23 (ET) **Having trouble accepting vehicles not licensed in their country: preference is to have vehicles airlifted to TEPCO site.**
Position: EST Chronology Officer
Name: Jessica Kratchman
Record: 1217
Facility:
Source: TEPCO mtg

Address/Location:
Attachment:
 This information is ~~Official Use Only - Sensitive Internal Information.~~

Date/Time: 03/16/2011 11:48:24 (ET) **All four Units have RCS continuing to inject via low pressure core spray.**
Position: EST Chronology Officer
Name: Jessica Kratchman **Unit 2 SFP: small blow out in the panel hole; loss of water inventory, but no walls have been knocked out.**
Record: 1216
Facility: **As bulldozers are clearing away rubble there is a radiation reduction of approximately 70%: this indicates that there has been a significant release.**
Source: TEPCO Meeting

Address/Location:
Attachment:
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Date/Time: 03/16/2011 11:45:46 (ET) **Do not think the walls of Unit 4 SFP have been blown out; because there would be streaming radiation if that were the case.**
Position: EST Chronology Officer
Name: Jessica Kratchman

(b)(5)

Record:	1215
Facility:	
Source:	TEPCO mtg with Chuck/ John
Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 11:32:30 (ET)	TEPCO met with the NRC reps:
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	Discussed possible specifications for cooling:
Record:	1214	Four train systems- seperated and independent for each SFP.
Facility:		<ul style="list-style-type: none"> *Need suction strainers. *Length of pipe from the ocean to the beach, (elevation change 10m). *Booster driven diesel pumps to get water 10m up from the ocean. *Unit 1, 4: need 500m of piping. *Units 2,3: need 700m of piping. *Diesal driven fire pumps. Ground mounted launch point nozzels. Must be movable and transportable. *Requesting assistance with installation with running and operation. *May eventually need to add boron, must be able to suck the boron from a tank. BACKUP system: *Four fire trucks with areal booms- must be able to lift 20-30m with water cannon on the end. &It;this is all at a minimum> 10-20 minutes workers will get their yearly dose. Other concepts: implament remote control robots for use in high rad areas.

Source:	John and Chuck
Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 10:55:46 (ET)	Texas State Radiation Board is requesting plume data.
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(b)(5)

Position:	EST Chronology Officer
Name:	Jessica Kratchman
Record:	1213
Facility:	
Source:	Texas

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	

Date/Time:	03/16/2011 10:42:53 (ET)	Japan needs Boron. Diablo Canyon has 20,000 tons of boron, it would need to be airlifted.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1212	
Facility:		
Source:	INPO	

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	

Date/Time:	03/16/2011 10:40:15 (ET)	Media on the ground in Japan (Scott Kelly) wants an interview with Chuck Casto. OPA is handling this request.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1211	
Facility:		
Source:		

Address/Location:	
Attachment:	
This information is Official Use Only - Sensitive Internal Information.	

Date/Time:	03/16/2011 10:38:14 (ET)	RASCAL confirms that there would be no impact on US: Alaska, Hawaii, CA.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1210	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	
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(b)(5)

Date/Time:	03/16/2011 10:36:04 (ET)	Question: With three cores and four SFP potentially compromised, would this effect the US? Answer: would depend on the conditions, and this is something we are revisiting, but the "quick answer" is "NO". This needs to be confirmed.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1209	
Facility:		
Source:	EDO	

Address/Location:	
Attachment:	
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Date/Time:	03/16/2011 10:18:39 (ET)	Confirming that the US NRC recommendation of a 50 mi evacuation is still what NRC is confident in recommending. Op Center answer: with todays conditions (reactors, SPFs, meteorological), this is the appropriate recommendation.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1208	
Facility:		
Source:	EDO	(b)(5)

Address/Location:	
Attachment:	
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Date/Time:	03/16/2011 10:04:15 (ET)	Media reporting that containment vessel may be breached. We cannot confirm this.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1207	
Facility:		
Source:	CNN	

Address/Location:	
Attachment:	
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Date/Time:	03/16/2011 10:01:55 (ET)	(b)(5)	;A document- the NRC wants to get a hold of this document.
Position:	EST Chronology Officer		
Name:	Jessica Kratchman		
Record:	1206		
Facility:			

(b)(5)

Source: Mike Weber

Address/Location:

Attachment:

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Date/Time: 03/16/2011 09:57:28 (ET)

Position: EST Chronology Officer

Name: Jessica Kratchman

Record: 1205

Facility:

Source: Mike Weber

(b)(5)
There needs to be a coordinated effort and unified opinion between Federal agencies.

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/16/2011 09:42:56 (ET)

Position: EST Chronology Officer

Name: Jessica Kratchman

Record: 1204

Facility:

Source: PMT

Running RASCAL with different core, met, and structural assumptions.

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/16/2011 09:41:07 (ET)

Position: EST Chronology Officer

Name: Jessica Kratchman

Record: 1203

Facility:

Source: PMT

Met people getting a forecast through the weekend because offshore winds may come back on shore.

Address/Location:

Attachment:

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Date/Time: 03/16/2011 09:38:34 (ET)

Position: EST Chronology Officer

Name: Jessica Kratchman

(b)(5)

(b)(5)

Record:	1202	(b)(5)
Facility:		
Source:	EDO	
Address/Location:		
Attachment:		

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Date/Time:	03/16/2011 09:36:01 (ET)	Need to use a combination of water and sand for SFP. Water- Units 1,2; Sand Units 3,4
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1201	
Facility:		
Source:	Casto	

Address/Location:		
Attachment:		

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Date/Time:	03/16/2011 08:54:45 (ET)	TEPCO new information: List of equipment; move to closest American installation:
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1200	
Facility:		<ul style="list-style-type: none"> *Four pumps are in country. *Need equipment for spent fuel pools. *Rocket launchers for water: can be mounted on the ground or on a latter truck. Needs to be able to launch water 30m in the air, from 50m away, 500 gall/ min. * Areal latter snorkel trucks (monitor nozzles) *Land based pumps *(Booster pumps by the ocean) *Needs to include strainers so seawater does not clog. *Lots of rubble in the way, need equipment to clear a pathway. Bulldozers. *Sand- RST recommends for Unit 3 and 4 spent fuel pools, instead of water.
Source:	Chuck Casto	

Address/Location:		
Attachment:		

(b)(5)

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Date/Time: 03/16/2011 08:43:56 (ET)	Communication plan: most importantly- needs to address why we are confident in our reactors.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1199	
Facility:	
Source:	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/16/2011 08:31:21 (ET)	Japanese translator in ELT room.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1198	
Facility:	
Source:	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/16/2011 07:54:32 (ET)	May not be able to attend Hill meeting in person, if not he will attend via phone.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1197	
Facility:	
Source: Chairman	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/16/2011 07:53:24 (ET)	They are providing two pumps (1000 gpm) from a truck approximately 700-800 miles away. 4 pumps arrived in port; not sure what port- checking on where.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1196	
Facility:	
Source: NR	

(b)(5)

Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/16/2011 07:16:55 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	(b)(5)
Record:	1195	
Facility:		(b)(5)
		NRC believes that Unit 4 SFP fire was caused by loss of water that resulted in a zirc fire.
		Chairman will attend hearing on Hill this morning that will likely involve this issue.
		Chairman does not plan to make these recommendations public at this time.
Source:	(b)(6)	

Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/16/2011 06:31:32 (ET)	Coordination of NR and NRC approaches:
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	NRC sent evacuation recommendations based on one unit. NR sent e-mail with additional recommendations for specific actions. NR does not consider the recommendations different. ET agrees with this view.
Record:	1194	
		(b)(5)
		ET states that NRC has provided recommendations to TEPCO on SFPs.
		NR wants to ensure we are on same page and notify Ambassador.
		Chairman, Admiral Mueller, Admiral Donaid, and Chuck Casto join discussion:

(b)(5)

Facility:

(b)(5)

Chairman indicates that NRC focus on whether we agree with TEPCO protective action recommendations.

ET believes that this situation will degrade so TEPCO will need to provide additional protective action recommendations. ET says need more information [Chairman

(b)(5)

Admiral Mueller reads his e-mail with detailed recommendations.

Chairman states that situation will degrade to might have 6 reactors and/or SFPs. No one disagreed.

(b)(5)

Chairman message:

(b)(5)

Source: Naval Reactors
Telecon

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/16/2011 06:25:08 (ET)
Position: EST Chronology Officer
Name: Thomas Scarbrough
Record: 1193

ET indicates that NRC will work with NR to reconcile recommendations.
ET working to contact Chairman.
ET used RASCAL to develop NRC talking points.

(b)(5)

Facility:	ET sent recommendations on SFPs to Ron Cherry. If cannot get water, then dump anything into SFPs based on NUREG used by Pat Hilands group. (b)(5)
Source:	Jack Foster (Chucks team)

Address/Location:	
Attachment:	

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Date/Time:	03/16/2011 05:55:28 (ET)	Chuck reported on telecon with Naval Reactors (Admiral Mueller) and Ambassador
Position:	EST Chronology Officer	about Naval Reactor e-mail to Ambassador.
Name:	Thomas Scarbrough	
Record:	1192	Naval Reactors e-mail:
Facility:		Need more personnel on site.
		Need more pumping power on site now.
		Working on electricity restoration (rather than cooling cores) could result in radiation spread over hundreds of miles.
		(b)(5)
		NRC memo referred to 50 miles for evacuation based on Unit 4 SFP issue.
(b)(5)		
ET says that NR e-mail and NRC memo not necessarily different. (e.g., NRC memo based on one unit)		
(b)(5)		
ET will prepare talking points and interact with Naval Reactors on this issue.		
ET also working on Unit 4 SFP recommendation.		
Source:	Chuck Casto	

(b)(5)

Address/Location:	
Attachment:	

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Date/Time: 03/16/2011 05:28:41 (ET)	<p>NRC team invited to meeting with TEPCO at 8 p.m.</p> <p>SFP Status:</p> <p>Unit 1 and 2 boiling down</p> <p>Unit 3 and 4 zirc water reaction</p> <p>No SFP walls in Unit 4 so no ability to retain water.</p> <p>TEPCO discussing dropping sand on Unit 4 SFP.</p> <p>Pat Hiland said his group will research best approach for Unit 4 SFP.</p> <p>John indicated that team charter indicated recommendations must be routed through Ambassador. ET stated that team should establish protocol with Ambassador for technical issues. ET will provide more guidance at 7:15 prior to team meeting with TEPCO.</p> <p>ET requested that team also check on Unit 5 SFP status.</p>
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1191	
Facility:	
(b)(5)	

Source: John Monninger (Chucks team)	
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Address/Location:	
Attachment:	

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Date/Time: 03/16/2011 04:04:40 (ET)	<p>Dan Dorman informs Chuck that NRC staff sent plant summary and recommendation to Ron Cherry. Chuck has not seen it yet.</p> <p>ET information needs relayed to Chuck: Current condition at Unit 4?</p>
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1190	

(b)(5)

Decreasing level at Unit 5 (Rx vessel or SFP?) with use of diesel generator to provide water.

(b)(5)

(b)(5)

(b)(5)

(b)(5)

ET will send to Chuck (1) Ops center update, (2) NRC talking points, and (3) flyover recommendation. Previously sent summary and bounding analysis to Ron Cherry.

Chuck will work to obtain more accurate information from Japan sources. Chuck indicates that it would be best to have access to TEPCO EOC for most accurate information. Chuck wants plant info directly to his team from Japan sources.

Facility:

(b)(5)

Chuck indicates NRC severe accident NUREG/CR-6150 tracks this event very closely. DOE lab INL could provide code scenario assistance. Pat Hiland indicates that Ops Center team has been reviewing the NUREG.

ET informed Chuck that 4 pumps are available for TEPCO to be picked up. ET and Chuck discussed thinking about long-term needs.

(b)(5)

Chuck said team has KI.

(b)(5)

ET indicates that GE-Hitachi has EOC in Tokyo. Chuck suggests contacting upper levels of GE if necessary for access.

Source: Chuck Casto

Address/Location:

Attachment:

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Date/Time: 03/16/2011 03:07:43 (ET)

IAEA report did not specify if Unit 5 water level applied to Rx vessel or SFP. Report indicated that water was 200 cm above fuel 5 hours ago, but had dropped recently.

Position: EST Chronology Officer

Name: Thomas Scarbrough

Record: 1189

Facility:

Source: Dan Dorman

Address/Location:

Attachment:

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Date/Time: 03/16/2011 02:53:50 (ET)

Unit 5: RX vessel water level has dropped 40 cm in last 5 hours. TEPCO plans to use diesel generator at Unit 6 to supply water to Unit 5.

Position: EST Chronology Officer

Name: Thomas Scarbrough

Record: 1188

Facility:

Source: Pat Hiland

Address/Location:

Attachment:

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Date/Time: 03/16/2011 01:03:51 (ET)

Jim Trapp reports that Japan govt. says temporary sheltering of plant workers was performed and did not evacuate site.

Position: EST Chronology Officer

Name: Thomas Scarbrough

(b)(5)

(b)(5)

Record: 1187	Japan PM asked Jim and Tony to participate on a panel of technical experts at Parliament.
Facility:	Jim and Tony had to leave for expert meeting. Ron Sherry (sp?) will take one-pager with NRC recommendations to PM. Amy confirmed that 7 members of Castos team heading to hotel. ET asked Amy to set up telecon with Chuck and team following their arrival. Plan telecon for 5 pm Tokyo time.
Source: Jim Trapp	

Address/Location:	
Attachment:	

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Date/Time: 03/16/2011 00:32:07 (ET)	GE turbines are massive (5 MW).
Position: EST Chronology Officer	Logistical issues with heavy equipment.
Name: Thomas Scarbrough	200 tons estimated weight.
Record: 1186	1 generator per C5 plane.
Facility:	Tony needed to hang up to talk to Ambassador.
Source: Tony Ulises	

Address/Location:	
Attachment:	

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Date/Time: 03/16/2011 00:02:56 (ET)	Discussion of approval for gas turbines from GE.
Position: EST Chronology Officer	Provided phone number for turbine specs (Jeff K)
Name: Thomas Scarbrough	Joe will take action for approval.
Record: 1185	
Facility:	
Source: Bill Bergers Deputy (Joe)	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 23:47:02 (ET)	Dan Dorman: Conflicting reports for possible site abandonment. TEPCO said only essential actions being taken onsite. Washington Post says site personnel being removed.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	Jim Trapp: Unit 4 in "shambles"

(b)(5)

Record: 1184	Dan told Matt Fuller (Ambassadors Special Asst) about abandonment concern. Fuller will speak to Ambassador about abandonment concern.
Facility:	TEPCO requested GE for gas turbine generators. Bill Berger needs to send approval to US govt. Dan Dorman reported that the diesel pumps previously requested are sitting on a dock waiting for TEPCO to pick up.

Source: Jim Trapp	
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Address/Location:	
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Attachment:	
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This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 23:36:10 (ET)	Prepare recommendations for Chairman on NRC position on Fukushima reactors
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1183	
Facility:	
Source: Jack Grobe	

Address/Location:	
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Attachment:	
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This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 23:10:12 (ET)	Unit 2: Suppression chamber is damaged.
Position: EST Chronology Officer	Unit 3: suppression chamber pressure instrument is downscale
Name: Thomas Scarbrough	
Record: 1182	
Facility:	
Source: TEPCO press conference	

Address/Location:	
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Attachment:	
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This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 22:54:49 (ET)	If you look at hydrogen generation, at units, and we have no containment for Unit 4.
Position: EST Chronology Officer	Marty
Name: Rebecca Karas	(b)(5)
Record: 1181	

(b)(5)

Facility:	
Source:	RST

Address/Location:	
Attachment:	
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Date/Time:	03/15/2011 22:47:47 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1180	
Facility:		
Source:	Trapp	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/15/2011 22:45:23 (ET)	Pulling all workers from damaged nuclear plant.	
Position:	EST Chronology Officer		
Name:	Rebecca Karas		
Record:	1178		EST Chronology Officer - Rebecca Karas at 22:45:50 on 3/15/2011
Facility:			
Source:	Wash Post quoting JP		

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/15/2011 22:45:23 (ET)	Pulling all workers from damaged nuclear plant.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1179	
Facility:		
Source:	TEPCO	

Address/Location:	
Attachment:	

(b)(5)

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Date/Time: 03/15/2011 22:39:53 (ET)	#4, entire secondary containment appears gone worse than #3. Active smoke coming out of 3, plus #4 issues. GE-Hitachi getting briefing from TEPCO.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1177	
Facility:	
Source: RST	

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 03/15/2011 22:17:45 (ET)	TEPCO #3 has been seeing white smoke coming out - looking for cause. Near flood gate radiation reading is fluctuating hour by hour, but on whole it poses no real hazard. At one time last night, we had reading of 1000mSv, but now 800-600 mSv. Radiation near flood gate at 10am started to increase rapidly and has reached to unit of mSv. All workers there have suspended operations, and have asked them to evacuate to safe area. As of 1054 reading began to drop, and we are right now conducting expert analysis, but most probable is that part of the vessel evaporation is coming out and that is cause of white smoke.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1172	
Facility:	
Source: Cabinet Secretary (JP) TV	EST Chronology Officer - Rebecca Karas at 22:35:47 on 3/15/2011

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 03/15/2011 22:21:21 (ET)	At 834 am got report that white smoke rising from #3, but no report of blast. Part of debris could be coming out of containment vessel. We dont have detailed information - we are investigating, but part of containment is broken and it seems that vapor is coming out from the broken part. We have decided no need to change evacuation instruction. #4 has SFP, and we are preparing to pump water into reactor. Rising rad levels mainly due to #3 reactor. Temp rising in 4, 5 and 6 reactors. We have joint taskforce between govt and TEPCO who will report whether water will be sprayed from above. May cause some risk if we pour large amounts of water in very short time.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1173	
Facility:	

(b)(5)

606707

Facility:	Gradual addition of water is more safe to do. When we make final decision we will announce. EST Chronology Officer - Rebecca Karas at 22:35:30 on 3/15/2011
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Source:	Cabinet Secretary (JP) TV
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Address/Location:	
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Attachment:	
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This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/15/2011 22:26:45 (ET)	<p>#3 reactor needed to have water injected, so needed to release air. In releasing air, radiation could have leaked. Possible radiation coming out through that process. We are working to inject water in #4, have not implemented yet. Have high rad from #3, so are standing by and want to see how #3 is doing before decide to inject water in #4. TEPCO people cant even go inside compound. We might need help of US military. Have been offered help, and will think about the specifics. We are in process of coordination with US. We are supplying water from ground, but supplying from above requires pumping large amount of water, which involves risk, plus have to consider risk of helicopter operation. Restoration of ECCS will be better - stable supply of power would make it easier to carry out operation. Radiation was in microSV level yesterday, and today is mSV. At 1054, rad level has been coming down rapidly, though (Would like to tell public that we are exposed to radiation in our daily lives, like when you get an Xray or when you fly by airplane.)</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1174	
Facility:		

Source:	Cabinet Secretary (JP) TV
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Address/Location:	
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Attachment:	
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This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/15/2011 22:21:21 (ET)	<p>At 834 am got report that white smoke rising from #3, but no report of blast. Part of debris could be coming out of containment vessel. We dont have detailed information - we are investigating, but part of containment is broken and it seems that vapor is coming out from the broken part. We have decided no need to change evacuation instruction. #4 has SFP, and we are preparing to pump water into reactor. Rising rad levels mainly due to #3 reactor. Temp rising in 4, 5 and 6 reactors. We have joint</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1175	
Facility:		

(b)(5)

Facility:	taskforce between govt and TEPCO who will report whether water will be sprayed from above. May cause some risk if we pour large amounts of water in very short time. Gradual addition of water is more safe to do. When we make final decision we will announce.
Source: TEPCO	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/15/2011 22:17:45 (ET)	TEPCO #3 has been seeing white smoke coming out - looking for cause. Near flood gate radiation reading is fluctuating hour by hour, but on whole it poses no real hazard. At one time last night, we had reading of 1000mSv, but now 800-600 mSv. Radiation near flood gate at 10am started to increase rapidly and has reached to unit of mSv. All workers there have suspended operations, and have asked them to evacuate to safe area. As of 1054 reading began to drop, and we are right now conducting expert analysis, but most probable is that part of the vessel evaporation is coming out and that is cause of white smoke.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1176	
Facility:	
Source: TEPCO media briefing	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/15/2011 22:15:38 (ET)	Fuel pools may have heated in #3 and produced steam (TEPCO).
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1171	
Facility:	
Source: NHK	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/15/2011 22:06:36 (ET)	Fire about 5 hours ago in Unit 4, low in reactor building (b)(5) TV also shows smoke rising from site. Difficult to tell which units it is from.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1170	

(b)(5)

Facility:		
Source:		PMT
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/15/2011 21:52:42 (ET)	<p>Wants quick status update. Grobe: Much better than last night. U1-3, best info is that nothing has changed. U2 less stable - concern with stability of core cooling on Unit 2. Best information is they all have primary containment integrity. Dose rate at site boundary is 60mR/hr. U4 had another fire about 5 hrs ago. Cause is not clear. Smoke was seen. Appears fire self-extinguished. Dose rates are 30R/hr. Believe is shine, not contamination or release, from decreased SFP water level. News media continuing to show footage from fire in the morning. Fire is out as best we understand. Most of team is on the ground. Casto a little later, as well as 1 other team member. Trapp will brief Casto and then get ahold of us. Japanese govt has accepted help from US - 1 doz generators and other equipment, rad monitoring, KI. WANO Japan is getting access to TEPCO briefings, and we are trying to get access through them.</p> <p style="text-align: center;">(b)(5)</p> <p style="text-align: right;">Surgeon</p> <p>General is recommending West Coast residents procure KI. We have said we agree with the Japanese recommendations, and we do not anticipate rad materials affecting US and its territories</p> <p style="text-align: center;">(b)(5)</p> <p>Also trying to become more predictable as an Ops Center. Have updated 2-pager to be more consistent. Will be producing go-books. Will be updated at 0600 and 1800 electronically. Revisited staffing of various teams and right-sized it. We will be at this for several weeks. Periodic briefings list is maintained by Liaison Team. Chairman briefed Cmsrs, and they agreed want Cmsn meeting early next week to hear from staff on what is going on and what Agency's response is. Open meeting and then closed one afterwards.</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1169	
Facility:		
Source:		Eric Leeds via Bridge
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/15/2011 21:38:03 (ET)	USAID reps went to OPA at State Dept (b)(5)
		(b)(5)

Position:	EST Chronology Officer	(b)(5)	They will deal with it. Marty: We should go out to our SLOs and tell them weve initiated these actions in response to what came out from Surgeon General.
Name:	Rebecca Karas		
Record:	1168		
Facility:			
Source:	Liaison Team		

Address/Location:	
Attachment:	

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Date/Time:	03/15/2011 21:29:08 (ET)	Discuss restructuring talking points and status summary into 1 document with different sections.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1167	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/15/2011 21:11:00 (ET)	For briefing books, should make up initial set of "go" books, and then just email updates on some set duration to their secretaries to update.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1166	
Facility:		
Source:	Grobe	

Address/Location:	
Attachment:	

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Date/Time:	03/15/2011 21:08:27 (ET)	Liaison Team to get ahold of Surgeon Generals office (b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1165	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

(b)(5)

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Date/Time: 03/15/2011 21:07:47 (ET)	Surgeon General is recommending KI for everyone on West Coast.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1164	
Facility:	
Source: ET	

Address/Location:	
Attachment:	

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Date/Time: 03/15/2011 21:06:05 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1163	
Facility:	
Source: Chairman	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 20:47:38 (ET)	Grobe: team is arriving - most arriving now. Casto in a few hours later. They go to hotel across from embassy. Casto will be at embassy in about 4 hours. As soon as he is briefed, he will get on phone with us. Should have functioning team in morning. We dont know if they will get access to information they need
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1161	

Facility:	(b)(5)
	Govt of Japan has accepted US offer for equipment (DOD), land and air monitoring (DOE) - we will get info real time, KI pills. INPO has established Level 1 document. Fire in Unit 4. About 4 hours ago, fire detected in Unit 4. Not clear if this was instantaneous hydrogen burn, or lasting fire. Fire yesterday was lube oil and extinguished. Dose rates are 30R/hr inside U4. TEPCO thinking about ways to fight fire. Jaczko:
	(b)(5)

Source: Chairman bridge call	
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Address/Location:	
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(b)(5)

Attachment:

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Date/Time: 03/15/2011 20:47:38 (ET)	<p>Grobe: team is arriving - most arriving now. Casto in a few hours later. They go to hotel across from embassy. Casto will be at embassy in about 4 hours. As soon as he is briefed, he will get on phone with us. Should have functioning team in morning. We don't know if they will get access to information they need</p> <p>(b)(5)</p> <p>Govt of Japan has accepted US offer for equipment (DOD), land and air monitoring (DOE) - we will get info real time, KI pills. INPO has established Level 1 document. Fire in Unit 4. About 4 hours ago, fire detected in Unit 4. Not clear if this was instantaneous hydrogen burn, or lasting fire. Fire yesterday was lube oil and extinguished. Dose rates are 30R/hr inside U4. TEPCO thinking about ways to fight fire. Jaczko</p> <p>(b)(5)</p>
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1162	
Facility:	
Source: Chairman bridge call	

Address/Location:

Attachment:

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 03/15/2011 20:39:58 (ET)	<p>Discusses expanded team during Japan daytime hours. RST believes may need fewer people. PMT may need one more dose assessor. Do need to expand Liaison Team (1-2 people). Shortage of directors for Liaison Team. Working to solve through Michelle. Also shortage of State Liaison people. Grobe: get needs specified so filling those positions happens automatically. Expect this to continue next couple of weeks. ETST feels understaffed. Few people supporting all briefing books. Need to also think about swapping out people in Japan in 2 weeks. If Chuck establishes himself as POC, shouldn't swap him out (b)(5) Nader is going to reassess needing 2 OIP people. Kirk will probably come back first in about a week, and we can assess whether need replacement. Have asked Office Directors to identify people.</p>
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1160	
Facility:	
Source: ET	

Address/Location:

Attachment:

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(b)(5)

Date/Time: 03/15/2011 20:29:02 (ET)	Grobe and Trapp discuss logistics of arrival team. We need to update table to add cell
Position: EST Chronology Officer	phone numbers
Name: Rebecca Karas	(b)(5)
Record: 1159	
Facility:	If we can get in touch with WANO, that would help. Ambassador has tried to get desk at seat of NI, and has not been successful. Also trying to get into TEPCO EOC. Have been working about 20 hour days. Other groups are on way though. Marty: want to engage with all of team soon when Chuck is there and is briefed up. Chuck will offer to provide coordination for all US nuclear activities to ambassador.

Source: Trapp	
Address/Location:	
Attachment:	

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Date/Time: 03/15/2011 20:22:35 (ET)	Conflicting reports: One story is that Fire in 4 was SFP area hydrogen fire. Separate
Position: EST Chronology Officer	story is that it was oil fire. Another thought is that reports of new fire are just restatement
Name: Rebecca Karas	of old fire. But one other thought is that it is in fact a new fire. Trying to validate.
Record: 1158	
Facility:	GE says original calculation was 4-6 days for U4 SFP.
Source: Trapp via PMT	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 20:00:23 (ET)	Grobe: Status not changed since last update for Units 1-3. all have some fuel damage,
Position: EST Chronology Officer	and sea water being injected. Unit 2 being viewed as less stable. All 3 have lost
Name: Rebecca Karas	secondary containment, but primary believed intact. Dose rates at gate 60mR/hr. Unit 4
Record: 1157	experienced a lube oil fire yesterday. Reports of another fire. 30R/hr in building due to
	shine from fuel due to reduced shielding. Complicates fighting fire. TEPCO
	contemplating fighting fire from external locations. 80 deg C in other pools. Team will be
	arriving over next several hours. Many at 10pm, others at 12 and 0300. Priority is getting
	in communication with our team. Japan has accepted support with equipment. Military
	facilitating. Monitoring by DOE. And requested KI. Monitoring land and air-based. Want
	to get connected with that data stream

(b)(5)

(b)(5)

(b)(5) INPO has issued highest level event doc. Level 1 event report. Required of each US utility to: assess and evaluate readiness/adequacy of B%B, SAMG, SBO and issues with internal and external flooding similar to that which could happen from seismic event. Marshall: IAEA table: on SP pressure line, what is D/S stand for? What is distinction between A and B on pressure. Grobe: information is somewhat dated. Need to clean up reports a bit. Information is about 10pm yesterday. Not sure what relevance information has today. Franovich: Are we considering taking action like INPO? Grobe: not contemplating any prompt action at this time. Its days or weeks out, not near-term. IAEA table useful, but would be better in our countrys units. Grobe:

(b)(5)

Facility:

Trying to do through WANO. Marshall: Unit 2, seem to be more comfortable primary cont. is not breached. Why? Grobe: it is retaining pressure. RST has indicated they have a higher level of confidence its retaining pressure. Vacuum breakers between torus and drywell, and also torus and Rx bldg. It could be that one vacuum breaker opened briefly. Noise heard at time. Possibly localized detonation. We dont know what happened. Has been reported to us that Prim. Cont is retaining pressure, though, so appears intact. Fire on Unit 4 is being reported as fire that may have initiated due to hydrogen gas from low levels of water in SFP. No indication what is burning. Media indicates fire started and being reported by a TEPCO person that they are not taking actions to extinguish at this time due to dose rates in reactor building. Previous fire was lube oil. Monitoring to get more info. Marshall: Is TEPCO cycling operators in and out. Grobe: Know evacuated non-essential personnel. 50 remain onsite. Have reports that 5 individuals received lethal doses. If dose rates were 40-60R/hr for several hours, than is possible. Having difficulty confirming information. Chairman: CNN reporting fire. Grobe: repeats fire info. We believe 30R/hr is shine dose from lower SFP levels. Chairman:

(b)(5)

Source: Commission TA Briefing

Address/Location:
Attachment:

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Date/Time: 03/15/2011 19:59:11 (ET) Will be Commission meeting next week on this - high level as its public. Closed meeting afterwards on agenda planning. Start out with status of Japan as background.

Position: EST Chronology Officer

(b)(5)

Name:	Rebecca Karas
Record:	1156
Facility:	
Source:	ET

Address/Location:	
Attachment:	

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Date/Time:	03/15/2011 19:56:24 (ET)	Need to start thinking about recommendations for what we should do domestically.
Position:	EST Chronology Officer	Need to look at GSI-199 and when its due.
Name:	Rebecca Karas	
Record:	1155	
Facility:		
Source:	Marty	

Address/Location:	
Attachment:	

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Date/Time:	03/15/2011 19:47:04 (ET)	Japanese have requested KI. US through DOE is tasked to do this.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	They have accepted our offer of aerial and ground monitoring.
Record:	1153	EST Chronology Officer - Rebecca Karas at 19:51:58 on 3/15/2011
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/15/2011 19:47:04 (ET)	Japanese have requested KI. US through DOE is tasked to do this.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1154	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

(b)(5)

Date/Time:	03/15/2011 19:35:47 (ET)	Finishing up hearing process with Chairman, and need 2 things prepared and ready by 0630 tomorrow. Need 10 copies of each, Bill will pick up at 0700. 1: update of NRC talking points (Chron ones). Also 10 copies of ops center status update.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1152	
Facility:		
Source:	Borchardt via phone	

Address/Location:	
Attachment:	

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Date/Time:	03/15/2011 19:33:59 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1151	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	

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Date/Time:	03/15/2011 19:31:48 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1150	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	

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Date/Time:	03/15/2011 18:50:30 (ET)	TEPCO is saying they havent yet started fire extinguishing Unit 4 fire. Fuel rods have been exposed and generating hydrogen in Unit 4. Some of roof is damaged, so helicopters could be used to inject water, or by fire engines. Not decided yet for sure because of difficulties.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1145	

30R/hr in area, so difficult for personnel to fight fire in area.
 EST Chronology Officer - Rebecca Karas at 18:54:55 on 3/15/2011

(b)(5)

Facility:	The 30R/hr is inside Unit 4. EST Chronology Officer - Rebecca Karas at 19:27:40 on 3/15/2011	
Source:	TEPCO via TV	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/15/2011 19:19:59 (ET)	Flight for staff got delayed. Most are 10pm. Casto about 12pm. Last person about 3am.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1148	
Facility:		
Source:	ET	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/15/2011 19:15:24 (ET)	INPO has issued document to industry, asking for 4 actions: confirm b5b, adequacy of SBO, and other two are related to safe flooding.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1147	
Facility:		
Source:	ET	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/15/2011 18:50:30 (ET)	TEPCO is saying they havent yet started fire extinguishing Unit 4 fire. Fuel rods have been exposed and generating hydrogen in Unit 4. Some of roof is damaged, so helicopters could be used to inject water, or by fire engines. Not decided yet for sure because of difficulties.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1149	
Facility:	30R/hr in area, so difficult for personnel to fight fire in area. EST Chronology Officer - Rebecca Karas at 18:54:55 on 3/15/2011	
Source:	TEPCO via TV	

(b)(5)

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 18:50:30 (ET)	TEPCO is saying they havent yet started fire extinguishing Unit 4 fire. Fuel rods have been exposed and generating hydrogen in Unit 4. Some of roof is damaged, so helicopters could be used to inject water, or by fire engines. Not decided yet for sure because of difficulties.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1146	
Facility:	
Source: TEPCO via TV	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 18:43:20 (ET)	State Dept. has confirmed fire on Unit 4.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1144	
Facility:	
Source: State Dept.	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 18:42:14 (ET)	Fire has not yet been contained.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1143	
Facility:	
Source: CNN Live	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 18:38:40 (ET)	TEPCO says another fire burning in Unit 4.in northeastern corner of 4 reactor building. Discovered 5:45am local time. Helicopter being prepared to fight fire.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1142	

(b)(5)

Facility:	
Source:	CNN Live
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time:	03/15/2011 18:22:49 (ET)
Position:	EST Chronology Officer
Name:	Rebecca Karas
Record:	1141
Facility:	
Source:	ET
New fire at Unit 4 reported on CNN. Requested by State Dept. to comment on.	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time:	03/15/2011 18:11:48 (ET)
Position:	EST Chronology Officer
Name:	Rebecca Karas
Record:	1140
Facility:	
Source:	ET
Need to make sure the Status update and Talking Points are consistent. Need to make sure we are still comfortable with the worst case analysis. Chairman needs this updated at 7:00.	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time:	03/15/2011 13:32:06 (ET)
Position:	EST Chronology Officer
Name:	Jessica Kratchman
Record:	1122
Facility:	
Source:	IAEA
Japan upped the rating from a 4 to a 6.	
This is inaccurate. The IAEA site continues to say Japan has classified as a 4.	
EST Chronology Officer - Rebecca Karas at 18:10:41 on 3/15/2011	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time:	03/15/2011 17:38:46 (ET)
Position:	EST Chronology Officer
Had conference call with Office Directors to support staffing in general. Want people to make commitment to support 4 days in a row. Getting mixed signals on who they need.	

(b)(5)

Name:	Rebecca Karas	Have Marty supplementing, but that is all now. Grobe: could use another leadership person for PMT. Should talk through staffing with Marty. Talking about switching out people in Japan every 2 weeks.
Record:	1138	
Facility:		
Source:	Discussion with Michelle E.	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/15/2011 17:28:46 (ET)	Teams are not aware of any plans to augment staff during daytime in Japan.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1137	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/15/2011 17:23:43 (ET)	Going to check to make sure we are supplementing Ops Center staff during daytime in Japan consistent with turnover instructions.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1136	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/15/2011 17:14:36 (ET)	ET turnover mentions needing to consider onsite transfers for our staff in-country. Seeking clarification on "onsite transfers".
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1135	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

(b)(5)

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/15/2011 16:23:33 (ET)	Starting to get data from AFB. Most of data is upwind, though. Flyover data should help, though.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1134	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/15/2011 16:18:40 (ET)	Rest of Commissioners want package provided to Borchardt & Chairman ASAP.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1133	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/15/2011 16:15:38 (ET)	DHS wants update to questions by 4:00. We were supposed to respond by now. Question for us is do we still believe no impact to US citizens in the US. Grobe: Tell them do not anticipate any health impacts. Just tell him answer is still yes.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1132	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/15/2011 16:06:10 (ET)	Narita is open. Our team should arrive at 9-10 tonight (delay at Heathrow).
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1131	
Facility:		
Source:	Liaison Team	

(b)(5)

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/15/2011 15:56:30 (ET)	<p>Jack updates: Continuing to work issues, no substantive change in plant conditions. Continue to have issues with 1-4. 4 is SFP level. Other 3 units appear more stable than yesterday. Continue to work rad support for our team. Trying to get more info on rad conditions.</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1130	
Facility:		
Source:	Borchardt call	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/15/2011 15:45:38 (ET)	(b)(5)
Position:	EST Chronology Officer	<p>What dosimetry would our team need, what doses they likely to see, what is protocol for dosimetry, and what would we recommend for members of the public (US citizens in Japan). Once teams are in place, can the NRC team serve as RSO for the US contingent. We said we could do if they need. Jack Foster is only HP going though. ET decides RSO function would come from HQ ops center. They want to know who is going to provide dosimetry to the entire US contingent. ET: DOD should handle. Also USAID may also have that covered. Need to check on whether we have KI or have to mail it? Naval Reactors is giving all their pilots KI each day, and admin limit of 300 mR/day. 160,000 US citizens there, in addition to DOD also. Heard airport now closed in Japan, not sure why. Will check with FAA.</p>
Name:	Rebecca Karas	
Record:	1129	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/15/2011 15:42:38 (ET)	<p>USAID mentioned that there are 174 members of USAID DART in Japan. DOD said attempting to keep vessels out of plume, but trying to continue to provide assistance needed by Japanese. Winds offshore next couple days, then onshore Sunday and Monday. EPA is continuing to use rad monitoring network, and continue to see nothing on it.</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1128	
Facility:		
Source:	ET	

Address/Location:	
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(b)(5)

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/15/2011 15:13:30 (ET)	Hearing at 9am tomorrow. Senator Boxer having meeting at 3pm (thinks its meeting with public?). GE working with TEPCO. Trying to secure 10 portable generators in US and get them to Japan. US working on providing equipment to Japanese. We provided 2 fire engines as requested. Liaison Team does briefings with USAID early in the am. ESF8 has call at 8 that Liaison Team does. RST setting up daily call with INPO at 10:30, since they are having daily call with CNOs at noon. INPO will tell CNOs to: Confirm continued effectiveness of B5B for all us plants, and w/in 30 days, confirm SBO readiness. Ambassador issued press release, and tells Americans to follow Japanese govt. instructions. We issued press release that is corrected.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1127	
Facility:		
Source:	ET	

(b)(5)

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/15/2011 14:40:24 (ET)	2pm meeting with Congressional Staffers.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1126	
Facility:		
Source:		

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/15/2011 14:07:33 (ET)	Includes a table of pressures and water levels. A comparison of these figures indicates water level in Unit 2 has dropped below fuel.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1125	
Facility:		
Source:	IAEA	

Address/Location:	
Attachment:	

(b)(5)

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 13:58:58 (ET)	Trying to set up 24 hour Japanese translation.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1124	
Facility:	
Source:	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 08:45:38 (ET)	Wants a press release saying we agree with PARs the Japanese are issuing. PMT will run calculations creating a basis for this determination. France has classified this event as a 6. Japan is still calling it a 4. EST Chronology Officer - Jessica Kratchman at 13:38:13 on 3/15/2011
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1096	
Facility:	
Source: State Department	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 13:32:06 (ET)	Japan upped the rating from a 4 to a 6.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1139	
Facility:	
Source: IAEA	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 12:59:06 (ET)	Confirmed that Unit 4 spent fuel pool definitely did not have a zirc fire. Correction: zirc EST Chronology Officer - Jessica Kratchman at 13:17:50 on 3/15/2011
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1119	
Facility:	
Source:	

(b)(5)

Source: GE

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 13:14:38 (ET) CA briefings will be at 8am and 8pm.
 Position: EST Chronology Officer
 Name: Jessica Kratchman
 Record: 1120
 Facility:
 Source:

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 12:59:06 (ET) Confirmed that Unit 4 spent fuel pool definitely did not have a zurc fire.
 Position: EST Chronology Officer
 Name: Jessica Kratchman
 Record: 1121
 Facility:
 Source: GE

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 12:52:30 (ET) Indication from GE that the spent fuel pool is not uncovered and there is 30 days left before the fuel will become uncovered.
 Position: EST Chronology Officer
 Name: Jessica Kratchman
 Record: 1118 (b)(5)
 Facility:
 Source: PMT

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 12:31:16 (ET) New earthquake near Hamaoka Reactors- no damage to reactors (5 units total, 2 decommissioned, 1 shutdown for inspection, 2 operating are OK).
 Position: EST Chronology Officer
 Name: Jessica Kratchman

(b)(5)

Record:	1117
Facility:	
Source:	State Department

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/15/2011 11:52:17 (ET)	CNN: US Navy is providing support.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1116	
Facility:		
Source:		

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/15/2011 11:50:24 (ET)	CNN: dangerous levels of radiation leaking.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1115	
Facility:		
Source:	CNN	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/15/2011 11:33:21 (ET)	Call from DHS- wants NRC to share our models with them.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1114	
Facility:		
Source:		

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/15/2011 11:24:44 (ET)	Tony and Jim Provided an update (b)(5)
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(b)(5)

Position:	EST Chronology Officer	(b)(5)
Name:	Jessica Kratchman	
Record:	1113	
Facility:		
Source:	EDO briefing	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/15/2011 11:23:33 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1112	
Facility:		
Source:	EDO Briefing	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/15/2011 11:06:51 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1111	
Facility:		NRC is trying to get better dose assessment data. US Navy is going to begin areal monitoring.
Source:	EDO Briefing	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/15/2011 10:50:05 (ET)	Q&A updated to support briefings today and tomorrow. Need prompt review.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1110	
Facility:		
Source:	Mike	

Address/Location:	
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(b)(5)

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 10:47:06 (ET)	Japanese asked for 2 fire trucks; they were delivered this morning; other equipment has been staged.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1109	
Facility:	
Source:	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 10:46:37 (ET)	(b)(5)
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1108	
Facility:	
Source: RMT	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 10:22:25 (ET)	Press release will be issued after	(b)(5)
Position: EST Chronology Officer	(b)(5)	
Name: Jessica Kratchman		
Record: 1107		
Facility:		
Source: Josh		

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 10:03:51 (ET)	Chairman wants data showing that we support Japanese PARs ASAP.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1106	
Facility:	

(b)(5)

Source: Chairman

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 09:55:47 (ET) INPO issuing guidance to US Plants to verify status of b.5.b equipment, and station

Position: EST Chronology Officer blackout preparations.

Name: Jessica Kratchman

Record: 1105

Facility:

Source:

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 09:53:29 (ET) Commissioner Ostendorf will be coming to Op Center at 11:30am.

Position: EST Chronology Officer

Name: Jessica Kratchman

Record: 1104

Facility:

Source: EDO/ INPO Meeting

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 09:42:38 (ET) INPO is staffing their Op Center.

Position: EST Chronology Officer

Name: Jessica Kratchman INPO Chief Nuclear Officers meeting today.

Record: 1103

Facility: INPO and NRC to set up Op Center to Op Center meetings.

Source: EDO mtg with INPO

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 09:33:49 (ET) PMT staffed with a fluent Japanese speaker, He will aid in reading rad level maps when

Position: EST Chronology Officer it is posted on the news.

Name: Jessica Kratchman

(b)(5)

Record:	1102
Facility:	
Source:	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/15/2011 09:15:52 (ET)	Staff is working on possible ways to get water to the spent fuel pool.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1101	
Facility:		
Source:	Mike to EDO	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/15/2011 09:09:41 (ET)	ET support staff calling Miriam Cohen/ Glen Tracey to identify Staff fluent in Japanese. Also, consider health and expertise of Staff members.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1100	
Facility:		
Source:		

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/15/2011 09:04:47 (ET)	PMD should consider if the core on the floor or the spent fuel pool status would influence the NRC to make different PARs then the Japanese are issuing.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1099	
Facility:		
Source:	PMD	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/15/2011 08:56:46 (ET)	French and UK call at 9:30 AM EDT;	(b)(5)
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(b)(5)

Position: EST Chronology Officer	(b)(5)
Name: Jessica Kratchman	
Record: 1098	
Facility:	
Source: PMT	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 08:48:06 (ET)	Staffing issues in the Op Center- may need to reach out to other NRC areas. May need to implement a shadowing approach for OJT.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1097	
Facility:	
Source:	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 08:45:38 (ET)	Wants a press release saying we agree with PARs the Japanese are issuing. PMT will run calculations creating a basis for this determination.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1123	
Facility:	
Source: State Department	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 08:44:58 (ET)	HR should identify Staff that can speak Japanese.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1095	
Facility:	
Source: Mike	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

(b)(5)

Date/Time: 03/15/2011 08:34:15 (ET)	1). Op Center should remained staffed as long as there are Staff in Japan. 2). Op Center technical staff should be supplemented while it is day time in Japan. 3). Need to consider on site transfers for staff in-country.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1094	
Facility:	
Source: EDO	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/15/2011 08:19:19 (ET)	OCA will be coordinating talking points for the EDO at his Congressional Briefing at 2pm today.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1093	
Facility:	
Source: OCA	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/15/2011 08:01:23 (ET)	OPA- the Q&As are being updated; recommended launching the Sharepoint site so Staff have a common product to refer to. NRC State and Local Liaisons were provided with information over the weekend that Chairman still considers valid. However, they are interested in getting the next version of the information. The chairman is still comfortable communicating that there is a low likelihood of harmful radiation.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1092	
Facility:	
Source: Chairman briefing	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/15/2011 07:58:44 (ET)	The Chairman would like the focus for today to be on deciding if the NRC trusts the
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(b)(5)

Position: EST Chronology Officer	PARs being made by the Japanese government. Should be checking the basis of PARs taken by the Japanese.
Name: Jessica Kratchman	
Record: 1091	
Facility:	
Source: Chairman briefing	

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 03/15/2011 07:49:31 (ET)	Chairman briefing begins.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1090	
Facility:	
Source:	

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 03/15/2011 07:17:09 (ET)	Microseverts has been confirmed by PMT as correct.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1089	
Facility:	
Source:	

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time: 03/15/2011 07:12:25 (ET)	<ul style="list-style-type: none"> *Fire due to lube oil not zirconium. * Hi dose rates measured between Units 3 and 4. Source is from the Unit 4 spent fuel pool. *Unit 2 is in better shape then they previously thought it was. *Unit 2 containment thought to be in tact.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1088	
Facility:	(b)(5)

(b)(5)

Source:	
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Address/Location:	
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Attachment:	
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~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/15/2011 07:10:42 (ET)	Differing reports, micro versus milliseverts.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1087	
Facility:		
Source:		

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/15/2011 06:31:55 (ET)	Japan sources report: Fukushima Daiichi Unit 2: cooling established, SRV repaired, water injected into core, containment integrity maintained Unit 4 SFP: level reduced and hydrogen explosion, fire caused by lube oil, fire burnt out, 40 R/hr between Units 2 and 4 earlier today. No info on other SFPs. Dan Dorman indicated possible diesel pump availability. Tony and Jim will work issue from their end. Ambassador is waiting on decision for protective action measures based on Japan reports on plant status. Front gate levels spiked at 11,000 microsieveverts and now about 600 microsieveverts. Switchgear damage at site might make additional pump hookup difficult. Report of 5 TEPCO employees received fatal exposure. Additional possible from explosions.
Position:	EST Chronology Officer	
Name:	Thomas Scarbrough	
Record:	1086	
Facility:		
Source:	Jim Trapp/Tony Ulises	

Address/Location:	
Attachment:	

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(b)(5)

Date/Time:	03/15/2011 06:02:13 (ET)	Dan Dorman:
Position:	EST Chronology Officer	Wind direction toward Tokyo but slowly shifting toward west over next 24 hours.
Name:	Thomas Scarbrough	Fukushima Daiichi:
Record:	1085	Units 1 and 3: Stable core cooling.
Facility:		Unit 2: Loud noise within containment followed by pressure drop from 3 to 1 atm and increasing radiation levels. Staff believes noise might indicate vessel failure but no official notification. Staff performed dose calculations based on ex-vessel core. Dose projections indicate 50 miles for Protective Actions Recommendations if wind remains in same direction. Less if wind shifts toward west. Previous 3 to 4 rem/hr levels near unit.
		Unit 4: Fire in SFP but reported out. Staff believes might have been zirconium fire. Previous 10 rem/hour level near unit.
		New gate level is 60 mrem/hr.
		No SFP level information.
		Japan protective actions:
		Evac 20 km
		Shelter 30 km
		No fly zone 30 km
		Chairman discussing with embassy possible evac out to 50 miles for US citizens.
		DOE rad team will arrive shortly.
		Defense Threat Agency reports several diesel pumps 75-150 psi available in Japan. Staff informing TEPCO.

Source:	Commissioners TA Brief	
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Address/Location:	
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Attachment:	
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This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/15/2011 05:48:36 (ET)	at 2:30 am EDT March 15, Fukushima Daiichi gate readings were 600 microsieverts per
Position:	EST Chronology Officer	hour
Name:	Thomas Scarbrough	
Record:	1084	
Facility:		
Source:	CNN	

(b)(5)

Address/Location:	
Attachment:	

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Date/Time: 03/15/2011 04:58:55 (ET)	Staff tracking down possible source of diesel pumps in Japan. Will check on fuel oil supply for those pumps.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1083	
Facility:	
Source: Staff	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 04:40:30 (ET)	IAEA reported in press release that fire in spent fuel pool at Fukushima Daiichi Unit 4 extinguished at 2200 EDT March 14
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1082	
Facility:	
Source: IAEA	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/15/2011 04:29:37 (ET)	Chuck Casto will stop at Region IV office to obtain KI for delivery to NRC staff in Japan
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1081	
Facility:	
Source: Chuck Casto	

Address/Location:	
Attachment:	

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Date/Time: 03/15/2011 01:27:22 (ET)	SFP: OK with Japan recommendations.
Position: EST Chronology Officer	
Name: Thomas Scarbrough	
Record: 1080	

[Redacted] (b)(5)

[Redacted] (b)(5)

Facility:	
Source:	PMT Brief
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/15/2011 00:02:18 (ET)	Contact AID to request help in providing KI to NRC team in Japan.
Position: EST Chronology Officer	(b)(5)
Name: Thomas Scarbrough	
Record: 1079	
Facility:	
Source: Chairman	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/14/2011 23:54:29 (ET)	State Dept requests
Position: EST Chronology Officer	1. Will release last hours, days or weeks?
Name: Thomas Scarbrough	2. Any plume projections with wind toward Tokyo?
Record: 1078	3. Any NRC evacuation recommendations?
Facility:	
Source: State Dept Telecon with staff	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	
Date/Time: 03/14/2011 23:30:33 (ET)	Jack Grobe provided info:
Position: EST Chronology Officer	Unit 1: core cooling stable, SFP cooling, fairly stable
Name: Thomas Scarbrough	Unit 2: core cooling not existed for some time, pumps have been deadheaded, loud sound inside drywell, primary containment 3 to 1 atm, primary containment not intact, possible substantial core melt, possible ex-vessel
Record: 1077	Unit 3: stable core cooling, no SFP info,
	Unit 4: SFP dry and appears to be zirc fire in SFP
	Units 5 and 6: no problems reported
	Japan govt: 20 miles evac and 30 km shelter winds now toward Toyko
(b)(5)	

Facility:	Unit 3: 2 to 4 R/hr site boundary Unit 4: 10 R/hour site boundary 9 NRC staff dispatched to Japan Chuck Casto will lead team in Japan upon arrival Chairman on call with White House DOE rad monitoring 7 hours before arrival in Japan NRC has limited field monitoring information
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Source:	Commissioners Assistants Telecon
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Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/14/2011 23:18:00 (ET)	(b)(5)
Position:	EST Chronology Officer	NRC provided unit status to NSC
Name:	Thomas Scarbrough	NRC monitoring protective measures
Record:	1076	NRC performing bounding analyses
Facility:		winds reported toward Tokyo
Source:	(b)(6) telecon	

Address/Location:	
Attachment:	

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Date/Time:	03/14/2011 22:56:54 (ET)	Unit 1 believe stable core cooling, no indication of SFP level issues, U2, do not have stable core cooling. Havent had quite a while. Believe had loud sound at U2, we believe ex-vessel breach. They also believe primary containment no longer intact. They did not directly tell us ex-vessel, but that is our judgement based on what we heard. Unit 2 - lost all AC, no injection, problems controlling SRV. They said 4mPA in vessel, so fire pump cannot push into that. They probably melted some fuel, got SRV open, melted more fuel. Loud sound we believe since it wasnt like sound on other units. Guess is probably when core went ex-vessel and landed outside in water in containment - steam explosion. Would make sense with containment pressure decreasing at same time. Unit 3: Have core cooling and too busv to confirm pool level.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1075	
Facility:		(b)(5) (b)(5) Believe had

(b)(5)

loud noise - not sure if U2 or U4 or both. Have fire in U4 SFP. Grobe: Prime minister said fuel is not on fire. Trapp: They dont have water level in SFP. Grobe: 10R/hr at site boundary near U4. Trapp: no known problems with 5 and 6. Grobe: This is no longer INES Level 4. Field monitoring info would be helpful. Casto is in air, other guys in air. Guys from RI and TTC should be in air, or shortly. Trapp: (b)(5)

(b)(5)

(b)(5)

Source: Jim Trapp

Address/Location:

Attachment:

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Date/Time:	03/14/2011 22:56:09 (ET)	10 R/hr outside Unit 4.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1074	
Facility:		
Source:	ET turnover info	

Address/Location:

Attachment:

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Date/Time:	03/14/2011 22:47:12 (ET)	Unit 4 zirc fire. Unit 2 is now ex-vessel.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1073	
Facility:		
Source:	ET	

Address/Location:

Attachment:

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Date/Time:	03/14/2011 22:28:50 (ET)	Small amount of neutron radiation detected at #3. 400 mSv around #4 reactor. This is likely to cause some impact to human health.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1072	
Facility:		

(b)(5)

Source: Japan official

Address/Location:

Attachment:

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Date/Time:	03/14/2011 22:07:48 (ET)	<p>#4 reactor is seeing a fire. At time of quake, #4 was out of operation. No fuel rods in reactor, but spent fuel still inside #4 reactor. Rods were heated and hydrogen generated. Hydrogen explosion has occurred on #4 reactor. Currently burning. UO2 also being released. #4 is housed on the outer building, so substances are coming from #4 reactor. #2 reactor: a blast heard this morning, 30 min after incident at #4 reactor. Hole was observed in #2 reactor, so we have been saying there was little possibility of hydrogen explosion. Part of the suppression chamber seems to have caused the sound of blast, and a little radioactive substance is thought to have escaped. 1, 2, 3 reactors water injection continuing and so far all 3 reactors cooling is effectively done. Next problem is maintaining cooling and dealing with #4. As of 1022am, between #2 and 3, 38 milliSv and 100 mSv at #4. So these are levels that can impact human health. Readings taken near are where release is happening. All but 50 directly involved in injection have been evacuated. Populace: 20 km radius evacuate, 30km radius, stay indoors.</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1070	
Facility:		

EST Chronology Officer - Rebecca Karas at 22:25:53 on 3/14/2011

Source: japan official

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/14/2011 22:07:48 (ET)	<p>#4 reactor is seeing a fire. At time of quake, #4 was out of operation. No fuel rods in reactor, but spent fuel still inside #4 reactor. Rods were heated and hydrogen generated. Hydrogen explosion has occurred on #4 reactor. Currently burning. UO2 also being released. #4 is housed on the outer building, so substances are coming from #4 reactor. #2 reactor: a blast heard this morning, 30 min after incident at #4 reactor. Hole was observed in #2 reactor, so we have been saying there was little possibility of hydrogen explosion. Part of the suppression chamber seems to have caused the sound of blast, and a little radioactive substance is thought to have escaped. 1, 2, 3 reactors water injection continuing and so far all 3 reactors cooling is effectively done. Next problem is maintaining cooling and dealing with #4. As of 1022am, between #2 and 3, 38</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1071	
Facility:		

(b)(5)

milliSv and 100 mSv at #4. So these are levels that can impact human health. Readings taken near are where release is happening. All but 50 directly involved in injection have been evacuated. Populace: 20 km radius evacuate, 30km radius, stay indoors.

Source:

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/14/2011 22:04:15 (ET)

asking people to remain indoors. Unit 2. Workers are putting themselves in very dangerous situation - doing that so we can avoid further radiation leakage.

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1068

Sheltering from 20-30 km.

Facility:

EST Chronology Officer - Rebecca Karas at 22:07:29 on 3/14/2011

Source: Prime Minister of Japan

Address/Location:

Attachment:

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Date/Time: 03/14/2011 22:04:15 (ET)

asking people to remain indoors. Unit 2 (b)(5)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1069

Facility:

Source: Prime Minister of Japan

Address/Location:

Attachment:

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Date/Time: 03/14/2011 21:55:20 (ET)

Need to start thinking about what equipment might be needed more long-term, like a couple of weeks from now.

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1067

Facility:

Source: ET

Address/Location:

(b)(5)

Attachment:

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Date/Time:	03/14/2011 21:53:03 (ET)	Correction: Higher readings from base were from helicopter en route to base, but not at base itself. HEPA filter reading was from base.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1066	
Facility:		
Source:	PMT	

Address/Location:

Attachment:

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Date/Time:	03/14/2011 21:49:16 (ET)	Unit 4 fuel on fire. Requesting boron.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1065	
Facility:		
Source:	TEPCO request via State	

Address/Location:

Attachment:

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Date/Time:	03/14/2011 21:42:51 (ET)	Navy contact recommends filling containment. He was suggesting he could lift fire trucks to site and fill containment. Chairman - get Trapp to confirm if thats an issue for them or not. But tell Naval contact to go ahead and push it if they can, because we agree injection should go into vessel also.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1064	
Facility:		
Source:	RST	

Address/Location:

Attachment:

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Date/Time:	03/14/2011 21:39:39 (ET)	Getting new numbers from the navy now. Trying to reconcile numbers. But RASCAL only calculates out to 50 miles. New numbers are 820-850 mR/hr at the gate. From 7pm to now its pretty stable. We dont know if they are actually new measurements, or if the source is repeating the old measurements.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1063	

(b)(5)

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Facility:	
Source: PMT	

Address/Location:	
Attachment:	
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Date/Time: 03/14/2011 21:15:15 (ET)	Admiral Donalds staff has called - they see it the same we do - he believes they have contacts over there that they can nudge to get water into containment in addition to reactor vessel.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1062	
Facility:	
Source: RST	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/14/2011 21:07:07 (ET)	Getting info from Navy Base that they are getting 20 mR TEDE and 120 mR thyroid in a 12 hour time period. We are running calculations to see what dose would be close to site. Seems to us that dose would be very high close to the site, and what PAR would be appropriate. Wondering if we could get in contact with some Exelon protective measures folks and run numbers by them.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1061	
Facility:	
Source: Chip Pardee	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/14/2011 21:01:38 (ET)	Radiation was 8217 microSv after blast. Some workers at Unit 2 now evacuating plant. Those leaving are not directly involved with injection.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1060	
Facility:	
Source: Japanese media	

Address/Location:	
Attachment:	
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Date/Time: 03/14/2011 20:56:05 (ET)	(b)(5)
Position: EST Chronology Officer	

(b)(5)

Name:	Rebecca Karas	(b)(5) We have some indication of U2 high dose readings at Daiichi - 3x background at front gate.
Record:	1058	
Facility:		Edit to information: (b)(5) We have some indication of U2 high dose readings at Daiichi - 3x background at front gate. EST Chronology Officer - Rebecca Karas at 20:58:39 on 3/14/2011
Source:	PMT	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/14/2011 20:56:05 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	We have some indication of U2 high dose readings at Daiichi - 3x background at front gate.
Record:	1059	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/14/2011 20:52:37 (ET)	Unable to measure wind direction nearby, due to quake. Northerly wind expected around NPP this morning. We do not know what has happened at U2 exactly.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1057	
Facility:		
Source:	TEPCO press brief	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/14/2011 20:40:05 (ET)	EDO is briefed on current situation. Aircraft carrier is 10 miles SW of Tokyo. Trying to confirm/understand measurements. He is 180 miles from the site. We have a disconnect in the data and information. DOE and Trapp are heading to PMs office to try and get more real-time information. Chip Purdie (Exelon) is in DC area, helping NEI, and can get
Position:	EST Chronology Officer	
Name:	Rebecca Karas	

(b)(5)

Record:	1056	to the people to help with analysis	(b)(5)
Facility:			
Source:	EDO bridge call		
Address/Location:			
Attachment:			

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Date/Time:	03/14/2011 20:21:52 (ET)	<p>Got information from Admiral from Navy base - indicates substantive detectable radiation at his base. We dont understand the information - can we contact the admiral or someone on his staff? (b)(5) He is looking to NRC for a recommendation. Wind shift was not long enough ago to carry contamination his way, though. Prime Minister wants us to come over and do independent assessment of the explosion. Alan/DOE is headed to PMs office with us. Told PM that we need to get down into facts of what happened. They believe explosion was different, and primary containment may have been breached.</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1055	
Facility:		
Source:	Jim Trapp	

Address/Location:			
Attachment:			

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/14/2011 20:20:55 (ET)	<p>Problem is our model does not really work well out that far. We may need to reach out to DOE.</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1054	
Facility:		
Source:	PMT	

Address/Location:			
Attachment:			

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Date/Time:	03/14/2011 20:16:32 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1053	
Facility:		
Source:	Jim Trapp call	

(b)(5)

Address/Location:	
Attachment:	
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Date/Time:	03/14/2011 20:12:58 (ET)	Radioactive materials have been dispersed. People should take precautions if they need to go outside. Radiation-guidelines are that at 5 microSv or above, you have to evacuate or stay indoors.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1052	
Facility:		
Source:	Japan Prime Minister	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/14/2011 20:09:33 (ET)	Jason, USAID wants to know whether to remove their people who are north of the area out. Jack: Were trying to understand the information were getting from the aircraft carrier, and also the Japanese. Based on earlier indications, the Japanese protective measures seemed reasonable, but the situation is evolving.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1051	
Facility:		
Source:	Jason, USAID	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/14/2011 20:04:37 (ET)	Discusses whether to evacuate embassy personnel, given wind change. We also have Americans living in Tokyo. We have aircraft carriers in the vicinity. The Japanese have issued no orders for Tokyo. PMT - we have some air sample values, plus navy reactors readings. Will try and see if they correlate. Chairman - need answer whether we concur with the protective action recommendations of Japan.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1050	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/14/2011 19:51:26 (ET)	Unit 2: Water injection operations will continue. Have heard that water level is not stable. Pumps are being used to inject seawater into reactor. Difficult to pump water into vessel, so pressure valve opened to permit water injection. Was explosive sound heard around suppression chamber, and pressure went down. Radiation up significantly in
Position:	EST Chronology Officer	
Name:	Rebecca Karas	

([Redacted])

Record: 1049	the area, so personnel were evacuative. Up to 965 micro-Sv in the immediate vicinity.
Facility:	Evacuees are ones not involved in water injection. Degree of leakage depends on whether its liquid or vapor. Fuel rods were exposed for some period of time.
Source: TEPCO news brief	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/14/2011 19:45:24 (ET)	2.7m of fuel rods are exposed at Unit 2. No. 1 and 3 reactors, operators have been ordered to evacuate.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1048	
Facility:	
Source: TEPCO	

Address/Location:	
Attachment:	
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Date/Time: 03/14/2011 19:37:20 (ET)	All dose projections have been from intact containment - damaged containment changes that. Still valid that PARs they have taken are consistent with ours. Question for PMT: now that its going inland, has Japan taken measures to protect injestion pathways? RST is going to try and figure out how failure could have happened.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1047	
Facility:	
Source: ET w/ Chairman	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/14/2011 19:33:49 (ET)	Unit 2: 6:14 am pressure began to fall in suppression pool. continuing injection into suppression pool, but operators not directly involved have been evacuated.
Position: EST Chronology Officer	
Name: Rebecca Karas	
Record: 1046	
Facility:	
Source: TEPCO news brief	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

(b)(5)

Date/Time:	03/14/2011 19:13:12 (ET)	Reports of new explosion at Daiichi - Unit 2.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1045	
Facility:		
Source:	ET	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/14/2011 17:51:19 (ET)	Confirmed Castos flight for 8:05pm, arriving in Japan at 1:30pm Wed. Car will take him directly to Embassy. Working on departures - probably 11:15 flight out of Dulles, arriving Wed. pm. Working on RI and TTC folks now. Brenner working on press release.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1044	
Facility:		
Source:	USAID staffers	

Address/Location:

Attachment:

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Date/Time:	03/14/2011 17:47:50 (ET)	(b)(5) higher pressure in reactor building could be from lifting of the drywell flange.
Position:	EST Chronology Officer	Ask Liaison Team reach out to USACE - Colonel Tom Smith - see if they can support us.
Name:	Rebecca Karas	
Record:	1043	
Facility:		
Source:	Marty	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/14/2011 17:37:54 (ET)	To Casto: Very important role for Japan and U.S. With team are there to help ambassador with anything needed.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1042	
Facility:		
Source:	Chairman Jaczko call	

Address/Location:

(b)(5)

Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/14/2011 17:35:36 (ET)	Jim Trapp got request from company, Millintech, initiated contact to donate neutron absorbers. ET: keep them on list, if Japan asks for that material, we will coordinate at that time.	
Position: EST Chronology Officer		
Name: Rebecca Karas		
Record: 1041		
Facility:		
Source: Liaison Team		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/14/2011 17:29:41 (ET)	Discuss need for full PMT due to wind shift.	(b)(5)
Position: EST Chronology Officer	(b)(5)	
Name: Rebecca Karas		
Record: 1040		
Facility:		
Source: Chairman Jaczko call		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/14/2011 17:24:08 (ET)	Discusses possible press release on NRC people going to Japan. Team of 9 people, 3 OIP, 6 technical. Casto will be working with Ambassador Roos as a single point of contact on reactor safety. Was charter developed for team and approved by Chairman. Borchardt will issue charter to Casto. Will prepare press release draft with this info. Q&As prepared to date have been shared to other agencies involved in this. Discussing making it more widely available throughout the agency.	
Position: EST Chronology Officer		
Name: Rebecca Karas		
Record: 1039		
Facility:		
Source: ET		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/14/2011 17:22:54 (ET)	Getting misc. congressional Qs, also from FEMA. What is NRC doing? What reactors near fault zones, etc. Farming them out across agency.	
Position: EST Chronology Officer		
Name: Rebecca Karas		
		(b)(5)

Record:	1038
Facility:	
Source:	Liaison Team

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/14/2011 17:20:51 (ET)	Coordinating flights of additional NRC employees to Japan. They will be going out tonight out of various airports in coordination with USAID.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1037	
Facility:		
Source:	Chairman call with Dudeck	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/14/2011 17:17:04 (ET)	Actions by Japanese seem consistent with ours, except we havent heard anything on ingestion pathway issues, but we may just not be hearing it, or it may be because the wind direction has been out to sea.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1036	
Facility:		
Source:	Call with Chairman	

Address/Location:	
Attachment:	

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Date/Time:	03/14/2011 17:05:59 (ET)	Been getting calls from health unit services. Working it through Liaison Team. Getting questions on what U.S. citizens in Japan would see in terms of radiation, what medical treatment needed, etc. Having problems staffing up PMT. Didnt staff up PMT completely over weekend. Wind direction is going to shift inland in next 6 hours. Need to staff PMT.
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1035	
Facility:		
Source:	PMT	

Address/Location:	
Attachment:	

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(b)(5)

Date/Time:	03/14/2011 16:52:44 (ET)	Continue to try and get a "what if" analysis of what equipment could be needed by Japanese. Were asked for equipment specs by military official. Took list of possible equipment and sent to GE. They have as-builts for when they built plant. They will help flesh out details so we can get it to people who could get them equipment. (b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1034	
Facility:		Also going to condense and provide to OPA to attach to back of briefing status document. Continue to maintain plant status. Getting emails from Jim Trapp asking for information. Working with Liaison Team. Maintaining RST plant status info. SFPs not on status update: going to add, including projection of how long before need makeup to SFP. We are not sure where exactly the fire water is being pumped in. We believe it is coming in from fire trucks.
Source:	RST	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/14/2011 15:52:23 (ET)	Ties in Jeff who conveys information from ambassador: NRC person in Japan could not be embedded or participate fully in crisis management. (b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1033	
Facility:		Marty: Would be helpful to be embedded.
Source:	(b)(6)	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/14/2011 15:46:59 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	RST needs to send SOARCA information to OSTP. EST Chronology Officer - Rebecca Karas at 15:50:22 on 3/14/2011
Record:	1031	
Facility:		
Source:	ET	

(b)(5)

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/14/2011 15:46:59 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1032	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/14/2011 15:38:29 (ET)	<p>Marty gives status overview: Unit 1: 6 hours ago, restored seawater injection. Believe core damage, but situation more stable. Unit 2: Have made a hole in the roof of containment so a combustible hydrogen limit doesnt build up. RCIC failed, but restored cooling via seawater injection. Unit 3, restored seawater injection. Containments functional for all 3 units. No concerns with SFP. Without AC and limited DC, need to keep eye on SFPs. Plant information via Tony onshift supporting ambassador in Japan. Working with USAID to coordinate on what additional equipment (like for B5B) might be useful for mitigation. Developed list. Also are sending staff from NRC led by Casto. Chuck will also coordinate the U.S. activities as it relates to the reactors. Havent issued any press releases today. Have been developing accident progression estimates. Developing Q&As, including addressing U.S. reactor safety.</p>
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1030	
Facility:		
Source:	Status Briefing	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/14/2011 15:24:05 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Rebecca Karas	
Record:	1029	
Facility:		<p>Marty: Made a hole in top of Unit 2 roof to allow hydrogen to escape. Brian: without forced ventilation, could still be pockets of hydrogen. Marty: Unit 3 same as U1, believe core damage, pumping seawater in. On Daini plants, still do not have a UHS, but stable at the moment. We</p>

(b)(5)

Facility: believe there are no immediate concerns with SFPs, but at some point, will need more water or cooling for them. We are sending experts to Japan (b)(6) Had tasked HHS with dose projections. Will tell HHS they can talk to NRC.

Source: (b)(5)

Address/Location:

Attachment:

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Date/Time: 03/14/2011 15:22:12 (ET) (b)(5)

Position: EST Chronology Officer

Name: Rebecca Karas

Record: 1028

Facility:

Source: ET

Address/Location:

Attachment:

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Date/Time: 03/14/2011 14:41:12 (ET) **Briefing for Hill staff:**

Position: EST Chronology Officer **Questions were raised about spent fuel pools and injuries/ over exposure of workers.**

Name: Jessica Kratchman

Record: 1027

Facility:

Source: Marty

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/14/2011 14:34:52 (ET) **Team has been established: Chuck Casto, John Monninger, Brooke Smith, Kirk Foggie, Tony Nakanishi, Tim Kolb, Jack Foster, Bill Cook, and Richard DeVercelly.**

Position: EST Chronology Officer

Name: Jessica Kratchman

Record: 1026

Facility:

Source: Erin Jackson

Address/Location:

Attachment:

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(b)(5)

Date/Time:	03/14/2011 14:31:15 (ET)	Invitation from NSS for NRC to participate in an inter agency meeting to discuss the US Governments role in the response efforts. Chairman has not heard much about this, EDO suggests we send someone of the SES level.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1025	
Facility:		
Source:		

Address/Location:	
Attachment:	

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Date/Time:	03/14/2011 14:29:32 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1024	
Facility:		
Source:	Chairman	

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/14/2011 14:27:25 (ET)	Team going to Japan is setup. Trying to get them airborne, but not sure when; not later than tomorrow morning.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1023	
Facility:		
Source:	Chairman/ EDO	

Address/Location:	
Attachment:	

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Date/Time:	03/14/2011 14:23:51 (ET)	USAID looking for equipment specs.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1022	
Facility:		
Source:	Laura	

Address/Location:	
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(b)(5)

Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/14/2011 14:16:08 (ET)	FEPCO provides new release.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	Should say TEPCO, not FEPCO
Record:	1020	EST Chronology Officer - Jessica Kratchman at 14:21:42 on 3/14/2011
Facility:		
Source:		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/14/2011 14:16:08 (ET)	FEPCO provides new release.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1021	
Facility:		
Source:		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/14/2011 14:08:03 (ET)	Unit 2 may have sea water restored. Mixed reports.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1019	
Facility:		
Source:	Tony	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/14/2011 13:57:44 (ET)	Considering extending offer to Ambassador to speak with the Chairman on the phone to discuss any questions/ concerns.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1018	
Facility:		

(b)(5)

Source:

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/14/2011 13:56:11 (ET)	Marty briefing Hill Staffers.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1017	
Facility:		
Source:	Marty	

Address/Location:

Attachment:

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Date/Time:	03/14/2011 13:40:41 (ET)	Press conference is officially over. Chairman on his way back to NRC HQ.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1016	
Facility:		
Source:		

Address/Location:

Attachment:

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Date/Time:	03/14/2011 13:09:00 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1015	
Facility:		
Source:	(b)(5)	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/14/2011 12:05:58 (ET)	Unit 2: confirmed that core uncovered about 2 m.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	

(b)(5)

Record:	1014
Facility:	
Source:	Dept. of State

Address/Location:	
Attachment:	
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Date/Time:	03/14/2011 11:54:55 (ET)	<p>Wants bottom line to communicate to Ambassador Roos: Based on RES SOARCA Analysis: Core could drop but we dont think containment will fail; not predicting a large release; nothing challenging their evacuation strategy.</p> <p>Assumption: containment will remain intact. This assumption depends on seawater level pumped in, and status of explosion.</p>
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1013	
Facility:		
Source:	Chairman	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/14/2011 11:19:16 (ET)	<p>The General of the USFJ is coordinating movement of equipment. The Ambassador and the General should determine who is in charge of this effort, NRC will support.</p>
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1012	
Facility:		
Source:	Nadar	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/14/2011 11:17:16 (ET)	<p>Get OIP assistance to help define mission expectations are.</p>
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1011	
Facility:		
Source:	Bill Borchardt	

Address/Location:	
Attachment:	

(b)(5)

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Date/Time:	03/14/2011 11:14:48 (ET)	12:30 PM EST,	(b)(5)
Position:	EST Chronology Officer		
Name:	Jessica Kratchman		
Record:	1010		
Facility:			
Source:			

Address/Location:	
Attachment:	

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Date/Time:	03/14/2011 11:12:18 (ET)	Chuck and the team need to be briefed and understand the expectations of their mission before they leave.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1009	
Facility:		
Source:		

Address/Location:	
Attachment:	

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Date/Time:	03/14/2011 11:08:52 (ET)	Tell USAID that Chuck Casto will be arriving from Atlanta. USAID wants to know his arrival time.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1008	
Facility:		
Source:	Bill Borchardt	

Address/Location:	
Attachment:	

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Date/Time:	03/14/2011 11:06:12 (ET)	From 10am meeting: want to know if radiation leaking on the ground? Marty- we cannot support dose assessments from the ground at this time.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1007	
Facility:		
Source:		

(b)(5)	
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Address/Location:	
Attachment:	
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Date/Time: 03/14/2011 11:02:38 (ET)	USAIDs legal issue with sending NRC experts to Japan- taken care of.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1006	
Facility:	
Source: Nadar	

Address/Location:	
Attachment:	
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Date/Time: 03/14/2011 10:58:49 (ET)	Marty spoke with EDO, they agreed on a list of four potential experts to fill the incident command position.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1005	
Facility:	
Source: Marty	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/14/2011 10:55:34 (ET)	NSA is reporting that 2 meters of fuel in Unit 2 is uncovered.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1004	
Facility:	
Source: Mark	

Address/Location:	
Attachment:	
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Date/Time: 03/14/2011 10:47:47 (ET)	President said that responding to this event is the highest priority in the country.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 1003	

(b)(5)

Facility:	
Source:	Jeff Temple

Address/Location:	
Attachment:	

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Date/Time:	03/14/2011 10:32:33 (ET)	Emailed initial equipment list to Jim Trapp.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1002	
Facility:		
Source:	Laura Dudes	

Address/Location:	
Attachment:	

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Date/Time:	03/14/2011 10:14:30 (ET)	Eric Leeds is going to identify four reactor safety experts by 11am. Margie suggests- Include an OIP Desk officer with the team, and in the embassy.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1001	
Facility:		
Source:	Eric Leeds	

Address/Location:	
Attachment:	

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Date/Time:	03/14/2011 10:03:51 (ET)	They need 6 NRC experts. <This contradicts the USAID request>.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	1000	
Facility:		
Source:	Jim Trapp	

Address/Location:	
Attachment:	

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Date/Time:	03/14/2011 09:44:42 (ET)	Reports on USAID meeting: Administrator Shaw requests direct communication with the Chairman; wants a list of necessary equipment; double the number of NRC people
Position:	EST Chronology Officer	

(b)(5)

Name: Jessica Kratchman	being sent to Japan; incident commander-looking for an NRC person.
Record: 999	
Facility:	
Source: Mike Dudek	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/14/2011 09:40:41 (ET)	Confirmation by Jim- there is no current issue with spent fuel pools.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 998	
Facility:	
Source: Jim Trapp	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/14/2011 08:55:52 (ET)	There is indication that Unit 2 has restored some level of sea water injection.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 997	
Facility:	
Source: NEI	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/14/2011 08:43:54 (ET)	Request for a list of Q and A responses to future media questioning.
Position: EST Chronology Officer	
Name: Jessica Kratchman	
Record: 996	
Facility:	
Source:	
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

(b)(5)

Date/Time:	03/14/2011 08:30:47 (ET)	Request for US NRC experts embedded in Japanese EOCs: NRC estimates a need for 6 individuals. NRR is creating a list of names. Request to have this list ready by the 9:30 conference call.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	995	
Facility:		
Source:		

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/14/2011 08:26:17 (ET)	NRC looking into b.5.b measures to come up with recommendations in case it comes to that. NRC also confirming whether tech assistance is needed in getting seawater from pit into the core. Will have this information ready in case it is requested.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	994	
Facility:		
Source:		

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/14/2011 08:07:29 (ET)	Call with Ambassador Roos office. Tepco and US Forces in Japan are working together to allocate firefighting equipment that is capable of pumping water from the ocean into the pits. ACTION: NRC is confirming that USFJ and Tepco are processing this request ASAP.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	993	
Facility:		
Source:	Ambassador Roos office	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/14/2011 07:10:40 (ET)	Chairman Confirmed 7:30am briefing in Operations Center. He wants to know status of situation and any issues with getting assets organized.
Position:	EST Chronology Officer	
Name:	Jessica Kratchman	
Record:	992	
Facility:		
Source:	Chairman	

(b)(5)

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/14/2011 06:17:36 (ET)	Jim called to notify the ET that he had received a request to embed NRC staff with Japans EOCs, which will require more staff being sent to Japan.
Position: EST Chronology Officer	
Name: Gregory Bowman	
Record: 991	
Facility:	
Source: Jim Trapp	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/14/2011 05:55:42 (ET)	Jim and Tony contacted the Operations Center to notify the team that Japan had requested assistance from the U.S. Assistance will be needed urgently.
Position: EST Chronology Officer	
Name: Gregory Bowman	Ambassador Roos will be initiating coordination of assistance, including possible assistance from the military.
Record: 990	
Facility:	
	NRC will prepare for coordination call by preparing ideas for re-initiating core injection, establishing core cooling, and recovering electrical power. NRC plans to reach out to GE and others in advance of a coordination call.
	Jim indicated that, based on time without injection, he believes it is unlikely the cores remain covered.
Source: Jim Trapp and Tony Uises	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/14/2011 04:16:05 (ET)	Received clarification to the status update posted at 3:01 AM on March 14: Reactor vessel water level was only reported for Unit 2. Level is above the TAF, but trending downward. Trends for Units 1 and 3 are unknown.
Position: EST Chronology Officer	
Name: Gregory Bowman	
Record: 989	
Facility:	

(b)(5)

Source: Jim Trapp and Tony Ulses

Address/Location:

Attachment:

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Date/Time: 03/14/2011 03:01:57 (ET)	From Jim and Tony in Tokyo at 2:30 AM EDT:
Position: EST Chronology Officer	
Name: Gregory Bowman	It appears that Fukushima-Daiichi has lost the "capability to cool." On Units 1 and 3, this is because the ability to refill the cooling water ponds they were taking a suction on to inject seawater into the reactor vessel and primary containment has been lost.
Record: 988	
Facility:	For Unit 2, it appears that they have lost the ability to operate RCIC. All three units have been in this state for the past 12 hours. Currently, all cores remain covered. However, reactor vessel level at all three units is trending in a downward direction at this time.

Source: Jim Trapp and Tony Ulses

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/14/2011 02:05:36 (ET)	Received communcation from Jim Trapp that cooling has been lost to all three units at Fukushima Daiichi.
Position: EST Chronology Officer	
Name: Gregory Bowman	
Record: 987	
Facility:	
Source: Jim Trapp	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/13/2011 23:42:12 (ET)	Completed call with Jim Trapp and Tony Ulses. Status update with the U.S. Embassy and Japan has been postponed as a result of the hydrogen explosion at Fukushima Daiichi Unit 3. The containment was confirmed to be intact. Japan continues to inject sea water to Units 1 and 3.
Position: EST Chronology Officer	
Name: Gregory Bowman	
Record: 986	

(b)(5)

Facility:		
Source: RST		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/13/2011 23:38:19 (ET)	Completed briefing for the Commission TAs and other NRC staff. Next briefing will be at 7:30 AM.	
Position: EST Chronology Officer		
Name: Gregory Bowman		
Record: 985		
Facility:		
Source: ET		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/13/2011 23:25:36 (ET)	Confirmed hydrogen explosion in the reactor building at Fukushima Unit 3.	
Position: EST Chronology Officer		
Name: Gregory Bowman		
Record: 984		
Facility:		
Source: LT		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/13/2011 22:24:30 (ET)	Reports of explosion at Fukushima Unit 3 reactor building at 11am JST. Possible Hydrogen explosion.	
Position: EST Chronology Officer		
Name: Alan Frazier		
Record: 983		
Facility:		
Source: Jim Trapp		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/13/2011 19:22:13 (ET)	Meeting with Japanese regulator has been postponed, new time TBD. Jim was able to confirm that last night Unit 3 lost cooling water due to a "transportation problem," and	
Position: EST Chronology Officer		

(b)(5)

Name:	Alan Frazier	pressure increased. The Japanese believe they have now restored cooling and decreased pressure. May be having instrumentation issues with Unit 3. Unit 3 remains their biggest concern.
Record:	982	
Facility:		
Source:	Jim Trapp and Tony Ulses	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/13/2011 19:00:41 (ET)	Tony called in from Tokyo, confirmed he received list of DOE questions. Will consider the questions during interactions with Japanese counterparts at 8:30am JST.
Position:	EST Chronology Officer	
Name:	Alan Frazier	
Record:	981	
Facility:		
Source:	Tony Ulses	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/13/2011 16:23:20 (ET)	Provided some dose information from Japanese. Data from Daiichi site. Will fax tomorrow from Embassy. Next meeting with Japanese counterparts Monday 8:30am JST.
Position:	EST Chronology Officer	
Name:	Alan Frazier	
Record:	980	
Facility:		
Source:	Jim Trapp	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/13/2011 15:32:51 (ET)	Status summary Fukushima Daiichi Units 1-3. USS Regan air sample data indicates contamination 100 nautical miles. Preparing for Congressional hearing Wednesday. Jim Trapp in Tokyo Tony Ulses delayed until Monday. Press release issued, another in the works.
Position:	EST Chronology Officer	
Name:	Alan Frazier	
Record:	979	
Facility:		
Source:	CA Brief	

Address/Location:	
Attachment:	

(b)(5)

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/13/2011 15:25:51 (ET)	Preparing new NRC press release supporting Japanese protective action
Position:	EST Chronology Officer	recommendations/ (b)(5)
Name:	Alan Frazier	(b)(5)
Record:	978	
Facility:		
Source:	(b)(5) and DOE	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/13/2011 15:22:13 (ET)	Provided confirming information regarding Fukushima Daiichi Units 1 - 3 after discussion with Japanese engineer. Unit 3 is of the most concern. Face to face meeting with Japanese engineer/regulators scheduled for 8:30am JST.
Position:	EST Chronology Officer	
Name:	Alan Frazier	
Record:	977	
Facility:		
Source:	Jim Trapp & Amb. Roos	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/13/2011 14:39:29 (ET)	DOE Secretary Chu suggests we send email requesting information/support to assess the situation.
Position:	EST Chronology Officer	
Name:	Alan Frazier	
Record:	976	Make air sample data (from Navy) and analysis available in next situation report. Add
Facility:		(b)(5)
Source:	Chairman	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/13/2011 14:22:46 (ET)	Press release issued 2pm.
Position:	EST Chronology Officer	
Name:	Alan Frazier	No harmful levels of radiation expected to reach US.
Record:	974	EST Chronology Officer - Alan Frazier at 14:32:32 on 3/13/2011
Facility:		

(b)(5)

Source: OPA

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/13/2011 14:22:46 (ET) Press release issued 2pm.
 Position: EST Chronology Officer
 Name: Alan Frazier
 Record: 975
 Facility:
 Source: OPA

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/13/2011 13:34:59 (ET) US Disaster Response Team and US Ambassador request list of questions to ask Japanese government. RST and PMT will provide on e-mail.
 Position: EST Chronology Officer
 Name: Alan Frazier
 Record: 972
 Facility: Trapp en route to Ambassadors residence for call with Japanese regulator and technical experts. Possible meeting later today.
 EST Chronology Officer - Alan Frazier at 13:41:55 on 3/13/2011
 Source: Jim Trapp

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/13/2011 13:34:59 (ET) US Disaster Reponse Team and US Ambassador request list of questions to ask Japanese government. RST and PMT will provide on e-mail.
 Position: EST Chronology Officer
 Name: Alan Frazier
 Record: 973
 Facility:
 Source: Jim Trapp

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/13/2011 13:21:24 (ET) Chairman call with (b)(6) action items: 1) Develop press release with message targeted at US Citizens in Japan, "follow the direction of Japanese

(b)(5)

Name:	Alan Frazier	government", protective actions consistent with US; 2) Get Jim Trapp to Embassy ASAP; 3) verify data from US Navy consistent with venting.
Record:	971	
Facility:		
Source:	(b)(5)	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/13/2011 11:25:50 (ET)	Navy informed Japanese Foreign Ministry of contamination encountered on US Navy and Japanese ships. Trying to find mechanism to get same information to METI, Japanese Ministry of Economy, Trade, and Industry. NR will try to work through US Embassy.
Position:	EST Chronology Officer	
Name:	Alan Frazier	
Record:	970	
Facility:		
Source:	DOE Naval Reactors	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/13/2011 10:16:49 (ET)	Received update from IAEA indicating reactor vessel water level for both Daiichi Units 1 and 3 below the top of active fuel (Unit 1 below indicating range and Unit 3 between 150 and 200 cm below the top of active fuel).
Position:	EST Chronology Officer	
Name:	Gregory Bowman	
Record:	969	
Facility:		
Source:	IAEA Update	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/13/2011 09:46:10 (ET)	Tony Ulises will not be able to make it to Tokyo until tomorrow due to a plane malfunction. Jim Trapp is working on getting to Tokyo now and meeting up with Ambassador Roos.
Position:	EST Chronology Officer	
Name:	Gregory Bowman	
Record:	968	
Facility:		
Source:	ET	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		

(b)(5)

669707

Date/Time: 03/13/2011 09:14:06 (ET)	Steve Troutman (NR) contacted the ET to discuss data obtained from the U.S.S. Ronald Reagan. The Navy obtained three portable air sample measurements at different times at 100 nautical miles with the following results: 7.5 x 10-9 uCi/ml (13:00), 3 x 10-9 uCi/ml (14:30), and 7.5 x 10-9 uCi/ml (17:00). In addition, at 130 nautical miles, beta/gamma shine was measured at 0.6 mrem/hr.
Position: EST Chronology Officer	
Name: Gregory Bowman	
Record: 967	
Facility:	
Source: Naval Reactors	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/13/2011 09:06:24 (ET)	Conducted 9:00 AM briefing with the Chairman to discuss status, including plans for (b)(5) and NRC press releases, the call with Admiral Donald and Deputy Secretary Poneman, and staff priorities.
Position: EST Chronology Officer	
Name: Gregory Bowman	
Record: 966	
Facility:	
Source: Chairman/ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/13/2011 08:30:34 (ET)	Received confirmation that Jim Trapp arrived in Japan. Working on establishing contact between Jim and the U.S. Embassy.
Position: EST Chronology Officer	
Name: Gregory Bowman	
Record: 965	
Facility:	
Source: LT	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/13/2011 07:41:23 (ET)	Conducted briefing of Commission offices and other NRC staff.
Position: EST Chronology Officer	
Name: Gregory Bowman	
Record: 964	
Facility:	
Source: ET	

(b)(5)	
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Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/13/2011 06:57:43 (ET)	Received call from Admiral Donald, Director of Naval Reactors. Coordinated call with Deputy Secretary Poneman. Navy ships operating approximately 50 miles offshore identified airborne contamination in excess of what they believe would be expected given available information (2.5 x 10 ⁻⁹ uCi/ml). Also, Navy personnel who ferried equipment to a Japanese ship came back contaminated on their shoes (2500 cpm). (b)(5) NRC PMT and NR agreed to coordinate to provide information to Japanese officials.
Position: EST Chronology Officer	
Name: Gregory Bowman	
Record: 963	
Facility:	
Source: Naval Reactors	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/13/2011 06:16:38 (ET)	Interagency teleconference held. The Disaster Assessment Response Team (DART) has arrived in Japan. The NRC learned that Tony Ulises is being flown to Tokyo for a meeting with Japanese authorities (NISA, JNES, etc.). He will then meet with Ambassador Roos to discuss messages to Americans in Japan. DART will decide on deployment of NRC staff in Japan after meetings tonight.
Position: EST Chronology Officer	
Name: Gregory Bowman	
Record: 962	
Facility:	
Source: LT/OIP	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/13/2011 05:20:07 (ET)	Update from TEPCO (12:00 PM JST): At Fukushima Daiichi Unit 3, TEPCO took action to reduce containment pressure and then reactor vessel pressure, and began injecting sea water and boric acid.
Position: EST Chronology Officer	
Name: Gregory Bowman	
Record: 961	
Facility:	
Source: TEPCO Update	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/13/2011 03:00:30 (ET)	Received confirmation that Tony Ulises has arrived in Japan at 14:23 local time.
Position: EST Chronology Officer	

(b)(5)

Name:	Gregory Bowman
Record:	960
Facility:	
Source:	OIP

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/13/2011 01:26:31 (ET)	OIP identified appropriate NISA contact (Neil) and per discussion with the Chairman, will provide this contact to (b)(6) for coordination.
Position:	EST Chronology Officer	
Name:	Gregory Bowman	
Record:	959	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/13/2011 00:37:06 (ET)	The Chairman contacted the ET to discuss results of the 11:30 PM call with (b)(5)
Position:	EST Chronology Officer	
Name:	Gregory Bowman	
Record:	958	
Facility:		
Source:	Chairman	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/12/2011 23:47:21 (ET)	Conducted briefing of Commission offices and other NRC staff. Next briefing will be at 7:30 AM EST.
Position:	EST Chronology Officer	
Name:	Gregory Bowman	
Record:	957	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

(b)(5)

Date/Time:	03/12/2011 23:15:00 (ET)	(b)(5)	No change from last
Position:	EST Chronology Officer	Situation Room briefing. Uncertainty remains on Unit 3 status. ET will send talking points to the Chairman for the 11:30 briefing.	
Name:	Gregory Bowman		
Record:	956		
Facility:			
Source:	ET		

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/12/2011 22:14:21 (ET)	Chairman contacted (b)(6)	to recommend proactive
Position:	EST Chronology Officer	communication from technical experts and offered NRC support.	
Name:	Gregory Bowman		
Record:	955		
Facility:			
Source:	ET		

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/12/2011 21:48:37 (ET)	US Ambassador to Japan called to request help crafting a message to all US citizens in
Position:	EST Chronology Officer	Japan.
Name:	Alan Frazier	
Record:	954	
Facility:		
Source:	Ambassador Roos	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/12/2011 21:46:21 (ET)	Will arrange a multi-agency call to share information and align messages. Time TBD.
Position:	EST Chronology Officer	
Name:	Alan Frazier	
Record:	953	
Facility:		
Source:	DOE Dep. Sec. Poneman	

(b)(5)

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/12/2011 21:18:18 (ET)	TEPCO informed Japanese Cabinet that Unit 3 water injection stopped and water level decreased exposing fuel. At 9:05pm JST able to inject water (not sea water). Added boric acid at 9:25pm JST and vented containment.
Position:	EST Chronology Officer	
Name:	Alan Frazier	
Record:	952	
Facility:		
Source:	Japan Chief Cabinet Secretary News Conference	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/12/2011 19:33:45 (ET)	Daiichi Unit 1 may be loosing water level. Possible problem with pump. NISA US Rep. Michael Chinworth. EST Chronology Officer - Alan Frazier at 19:53:57 on 3/12/2011
Position:	EST Chronology Officer	
Name:	Alan Frazier	
Record:	949	
Facility:		
Source:	NISA US Rep.	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/12/2011 19:48:21 (ET)	Call with (b)(6) and Chairman. Reports of problems with Unit 2.
Position:	EST Chronology Officer	Venting is normal process due to heat up of containment. Reactors operating using backup systems due to loss of offsite power. Provide name of technical expert to (b)(5) (b)(5) PA.
Name:	Alan Frazier	
Record:	950	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/12/2011 19:33:45 (ET)	Daiichi Unit 1 may be loosing water level. Possible problem with pump.
Position:	EST Chronology Officer	

(b)(5)

Name:	Alan Frazier
Record:	951
Facility:	
Source:	NISA US Rep.

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/12/2011 19:22:55 (ET)	Chairman Update. No progress with IAEA high-level contact but receiving updates. Developing high-level Q&As for 8pm review by Chairman. Next Chairman update 10pm. Next CA brief 11:30pm.
Position:	EST Chronology Officer	
Name:	Alan Frazier	
Record:	948	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/12/2011 17:36:19 (ET)	Status of Fukushima Daiichi NPS as of 2am JST (12pm EST) March 13: Unit 1 Reactor shutdown, subsequent explosion. Injecting sea water and boric acid into core. Unit 2 Reactor and RCIC shut down. Water level lower than normal but steady. Preparing to reduce vessel pressure. Unit 3 Reactor shut down. Continue to inject water by High Press Core Injection System. Preparing to reduce vessel pressure. No coolant leakage inside containment. Units 4-6 Reactors had been shut down with sufficient coolant. No coolant leakage inside containment.
Position:	EST Chronology Officer	
Name:	Alan Frazier	
Record:	947	
Facility:		
Source:	TEPCO	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/12/2011 15:54:49 (ET)	CA Brief. Status update. Information we have is still focused on Unit 1. Disaster response team in route, 2 NRC members. Outreach to IAEA. DHS interactions regarding consequence modeling. DOE assets staged in Las Vegas to do air monitoring. EPA monitoring west coast. May need to develop talking points for State liaisons.
Position:	EST Chronology Officer	
Name:	Alan Frazier	
Record:	946	
Facility:		
Source:	ET	

Address/Location:	
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(b)(5)

Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/12/2011 12:43:30 (ET)	Action items from (b)(5) deputies meeting: 1) Share NRC Q&As with
Position:	EST Chronology Officer	(b)(5) and DOE. 2) Establish communication with IAEA. 3) Outreach to States via liason
Name:	Alan Frazier	team.4) Continue to focus on timely and accurate communicaiton within the Federal
Record:	945	family.
Facility:		
Source:	Chairman	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/12/2011 12:40:41 (ET)	Senior Management status update. New Information: 40 GE Employees on site helping
Position:	EST Chronology Officer	with outage. 4 contaminated. DOS working to assist with evacuations. CA Brief
Name:	Alan Frazier	scheduled for 3:30pm.
Record:	944	
Facility:		
Source:	ET	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/12/2011 09:17:12 (ET)	U1 SBO using isocondenser plant. reached heat capacity limit of suppression pool.
Position:	EST Chronology Officer	drove pressure up to 120 psi. dose rates to CR went up 1000 time and 8 times at site
Name:	Margie Kotzalas	boundary. batteries hooked up. requested 4 EDGs. None hooked up yet. Hydrogen
Record:	943	explosion. Inside secondary containment, outside primary containment. Successfully
Facility:		vented primary containment. Reduced pressure by 50%. Dose rate 100mR/hr at
		boundary. Dropped to 7 mR/hr. Seen I and Cs which indicates fuel melt. In process of
		filling containment with borated sea water. Maintaining below design pressure of
		containment.
		U2 has not reached cold shutdown yet. Working to reduce temperature. Has RCIC
		system. Suppression pool at saturated temp. No indication that they are cooling
		suppression pool. No AC power.
Source:	(b)(6)	
Address/Location:		
(b)(5)		

Attachment:
 This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/12/2011 09:06:28 (ET)	Held call with Bill Webster, INPO. INPO has established link through WANO Tokyo and London Centers. INPO will provide update to CNOs. No request for assistance from WANO Tokyo or TEPCO. INPO incident response center is staffed and ready to assist if requested. CNOs indicated that they are ready to provide assistance.
Position: EST Chronology Officer	
Name: Margie Kotzalas	
Record: 942	
Facility:	
Source: (b)(6)	

Address/Location:
Attachment:
 This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/12/2011 08:58:05 (ET)	Mike Dudek reported to USAID. Jason Kozal reported to NOC
Position: EST Chronology Officer	
Name: Margie Kotzalas	
Record: 941	
Facility:	
Source: LT	

Address/Location:
Attachment:
 This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/12/2011 07:34:28 (ET)	Held CA brief
Position: EST Chronology Officer	
Name: Margie Kotzalas	
Record: 940	
Facility:	
Source:	

Address/Location:
Attachment:
 This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/12/2011 07:12:28 (ET)	1 NRC staff member en route to Japan, another member preparing to travel
Position: EST Chronology Officer	
Name: Margie Kotzalas	
Record: 938	
Facility:	

(b)(5)

Source: ET

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/12/2011 07:12:28 (ET) 1 NRC staff member en route to Japan

Position: EST Chronology Officer

Name: Margie Kotzalas

Record: 939

Facility:

Source: ET

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/12/2011 07:10:45 (ET) ET briefed NRC Chairman (b)(5)

Position: EST Chronology Officer (b)(5)

Name: Margie Kotzalas

Record: 937

Facility:

Source: ET

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/12/2011 06:30:43 (ET) ET briefed EDO

Position: EST Chronology Officer

Name: Margie Kotzalas

Record: 936

Facility:

Source:

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/12/2011 06:10:53 (ET) ET briefed (b)(6)

Position: EST Chronology Officer

Name: Margie Kotzalas

Source:

(b)(5)

Record:	935
Facility:	
Source:	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/12/2011 05:06:31 (ET)	NISA called IAEA and reported an explosion in the reactor building.
Position:	EST Chronology Officer	
Name:	Margie Kotzalas	
Record:	933	
Facility:		
Source:		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		

Date/Time:	03/12/2011 05:06:31 (ET)	NISA called IAEA and reported an explosion at the plant EST Chronology Officer - Margie Kotzalas at 06:11:07 on 3/12/2011
Position:	EST Chronology Officer	
Name:	Margie Kotzalas	
Record:	933	
Facility:		
Source:		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		

Date/Time:	03/12/2011 05:06:31 (ET)	NISA called IAEA and reported an explosion in the reactor building.
Position:	EST Chronology Officer	
Name:	Margie Kotzalas	
Record:	934	
Facility:		
Source:		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		

Date/Time:	03/12/2011 04:54:43 (ET)	NISA conducted press conference. No discussion of rad leaks. NISA expanded evacuation zone to 20 km. NOAA still tsunami advisory. Disaster Assistance Response Team on ground in Tokyo. Working with Japanese govt to prioritize search and rescue.
Position:	EST Chronology Officer	
Name:	Margie Kotzalas	
Record:	932	
Facility:		
Source:	LT debrief from 4 am call	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		

Date/Time:	03/12/2011 04:54:43 (ET)	NISA conducted press conference. No discussion of rad leaks. NISA expanded evacuation zone to 20 km. NOAA still tsunami advisory. Disaster Assistance Response Team on ground in Tokyo. Working with Japanese govt to prioritize search and rescue.
Position:	EST Chronology Officer	
Name:	Margie Kotzalas	
Record:	932	
Facility:		
Source:	LT debrief from 4 am call	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		

(b)(5)

Date/Time:	03/12/2011 04:50:03 (ET)	Briefed Chairman on status
Position:	EST Chronology Officer	
Name:	Margie Kotzalas	
Record:	931	
Facility:		
Source:		

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/12/2011 04:26:53 (ET)	Sent situation report to DHS
Position:	EST Chronology Officer	
Name:	Margie Kotzalas	
Record:	930	
Facility:		
Source:		

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/12/2011 04:12:40 (ET)	Informed Chairman of the loss of containment
Position:	EST Chronology Officer	
Name:	Margie Kotzalas	
Record:	929	
Facility:		
Source:		

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/12/2011 04:02:54 (ET)	(b)(5)	Calling Chairman.
Position:	EST Chronology Officer		
Name:	Margie Kotzalas		
Record:	928		
Facility:			
Source:	Media		

Address/Location:	
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(b)(5)

Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/12/2011 03:51:56 (ET)	Position: EST Chronology Officer	Resumed call with IAEA. Requested that IAEA let NISA know that we are standing by to provide assistance.
Name: Margie Kotzalas		
Record: 927		
Facility:		
Source: IAEA		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/12/2011 03:43:46 (ET)	Position: EST Chronology Officer	Held call with DOE. Asked for verification of DOE Tokyo email describing explosion. DOE said they were passing on information they saw in the media. DOE is not in contact with Japanese. They are getting information from media as well.
Name: Margie Kotzalas		
Record: 926		
Facility:		
Source: DOE - Dave Young & Dave Bowman		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/12/2011 03:36:26 (ET)	Position: EST Chronology Officer	Held phone call with IAEA to exchange facts as we know them. Explained that we have no contact with Japan. IAEA asked for our assessment. We stated that we cannot provide assessment without more facts.
Name: Margie Kotzalas		
Record: 925		
Facility:		
Source: IAEA		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time: 03/12/2011 01:00:04 (ET)	Position: EST Chronology Officer	Tony Ulises is on plane to Japan
Name: Margie Kotzalas		
Record: 924		
Facility:		

(b)(5)

Facility:		
Source:		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/12/2011 00:05:23 (ET)	Dan Dorman relieved Mike Weber
Position:	EST Chronology Officer	
Name:	Margie Kotzalas	
Record:	923	
Facility:		
Source:		
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/11/2011 23:59:03 (ET)	Unit 1 has core damage. In process of venting containment. Wind direction blowing to sea. Using fire trucks and batteries from vehicles to power pumps to get water into core.
Position:	EST Chronology Officer	
Name:	Margie Kotzalas	
Record:	922	
Facility:		
Source:	Chairman of JAEC	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/11/2011 23:16:06 (ET)	Units shut down. lost offsite power. EDGs started and ran for some time. 35 foot wave hit site. EDG fuel oil tanks above ground and got swept away. SBO. Unit 1 isocondenser plant. Unit 2 has RCIC. Been in SBO for 14 hours. Containment pressures risen substantially 80 psig in containment building. Excess of design pressure. Operators venting containment. Not clear whether successful. RST spoken with GE support facility and Exelon. Running simulator scenarios to get handle on timing. RST determined that if SBO continues unabated, there will be core damage. If containment pressure worsens, will need to vent to prevent catastrophic failure. Hypothesize will rate at INES Level 3. (b)(5) USAID putting together team of tech assistants from federal family to get on military flight to travel to Japan. Tony Ulises will attempt to make military flight that leaves tonight. Japanese govt interested in
Position:	EST Chronology Officer	
Name:	Margie Kotzalas	
Record:	921	
Facility:		

(b)(5)

getting engineering assistance from US. Developed series of Q&As. Staff working shift work. Just completed turnover at 11 pm. Will do another at 7 am. Will continue to support event.

Source: CA brief

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 23:00:19 (ET)

Chairman requests next Chairman Briefing at 0700 EST

Position: EST Chronology Officer

Name: Kevin Witt

Record: 920

Facility:

Source: ET Briefing for Chairman

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 22:58:25 (ET)

General assessment that the situation is deteriorating although limited information from site, (b)(5)

Position: EST Chronology Officer

Name: Kevin Witt

Record: 919

Facility:

Source: ET Brief for Chairman

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 22:56:50 (ET)

CA Brief scheduled for 2315 EST

Position: EST Chronology Officer

Name: Kevin Witt

Record: 918

Facility:

Source: ET Brief for Chairman

Address/Location:

Attachment:

(b)(5)

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 22:54:36 (ET)	- Discussion on doing analysis for Unit 1 or Unit 2; Unit 1 is closer to Oyster Creek; Unit 2 is more likely to have significant damage; Staff still analyzing whether to do Unit 1 or 2
Position: EST Chronology Officer	
Name: Kevin Witt	
Record: 917	
Facility:	
Source: ET Brief for Chairman	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 22:51:56 (ET)	- Discussion on sharing information with other National Regulators
Position: EST Chronology Officer	(b)(5)
Name: Kevin Witt	
Record: 916	
Facility:	
Source: ET Brief for Chairman	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 22:49:26 (ET)	- Alternate NRC rep identified to be on flight to Japan tonight
Position: EST Chronology Officer	- Chairman requests staff to do everything possible to get the alternate rep on the flight
Name: Kevin Witt	
Record: 915	
Facility:	
Source: ET Briefing for Chairman	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 22:43:38 (ET)	- Jim Trap is NRC rep to be sent to Jap
Position: EST Chronology Officer	- Part of US team for USAID
Name: Kevin Witt	- Military Flight to depart within the hour and NRC rep cannot make the flight (Wheels up at 1130)
Record: 914	
Facility:	- Chairman requests NRC rep to be on the flight/team

(b)(5)

Source: ET Brief for Chairman

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 22:42:31 (ET)	Chairman requests summary of plant status and current evaluation activities being done by NRC and GE
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	913	
Facility:		
Source:	ET - Chairman Brief	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 22:39:32 (ET)	<ul style="list-style-type: none"> - With current status and no intervening actions, potential for release at 0000 on 3/12 - GE says that there is no power around the plant site (unconfirmed) - Chairman requests that we confirm status of the reactor and power availability
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	912	
Facility:		
Source:	ET - Chairman update	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 22:29:31 (ET)	<ul style="list-style-type: none"> - Discussed communication strategy - Not much technical information received regarding plant status - RST communicating with GE; GE not in touch with Japanese - No formal request from Japanese government for engineering assistance
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	911	
Facility:		
Source:	ET - Chairman Brief	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 22:29:10 (ET)	Briefing for Chairman commencing
Position:	EST Chronology Officer	
Name:	Kevin Witt	

(b)(5)

Record:	910	
Facility:		
Source:	ET - Brief for Chairman	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/11/2011 22:13:25 (ET)	Situation has been assigned on the International Event Scale (INES) a 3 Maximum is 7
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	909	
Facility:		
Source:	ET brief from RST	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/11/2011 22:09:02 (ET)	All commercial flights to Japan are cancelled at this time Military flight will be departing to Japan tonight at approximately 2300 EST Will not be able to send NRC rep on that flight due to travel from R-III site and passport Planning to send NRC Rep to Japan morning of 3/12 on commercial flight
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	908	
Facility:		
Source:	ET update from LT	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/11/2011 21:28:08 (ET)	- Communication with GE still being pursued - Status updates being generated
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	907	
Facility:		
Source:	ET Brief from RST	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/11/2011 21:25:44 (ET)	Request from French Nuclear Regulator (ASN) for information about situation at

(b)(5)

686707

Position:	EST Chronology Officer	Japanese power plants; ET request contact be handled through OIP
Name:	Kevin Witt	
Record:	906	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/11/2011 21:21:25 (ET)	- Q&A are getting closer to completion - more technically oriented
Position:	EST Chronology Officer	
Name:	Kevin Witt	(b)(5)
Record:	905	
Facility:		(b)(5)
Source:	ET Brief from OPA	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/11/2011 20:36:21 (ET)	LT to coordinate with Department of State to coordinate assistance with Japans request for engineering support
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	904	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/11/2011 20:34:22 (ET)	- Chairman request staff to reengage Exelon and GE
Position:	EST Chronology Officer	- OIP offered NRC support to NISA and JNES
Name:	Kevin Witt	
Record:	903	
Facility:		
Source:	ET update with Chairman	

Address/Location:	
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(b)(5)

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 20:27:11 (ET)	- General Cartwright discussion with Japans Chief of Defense
Position:	EST Chronology Officer	- No need for assistance with aerial measurements
Name:	Kevin Witt	- Need engineering assistance from US (request will come through ambassador); Very
Record:	901	important that it comes to NRC and DOE, but NRC may have more relevant experience
Facility:		- DOE does not have expansive civil nuclear expertise
		Offered to coordinate assistance with GE, NRC to take lead with coordination EST Chronology Officer - Kevin Witt at 20:33:09 on 3/11/2011
Source:	ET Call with DAgostino	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 20:27:11 (ET)	- General Cartwright discussion with Japans Chief of Defense
Position:	EST Chronology Officer	- No need for assistance with aerial measurements
Name:	Kevin Witt	- Need engineering assistance from US (request will come through ambassador); Very
Record:	902	important that it comes to NRC and DOE, but NRC may have more relevant experience
Facility:		- DOE does not have expansive civil nuclear expertise
Source:	ET Call with DAgostino	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 20:13:19 (ET)	NRC to send rep to Japan on flight scheduled for 3/11 organized by USAID
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	900	
Facility:		
Source:	ET - LT update	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 19:58:36 (ET)	- Engineering building at Fugushima is collapsed
Position:	EST Chronology Officer	- Communications are difficult, no land lines, some cell phones, but difficult to reach

(b)(5)

688/707

Name: Kevin Witt	people
Record: 897	
Facility:	<ul style="list-style-type: none"> - Wave when it hit the site was approximately 35 feet - All equipment is above grade (no buried tanks or piping) <p>EST Chronology Officer - Kevin Witt at 20:01:45 on 3/11/2011</p> <ul style="list-style-type: none"> - Site has Event based EOPs (not system based) <p>EST Chronology Officer - Kevin Witt at 20:07:49 on 3/11/2011</p>
Source: ET Call with GE and Exelon	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 19:58:36 (ET)	- Engineering building at Fugushima is collapsed
Position: EST Chronology Officer	- Communications are difficult, no land lines, some cell phones, but difficult to reach people
Name: Kevin Witt	people
Record: 899	
Facility:	<ul style="list-style-type: none"> - Wave when it hit the site was approximately 35 feet - All equipment is above grade (no buried tanks or piping) <p>EST Chronology Officer - Kevin Witt at 20:01:45 on 3/11/2011</p>
Source: ET Call with GE and Exelon	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 19:58:36 (ET)	- Engineering building at Fugushima is collapsed
Position: EST Chronology Officer	- Communications are difficult, no land lines, some cell phones, but difficult to reach people
Name: Kevin Witt	people
Record: 898	
Facility:	
Source: ET Call with GE and Exelon	

(b)(5)

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/11/2011 19:50:31 (ET)	<ul style="list-style-type: none"> - Aware that Exelon is running some situations for GE (operating procedures and severe accident guidelines) - GE is staffing to run 24 hour support for Fugushima - GE has 70 staff at reactor site for refueling support - Fugushima is similar to Quad Cities and Dresden - No offsite power within 1 hour of shutdown due to earthquake damage - Severe accident manahgement guides were provided to Fugushima - Simulator was run with certain parameters - was not close to actual containment response - Exelon is offering any type of support to Fugushima if they receive updated simulator info
Position: EST Chronology Officer	
Name: Kevin Witt	
Record: 896	
Facility:	
	(b)(5)
Source: ET Call with GE and Exelon	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/11/2011 19:34:16 (ET)	Conference call with GE Support and VP of Exelon scheduled for 1945 to provide their knowledge of the situation
Position: EST Chronology Officer	
Name: Kevin Witt	
Record: 895	
Facility:	
Source: ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/11/2011 19:30:56 (ET)	RST and LT working on general questions and answers
Position: EST Chronology Officer	
Name: Kevin Witt	
Record: 894	
Facility:	

(b)(5)

Source: ET

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 19:17:40 (ET) FEMA Region IX and X are receiving questions about large radiation release at

Position: EST Chronology Officer Fugushima site

Name: Kevin Witt

Record: 893

Facility:

Source: ET

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 19:12:50 (ET) Chairman requests next briefing between 2200 and 2300 EST

Position: EST Chronology Officer

Name: Kevin Witt

Record: 892

Facility:

Source: ET - Chairman call

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 19:10:54 (ET) Update from Deputy call

Position: EST Chronology Officer - Misinformation among Federal family; nobody

Name: Kevin Witt - Continue to proactively reach out to counterparts in Federal Government

Record: 891 - No speculation or hypothesis

Facility:

Source: ET - Chairman call

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 19:09:57 (ET) Chairman requests information about current status and FAQs by 11pm

Position: EST Chronology Officer

Name: Kevin Witt

(b)(5)

Record:	890
Facility:	
Source:	ET - Chairman update
Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/11/2011 18:59:34 (ET)	-Chairman took action to find out better information
Position:	EST Chronology Officer	-Main discussion centered around minimal available information
Name:	Kevin Witt	- How to facilitate information sharing
Record:	888	DOE preparing to respond with radiation monitoring supplies
Facility:		- Communications plan will be developed - NRCC is scaling down, skeleton crew overnight and through the weekend
Source:	ET - Update from NRCC	NRC Rep at NRCC and is planning to leave; Will leave contact info at NRCC EST Chronology Officer - Kevin Witt at 19:04:08 on 3/11/2011

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/11/2011 18:59:34 (ET)	-Chairman took action to find out better information
Position:	EST Chronology Officer	-Main discussion centered around minimal available information
Name:	Kevin Witt	- How to facilitate information sharing
Record:	889	DOE preparing to respond with radiation monitoring supplies
Facility:		- Communications plan will be developed - NRCC is scaling down, skeleton crew overnight and through the weekend
Source:	ET - Update from NRCC	

Address/Location:	
Attachment:	

~~This information is Official Use Only - Sensitive Internal Information.~~

Date/Time:	03/11/2011 18:45:53 (ET)	Diablo Canyon has exited from NOUE due to cancellation of tsunami warning
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	887	

(b)(5)

Facility:	
Source:	HOO

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 18:33:30 (ET)	Report - 10 km radius evacuation at Fukushima
Position:	EST Chronology Officer	Small amount of radiation leaking
Name:	Kevin Witt	8x normal rad levels at plant gate
Record:	886	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 18:31:59 (ET)	WANO report - containment pressure at 100 psi, failure is possible at 120 psi
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	885	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 18:23:03 (ET)	USAID looking for interpretation of technical data and reports from TEPCO and other sources; need to understand how to communicate through established mechanisms (such as NRCC)
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	884	
Facility:		
Source:	ET - Update from USAID Mtg	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 18:19:01 (ET)	Report from TEPCO that pressure control is lost in three units - unconfirmed
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Position:	EST Chronology Officer
Name:	Kevin Witt
Record:	883
Facility:	
Source:	ET
Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/11/2011 18:14:20 (ET)	Next CA Briefing scheduled for 2315 EST
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	882	
Facility:		
Source:	ET - CA Brief	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/11/2011 17:30:10 (ET)	Commissioners Assistants Brief
Position:	EST Chronology Officer	(b)(5)
Name:	Kevin Witt	-RST briefed assesment for station blackout and info obtained from TEPCO and IAEA
Record:	881	press releases
Facility:		-NRC supporting meeting at USAID and Department of State -Exelon supporting GE with simulation using Dresden and Quad Cities models (source: RIII) -INPO and NEI communicating with counterparts in Japan -NRC Operations Center preparing for reduced staff monitoring overnight
Source:	ET - CA brief	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/11/2011 16:53:43 (ET)	News report that radiation is 1000x normal - possible venting of containment; hard to
Position:	EST Chronology Officer	know for sure what the situation is without direct communication from Japanese
Name:	Kevin Witt	

(b)(5)

Record: 878	Potential mix up in Unit identification; Unit 1 should be inherently safe
Facility:	EST Chronology Officer - Kevin Witt at 16:56:12 on 3/11/2011
	Fukushima Unit 1
	EST Chronology Officer - Kevin Witt at 16:56:56 on 3/11/2011
Source: ET - RST Update	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/11/2011 16:53:43 (ET)	News report that radiation is 1000x normal - possible venting of containment; hard to know for sure what the situation is without direct communication from Japanese
Position: EST Chronology Officer	
Name: Kevin Witt	
Record: 880	Potential mix up in Unit identification; Unit 1 should be inherently safe
Facility:	EST Chronology Officer - Kevin Witt at 16:56:12 on 3/11/2011
Source: ET - RST Update	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/11/2011 16:53:43 (ET)	News report that radiation is 1000x normal - possible venting of containment; hard to know for sure what the situation is without direct communication from Japanese
Position: EST Chronology Officer	
Name: Kevin Witt	
Record: 879	
Facility:	
Source: ET - RST Update	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/11/2011 16:42:07 (ET)	NRCC fully staffed
Position: EST Chronology Officer	1700 briefing
Name: Kevin Witt	Level 1 status - potential deescalation to Level 2 or 3 (everybody but emergency personnel at 1800)
Record: 877	
Facility:	
Source: ET - NRCC Update	

(b)(5)

Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/11/2011 16:32:55 (ET)	Chairman briefing scheduled for 1715EST Commissioner Assistant Brief at 1700 EST EST Chronology Officer - Kevin Witt at 16:41:06 on 3/11/2011
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	875	
Facility:		
Source:	ET	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/11/2011 16:32:55 (ET)	Chairman briefing scheduled for 1715EST
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	876	
Facility:		
Source:	ET	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/11/2011 16:10:54 (ET)	SITREP updated from R-IV and IAEA information; will be incorporated into Executive briefing book
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	874	
Facility:		
Source:	ET	
Address/Location:		
Attachment:		
<i>This information is Official Use Only - Sensitive Internal Information.</i>		
Date/Time:	03/11/2011 15:59:05 (ET)	Chairman requested NRC staff to attend USAID Meeting at Reagan Building
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	873	

(b)(5)

Facility:	
Source:	ET

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 15:36:27 (ET)	IAEA update - 1.3 meters water level in Fukushima Unit 1 Vessel
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	872	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 15:33:56 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	871	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 15:23:23 (ET)	Discussion of staffing for ops center; will need to continue monitoring for the near term
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	870	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 15:08:57 (ET)	Request from USAID - identify potential group of federal government staff to deploy to Japan if they request help
Position:	EST Chronology Officer	

(b)(5)

Name:	Kevin Witt
Record:	869
Facility:	
Source:	ET - OPA update

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 15:06:58 (ET)	1505 EST - HQ takes lead for monitoring
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	868	
Facility:		
Source:	ET - RIV Update	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 14:59:12 (ET)	Several Inquiries from Congressional offices about status of NRC activities; NRC staff are sharing information
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	867	
Facility:		
Source:	ET - LT update	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 14:53:43 (ET)	Stand down RIV IRC; RIV staff still maintain cognizance on international perspective
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	866	
Facility:		
Source:	ET - RIV Update	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Address/Location:	
Attachment:	

(b)(5)

Date/Time:	03/11/2011 14:51:57 (ET)	Threat to R-IV licensees is diminished
Position:	EST Chronology Officer	Waves at Diablo are still within acceptable levels
Name:	Kevin Witt	
Record:	865	
Facility:		
Source:	ET - RIV update	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 14:32:13 (ET)	Discussion from Japanese rep about opening Fukushima Unit 1 vessel to relieve pressure (unconfirmed)
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	864	
Facility:		
Source:	ET - Japanese Rep	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 14:29:02 (ET)	Length of Japanese earthquake fault is approximately 200-300 km
Position:	EST Chronology Officer	Assumed GM magnitude (design basis) is 7.7, actual magnitude was 8.8
Name:	Kevin Witt	
Record:	863	
Facility:		
Source:	ET - Japanese Rep	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 14:06:50 (ET)	Update from Liaison Team:
Position:	EST Chronology Officer	-Continuing to try to confirm statement from State Department regarding delivery of coolant
Name:	Kevin Witt	
Record:	862	-Have the Japanese reactors exceeded their design basis? Still pursuing...
Facility:		-Data regarding Fukushima is being obtained
		-US Department of Health and Human Services (HHS) is requesting information about is the US government doing anything to assure the availability of KI for sensitive

(b)(5)

individuals should there be release of radioactive material; have we been asked for international assistance?

Source: ET - LT update

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 13:43:57 (ET) Discussed option of R-IV standing down response mode due to minimal impact on NRC licensees and HQ taking lead for liaison activities

Position: EST Chronology Officer

Name: Kevin Witt

Record: 861

Facility:

Source: ET

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 13:20:07 (ET) LT is partially staffed working with federal partners and FEMA's radiological emergency rep

Position: EST Chronology Officer

Name: Kevin Witt

Record: 860

Facility:

Source: ET

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 13:16:55 (ET) TEPCO website indicates LOCA report at Fukushima

Position: EST Chronology Officer

Name: Kevin Witt

Record: 859

Facility:

Source: ET

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 13:12:10 (ET) Fire in turbine building has been extinguished;

(b)(5)

Position:	EST Chronology Officer	Diesel generators are not operable; 3.4 meters of water above fuel level Japanese declared "Heightened State of Emergency" with precautionary evacuations No official reports of radiation leakage; News reports indicate radiation levels increasing
Name:	Kevin Witt	
Record:	858	
Facility:		
Source:	ET - OIP briefing	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 13:10:04 (ET)	14 operational BWRs near location of earthquake; 11 units were operating, all have been shut down
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	857	
Facility:		
Source:	ET - OIP briefing	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 13:09:06 (ET)	Materials users and Humboldt Bay, agreement states have been contacted; No effects from tsunami reported
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	856	
Facility:		
Source:	ET - R-IV briefing	

Address/Location:

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 13:05:58 (ET)	NOUE declared at Diablo canyon as of 0423 PST Some precautionary measures have been implemented; 2 foot waves observed EST Chronology Officer - Kevin Witt at 13:08:01 on 3/11/2011
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	853	
Facility:		
Source:	ET	

(b)(5)

701/707

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/11/2011 13:07:26 (ET)	SONGS did not enter any EALs; operating normally
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	854	
Facility:		
Source:	ET - R-IV Briefing	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/11/2011 13:05:58 (ET)	NOUE declared at Diablo canyon as of 0423 PST
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	855	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/11/2011 13:04:21 (ET)	Commissioners Assistants Briefing underway
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	852	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/11/2011 13:02:11 (ET)	NRC Staff is filling in at National Resource Coordination Center
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	851	

(b)(5)

Facility:	
Source:	ET

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/11/2011 12:51:51 (ET)	Cable from US Ambassador with concerning statements about Japanese reactors - question whether reactor will maintain water level (possibility for uncovering core)
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	850	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/11/2011 12:17:14 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	849	
Facility:		
Source:		

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/11/2011 12:00:03 (ET)	next briefing scheduled for 1:00pm EST
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	848	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time:	03/11/2011 11:39:31 (ET)	R-IV does not request HQ support
Position:	EST Chronology Officer	

(b)(5)

Name: Kevin Witt	for incident response support
Record: 846	EST Chronology Officer - Kevin Witt at 11:40:46 on 3/11/2011
Facility:	
Source: ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/11/2011 11:39:31 (ET)	R-IV does not request HQ support
Position: EST Chronology Officer	
Name: Kevin Witt	
Record: 847	
Facility:	
Source: ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/11/2011 11:35:22 (ET)	2-3 foot water rise expected at Diablo, well within tidal fluctuation that can be handled
Position: EST Chronology Officer	
Name: Kevin Witt	
Record: 845	
Facility:	
Source: ET	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

Date/Time: 03/11/2011 11:16:43 (ET)	Crisis action team has not requested NRC support
Position: EST Chronology Officer	
Name: Kevin Witt	
Record: 844	
Facility:	
Source: LT liaison	

Address/Location:	
Attachment:	
<i>This information is Official Use Only - Sensitive Internal Information.</i>	

(b)(5)

Date/Time:	03/11/2011 11:09:56 (ET)	Japanese representative has left ops center
Position:	EST Chronology Officer	
Name:	Kevin Witt	Next briefing scheduled for 1230 EST
Record:	843	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 11:07:37 (ET)	Diablo Canyon is at full power and no impact is expected
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	842	
Facility:		
Source:	ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 11:04:57 (ET)	(b)(5)
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	841	
Facility:		
Source:	ET - Japanese Rep	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 11:02:43 (ET)	NRC assistance is not needed at this time from Japanese regulator
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	840	
Facility:		
Source:	ET - Japanese rep	

Address/Location:	
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(b)(5)

Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 11:00:47 (ET)	3 units were previously in outage
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	839	
Facility:		
Source:	ET - Japanese rep	

Address/Location:
Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 10:57:55 (ET)	Emergency Diesel Generator has been procured
Position:	EST Chronology Officer	Fire at Onigawa in turbine building (ground floor) has been extinguished
Name:	Kevin Witt	
Record:	838	Not confirmed from Tokyo
Facility:		
Source:	ET - Japanese rep	

Address/Location:
Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 10:56:56 (ET)	Japanese regulator is in Emergency Operating Mode (not confirmed)
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	837	
Facility:		
Source:	ET - Japanese Rep	

Address/Location:
Attachment:

This information is Official Use Only - Sensitive Internal Information.

Date/Time:	03/11/2011 10:53:24 (ET)	Mike Peck is resident at Diablo Canyon and is monitoring the situation
Position:	EST Chronology Officer	
Name:	Kevin Witt	
Record:	836	

(b)(5)

Facility:	
Source: ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 10:51:28 (ET)	NRC is in monitoring mode as of 0946
Position: EST Chronology Officer	EST Chronology Officer - Kevin Witt at 10:52:10 on 3/11/2011
Name: Kevin Witt	
Record: 833	R-IV has taken the lead
Facility:	EST Chronology Officer - Kevin Witt at 10:52:43 on 3/11/2011
Source: ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 10:51:28 (ET)	NRC is in monitoring mode as of 0946
Position: EST Chronology Officer	EST Chronology Officer - Kevin Witt at 10:52:10 on 3/11/2011
Name: Kevin Witt	
Record: 835	
Facility:	
Source: ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

Date/Time: 03/11/2011 10:51:28 (ET)	NRC is in monitoring mode as of 0946
Position: EST Chronology Officer	
Name: Kevin Witt	
Record: 834	
Facility:	
Source: ET	

Address/Location:	
Attachment:	

This information is Official Use Only - Sensitive Internal Information.

(b)(5)