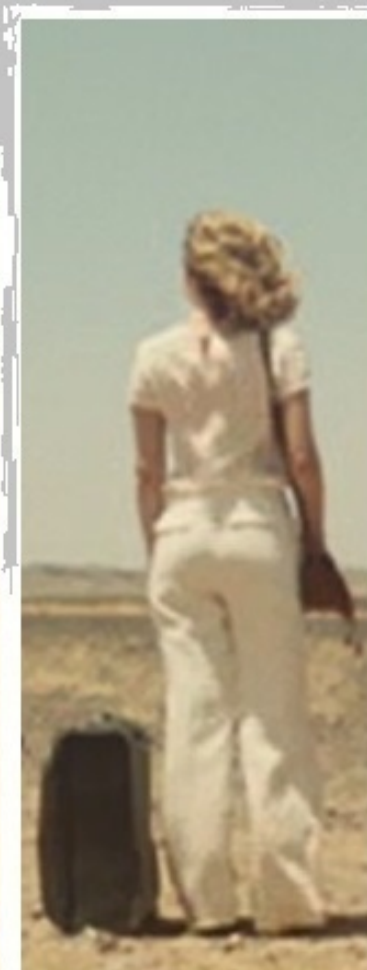




Ohura bay
Henoko
Okinawa

Help your men and women in uniform

Would you brush up
my English?



What is this book for?

“There is no targeting here. Plaintiffs’ allegations that the effects of TepCo’s conduct were felt by American citizens while on U.S. ships, one of which with a home port of San Diego, are too attenuated to establish purposeful direction,” Sammartino wrote.

Sammartino added the sailors “have provided no information to support an assertion that TepCo knew its actions would cause harm likely to be suffered in California.”

「[Judge: Sailors’ Fukushima Radiation Case Doesn’t Belong in US](#)」 (BIANCA BRUNO January 5, 2018)

Now, it is our turn to repay for their favor as Japanese.

It is not difficult for the sailors to provide "solid information to support an assertion that TepCo knew its actions would cause harm likely to be suffered in California."

If there is evidence to prove the sailors were exposed to radiation plume from Fukushima including the inhalation of deadly alpha emitters, the issue of clinical causal relations would be out of question.

Yes, there is solid evidence.



Content:

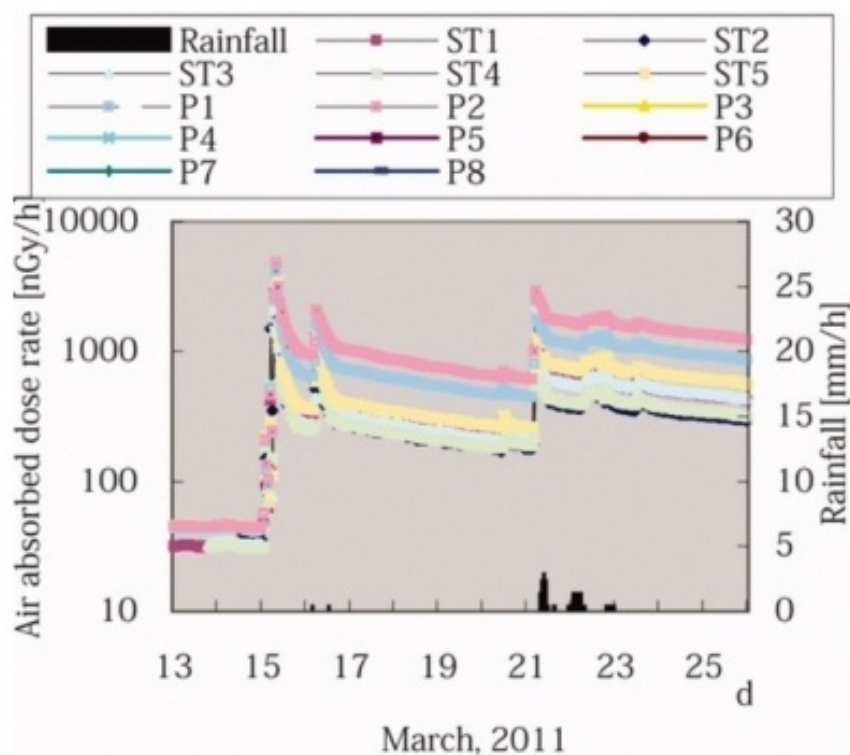
- 1) Radiation plume diffusion and USS Ronald Reagan
- 2) Lost opportunity to escape: a matter of time
- 3) Was ^{239}Pu released from Unit 4?
- 4) Counterargument
- 5) Conclusion



1) Radiation plume diffusion and USS Ronald Reagan

The date of massive radiation release from Fukushima Daiichi Nuclear Power Plant(DNPP) was monitored at IAEA Research Station of Tokaimura in Ibaragi Pref. located about 100 km south of FDNPP.

The report says that the air absorbed dose rate began to increase from about **1 am on 15 March 2011** and varied over time, with three peaks: **4.8 $\mu\text{Gy/h}$, 2.1 $\mu\text{Gy/h}$ and 3.1 $\mu\text{Gy/h}$ at 8 am on 15 March, 5 am on 16 March and 4 am on 21 March, respectively.**



□

From;

「Results of environmental radiation monitoring at the Nuclear Fuel Cycle Engineering Laboratories, JAEA, following the Fukushima Daiichi Nuclear Power Plant accident」

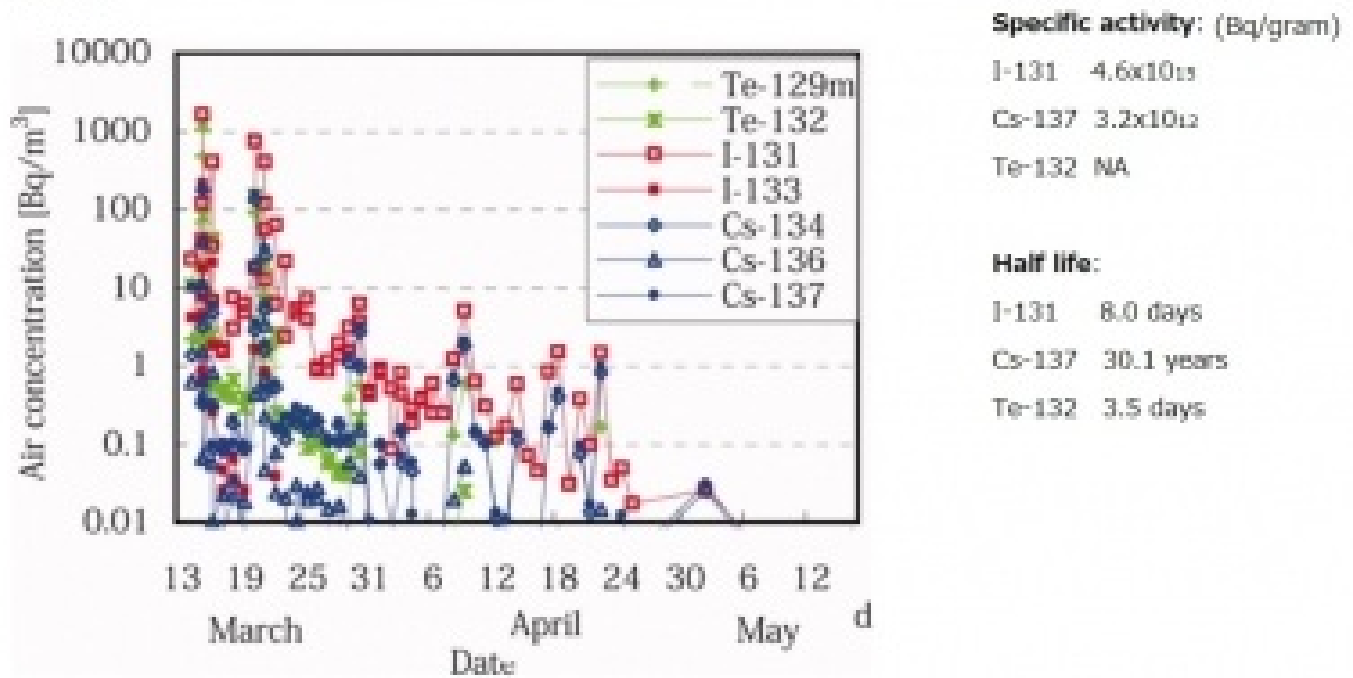
Masanori Takeyasu ,Masanao Nakano,Hiroki Fujita,Akira Nakada,Hitoshi Watanabe,Shuichi SumiyaJapan Atomic Energy Agency , 4-33 Muramatsu, Tokai-mura, Naka-gun , Ibaraki , 319-1194 , Japan

Pages 281-286 | Received 15 Nov 2011, Accepted 26 Dec 2011, Published online: 20 Feb 2012

<http://www.tandfonline.com/doi/full/10.1080/00223131.2012.660014>

From the same paper;

Figure 3. Temporal increase in the air concentrations of radionuclides (sum of aerosol and gaseous forms).



□

There are **two radiation plume waves** during March 15 and 17 before another peak on March 22.

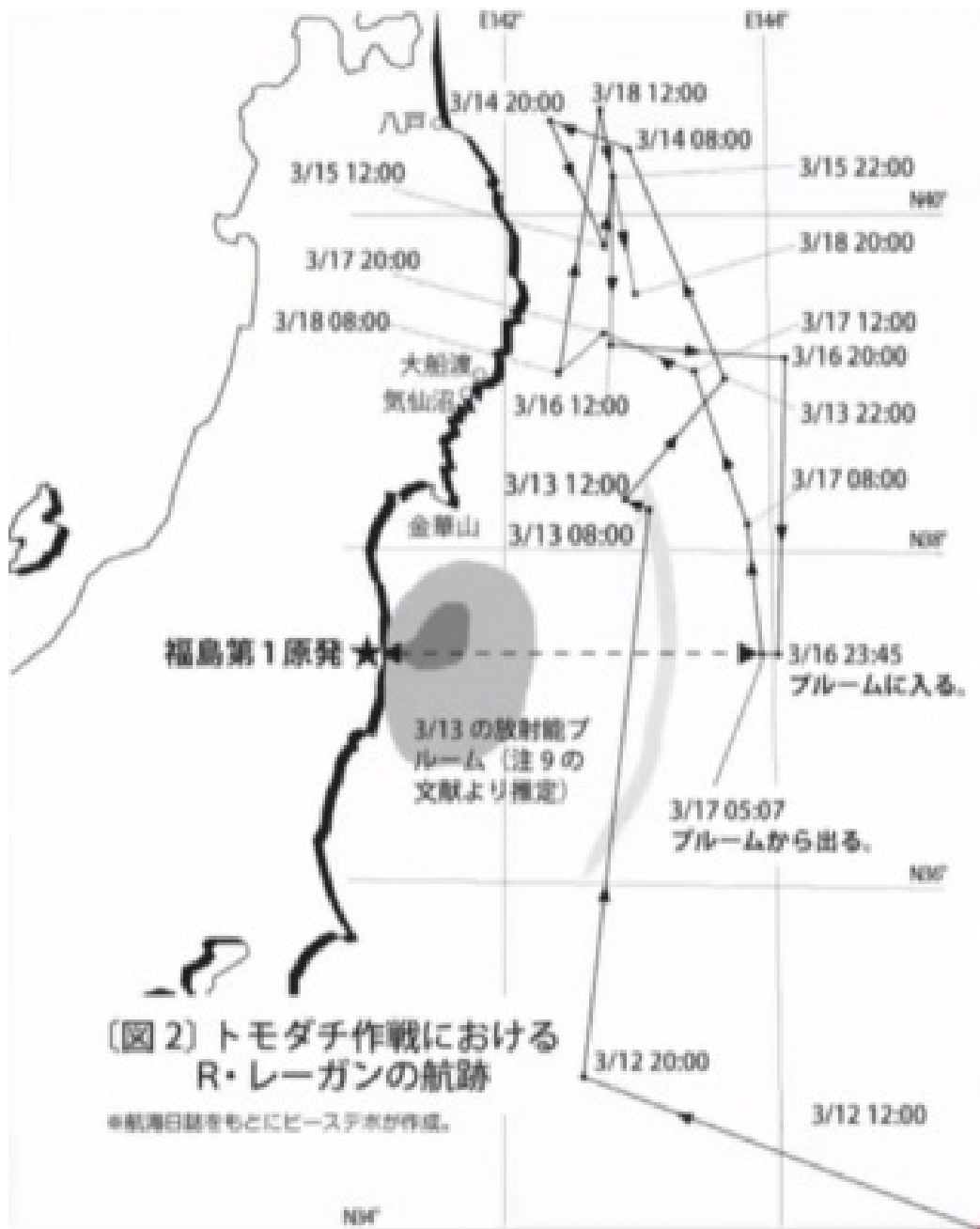
Operation Tomodachi

More than 400 sailors of **USS Ronald Reagn**, on the mission of Operation Tomodachi for disaster relief and support for Japanese casualties caused by Fukushima catastrophic disaster, were exposed to radiation plume and their health hazards are beyond imagination as watched in this documentary film released by dailymotion. Click the image.



<https://www.dailymotion.com/video/x63roud>

The map below is the screen shot from the video demonstrating the **trail of USS Ronald Reagan**.



This map shows its exact location at **6:00 of March 16**.



□

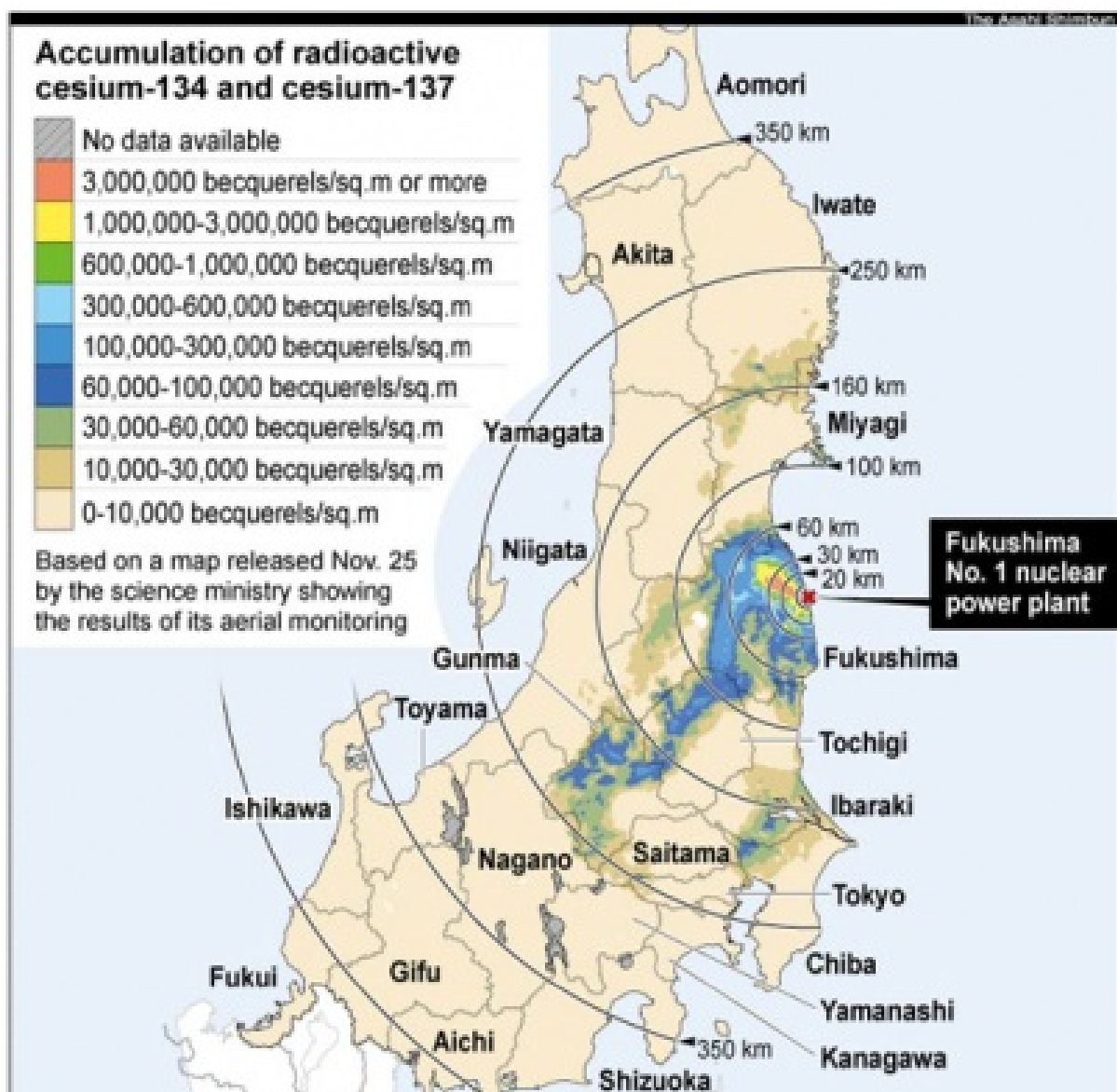
Comparing with the map below, its location at 6:00 of March 16 above is somewhere between 160Km and 250Km from Fukushima DNPP.

And the IAEA laboratory which made the first two charts is located 100Km south, near the coast around the letter of Tochigi.

Accumulation of radioactive cesium-134 and cesium-137



Based on a map released Nov. 25 by the science ministry showing the results of its aerial monitoring

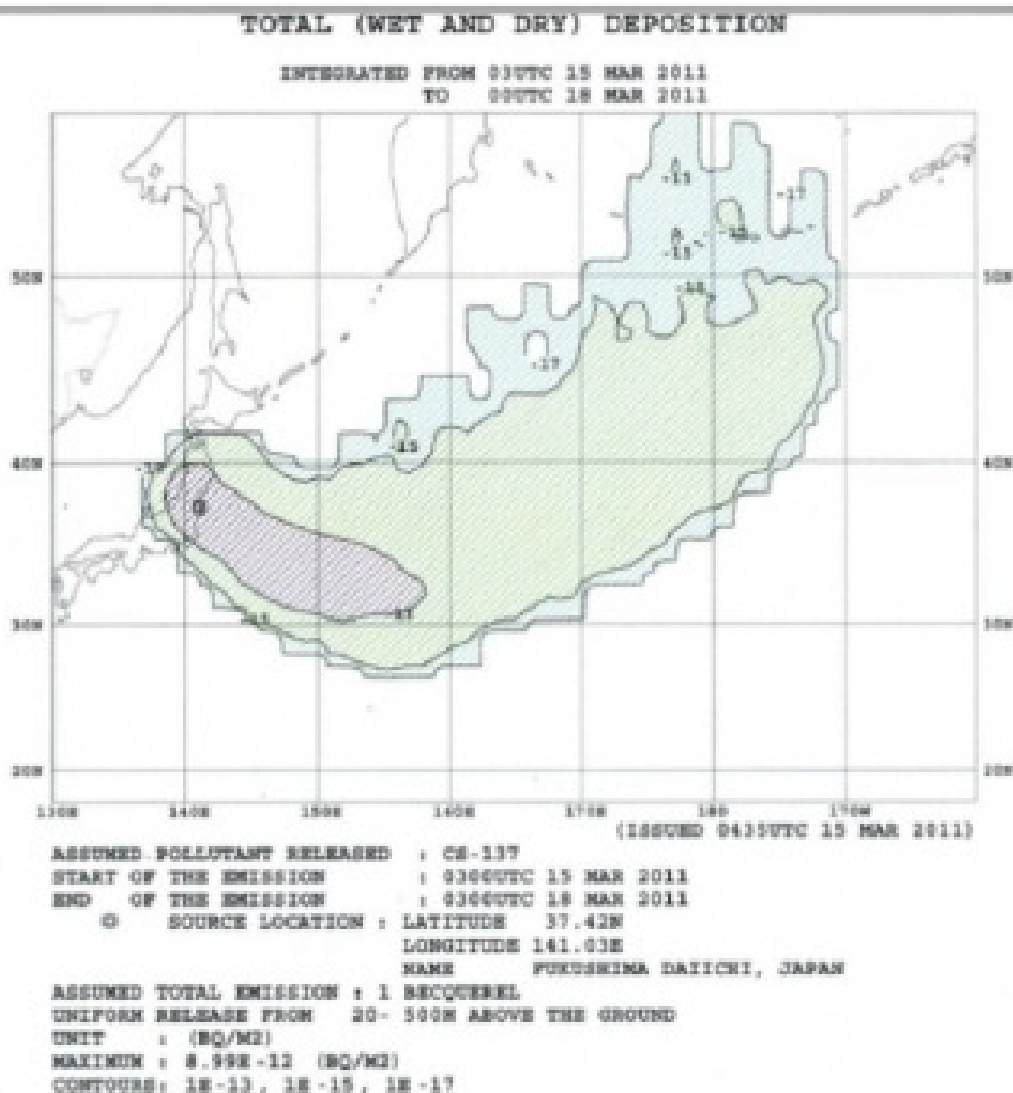


Radiation plume from Fukushima

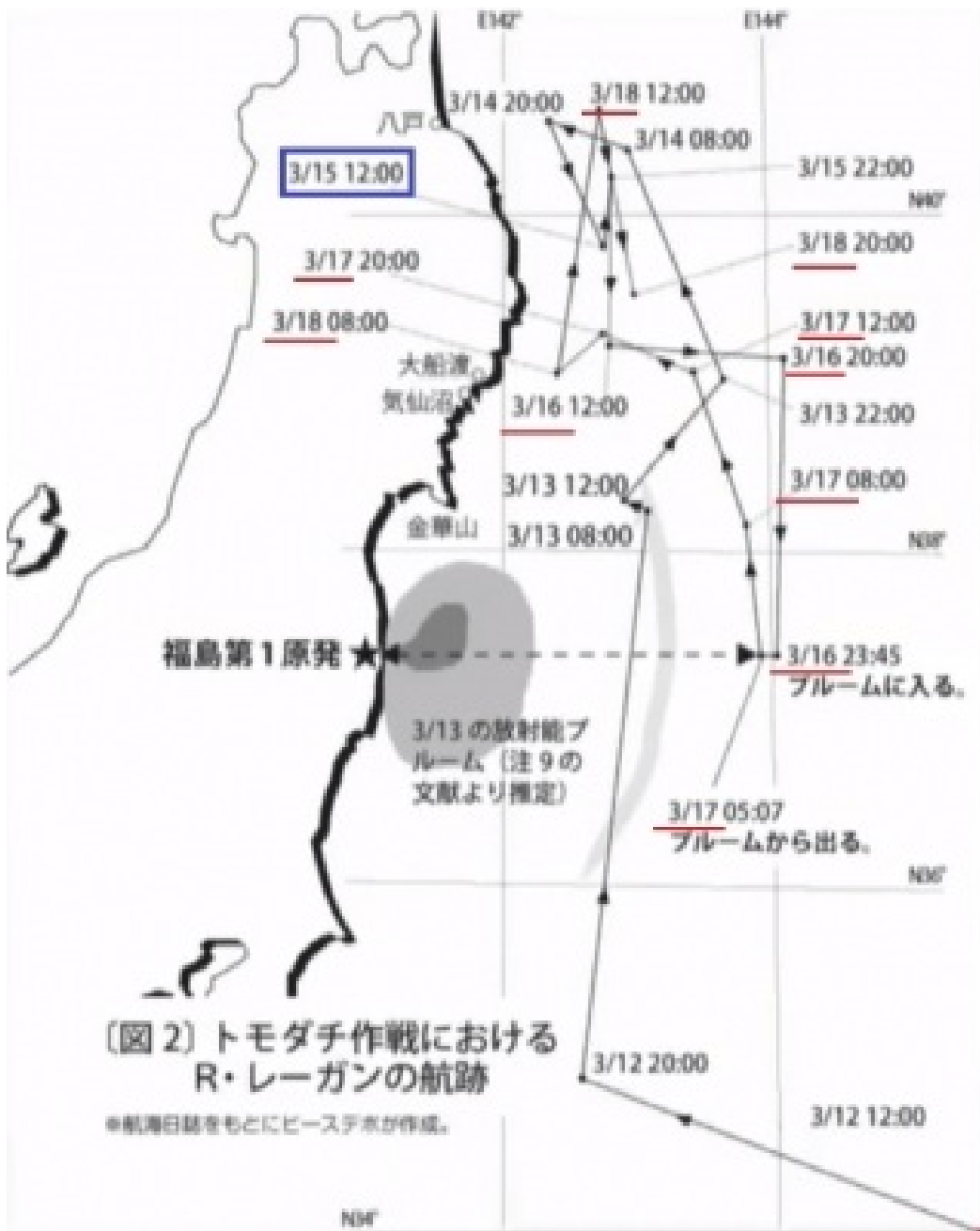
The next simulation of plume dispersion was released by Japanese Meteorological Agency on **March 15** for the prediction up to March 18.

Be noted that this simulation was made assuming 100% radiation release from Spent Fuel Pool(SFP) of **Unit 4**.

100%放出されたというモデルは日本の気象庁が作成したものです。

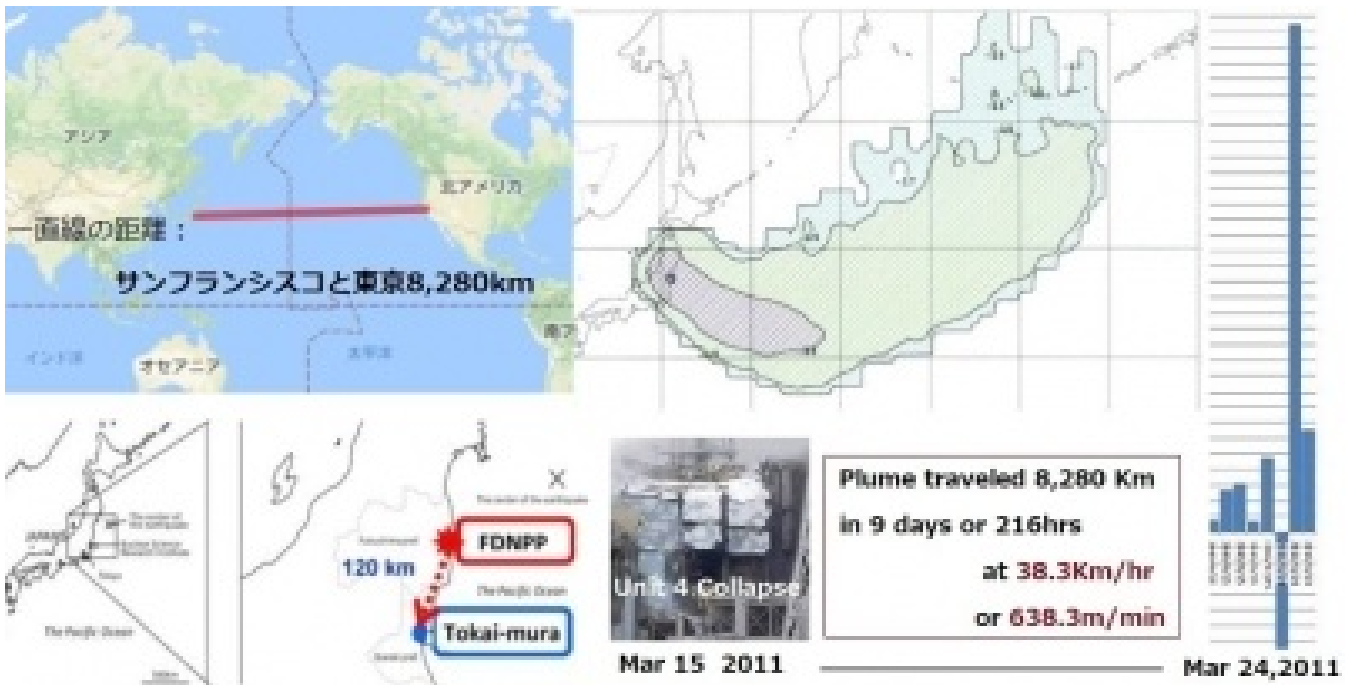


The tailing map again from March 16 to March 18 (underlined) with the location at **March 15 12:00** in blue square.



□ It seems obvious that Ronald Reagan moved around but **only within the thickest plume zone.**

The next image shows how fast the radiation plume traveled, probably with the help of Coriolis effect, up to **March 24 when US EPA monitored the surge of 239Plutonium** in the air above California.



The EPA chart indicates about **8 times** the base line. Two bars on the right are of the same date.

2) Lost opportunity to escape: a matter of time

The sailors were exposed to the first plume wave released by hydrogen explosions occurred in the Unit 1 and Unit 3 reactors on March 12 and 14, and the second wave by the white smoke observed at Unit 2 and Unit 4 reactors on March 15, according to the researchers of the study mentioned above.

Although the radiation release from Unit 4 is politically hidden from public eye, both Tepco and Japanese government announced the massive radiation release from Unit 4 around **11AM of March 15** as much as **400 mSv/h** as shown in the screen shot of the article of Yomiuri.

Take a look at the trailing map where Ronald reagan was then.

福島第一原発 4号機、超高濃度放射能が拡散

(2011年3月15日13時50分 読売新聞)

東京電力は15日、

東日本巨大地震で被災した福島第一原子力発電所4号機強調文（福島県）の原子炉建屋内にある使用済み核燃料を一時貯蔵するプール付近で、

同日午前9時38分頃に火災が発生、

同日午前10時22分には毎時400ミリ・シーベルト（40万マイクロ・シーベルト）の放射線量を観測したと発表した。

同日午前11時過ぎに記者会見した枝野官房長官は

「身体に影響を及ぼす可能性があることは間違いない」と述べた。

2号機では同日午前6時14分に大きな爆発があり、原子炉格納容器の下部にある圧力抑制室の圧力が低下した。

原子炉付近の相次ぐ破損で核燃料が損傷し、大量の放射性物質が漏れだした可能性がある。

茨城、栃木両県や都内などで、ごく微量の放射性物質が検出されている。

政府と東電は15日、事故対策統合本部を設置。

菅首相は同日午前11時に記者会見し、

同原発周辺の半径20～30キロ・メートル圏内の住民約13万6000人に対し、屋内退避を求めた。



IAEA was notified at 4:50 UTC which is 13:50 Japan time.



INCIDENT AND EMERGENCY CENTRE

Subject: Release of radioactivity from Unit 4 of Fukushima Daiichi nuclear power plant

At 04:50 UTC on 15 March 2011 the IAEA was informed by the Japanese authorities that the spent fuel storage pond at Unit 4 of the Daiichi nuclear power plant is on fire and radioactivity is being released directly into the atmosphere. Dose rates up to 400 millisievert per hour have been reported at the site. There is the possibility that the fire has been caused by a hydrogen explosion.

The IAEA has contacted the World Meteorological Organization and has asked that the results of atmospheric models be circulated to all Member States.

The IAEA will issue further information as soon as it becomes available.

Günther Winkler

Emergency Response Manager

15-March-2011 05:10 UTC

IAEA Incident and Emergency Centre



US NRC had known the damage of spent fuel pool(SFP) of Unit 4 earlier than the 400 millisievert announcement as shown in this FOIA document.

(below) From the NRC FOIA documents: March 16th, 2011 evidence that NRC officials were aware that conditions at the stricken Fukushima facility were much worse than they were willing to admit to the general public.

7 JOHN MONAGER: Unit 1 and 2 is boiling
8 down, and Unit 3 and 4 is having zirc/water reaction.
9 They believe there is essentially no walls on Unit 3.
10 The explosion -- I'm sorry -- Unit 4. The explosion
11 leveled the walls, leveled the structure for the Unit
12 4 spent-fuel pool all the way down to the approximate
13 level of the bottom of the fuels. So, there's no
14 water in there whatsoever.
15 MALE PARTICIPANT: And no ability to
16 retain water.
17 JOHN MONAGER: And no ability to retain
18 water. Someone has talked about dropping sand in
19 there, et cetera. To us, I mean the simple, obvious
20 answer, of course, is water, water, water.
21 You know, there is, I guess, Units 1, 3,
22 and 4, the reactor building, all three of those had
23 the explosion. So, then, you've got the question, at



Another example of FOIA document;

(below) From the NRC FOIA documents: the President's case, a worst-case-scenario, included the three reactors and all four spent fuel pools but was also based on a short duration of 4-5 days of emissions. Also, it is important to note that I have found no evidence in the FOIAs of Plutonium being modeled, only Iodine-131 and Cesium-137.

8	JIM WIGGINS: Yeah. I, you know, I still	
9	won't let anybody use the word "worst case" in the	
10	room here --	
11	CHAIRMAN JACIKO: Yeah.	
12	JIM WIGGINS: -- because there's about	
13	five worst cases.	
14	CHAIRMAN JACIKO: Right.	
15	JIM WIGGINS: What, what's the, the	
16	<u>president's case?</u>	
17	MALE PARTICIPANT: It's, it's bounding.	
18	It includes the, the fuel in the three reactors, the	
19	fuel in four spent fuel pools. It does not include	
20	the common spent fuel pool around Unit 4 nor reactors	
21	5 and 6 or any spent fuel pools there. And it's	
22	assumed, a release based over a four- to five-day day	
23	period --	
24	CHAIRMAN JACIKO: Okay.	



Not only Japanese government and Tepco knew but also IAEA and US government learnt the massive radiation release from Unit 4 on March 15.

The simulation map of Meteorological Agency was made based on the damage of SFP of Unit 4.

If this information was passed on to the captain of USS Ronald Reagan timely, those sailors might not have inhaled the deadly plutonium particles because there was plenty of time to run away from the worst case.

The speed of radiation dispersion is 38Km/hr as mentioned earlier and the location of Ronald Reagan was more than 250Km away from Fukushima.

It would have taken more than 6 hours for the plume from Unit 4 to get there even if it stayed there.

3) Was ^{239}Pu released from Unit 4?

Take a look at the next three images at first.



March 16, 2011 Zoom on North wall of R4 molten mass note the molten mass that flowed out of the wall is **gold colour** it later turns black as pictures will show. Also note the black smoke rising from R4!



These two photographs are from Facebook page "**Reactor 4 not all what you expected?**" uploaded on December 16, 2013 at:

<https://www.facebook.com/notes/troy-livingston/reactor-4-not-all-what-you-expected/10151758695293097/?fref=>

The next capture is from IAEA Technical Report on Fukushima which was published on-line August 2015.

It states in page 121 of Unit 4 that the emergency team tried to enter the RB at 10:30 in order to confirm the state of the SFP regarding to a reported fire, but abandoned the attempt because the dosimeter displayed a **maximum rate of 1000 mSv/h** upon opening the RB door.

「**The Fukushima Daiichi Accident: Technical Volume 1/5 - Description and Context of the Accident**」

<http://www-pub.iaea.org/MTCD/Publications/PDF/AdditionalVolumes/P1710/Pub1710-TV1-Web.pdf>

Attachment 3

(Screen shot of page 121 of IAEA Report)

A radiation dose rate measurement of nearly 12 mSv/h was recorded at the main gate at 09:00 on 15 March, the highest measurement since the beginning of the accident. Because of the high radiation levels, an order was issued by government authorities, two hours later at 11:00, requiring all residents within a 20–30 km radius of the Fukushima Daiichi NPP to take shelter indoors.

At 09:38, a fire was reported on the north-west part of the Unit 4 RB. It was observed later that this fire had self-extinguished at 11:00.

The ERC recovery team tried to enter the RB at 10:30 in order to confirm the state of the SFP regarding to a reported fire, but abandoned the attempt because the dosimeter displayed a maximum rate of 1000 mSv/h upon opening the RB door.

Note: $12\text{mSv/h} \times 8760\text{h} = 105,120\text{mSv/year}$ (100mSv/5 years for worker: standard)

$1000\text{mSv/h} \times 8760\text{h} = 8,760,000\text{mSv/year}$

Note: "Upon opening the RB door" means that inside Unit 4 RB had extremely high radiation levels in excess of 1000mSv/hour and that high level of radiation was released outside the Unit 4 RB due to its structural damages.



No one knows how much the true radiation levels were because 1000 mSv/h was the limit of the detector and there is no information at all what radionuclides were there.

On the other hand, there were solid evidence of ^{239}Pu release from Fukushima in addition to the US

EPA monitoring.

Another IAEA laboratory of Tokaimura detected ^{239}Pu in the air 7 to 23 times the global fall out in terms of disintegration measured by count per second(cps).

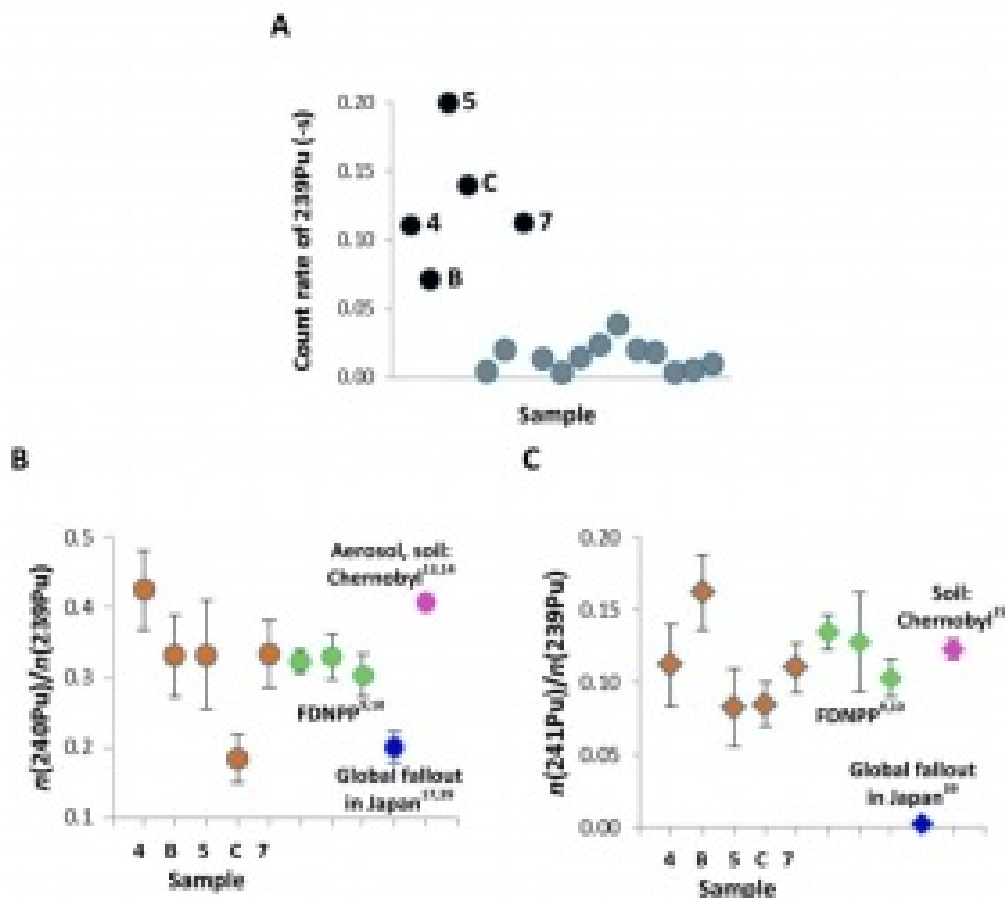


Figure 3. (A) Count rate of ^{239}Pu in the sample sources. The data with sample name is used for further discussion, (B) $n(^{241}\text{Pu})/n(^{239}\text{Pu})$ and (C) $n(^{241}\text{Pu})/n(^{239}\text{Pu})$ in the aerosol samples. The orange, green, blue, and pink colors indicate the data obtained in this study, in the litter samples in the 20–30 km zone around the FDNPP,¹⁷ global fallout in Japan¹⁷ and in Chernobyl samples,^{15–18} respectively. The bars indicate uncertainty ($k = 1$) except for (B), (C) Global fallout in Japan. The bar of Global fallout in Japan indicates the range of the analytical results. (B) Global fallout in Japan: 0.17 – 0.25,^{17,18} (C) Global fallout in Japan: 0.00255–0.00314,¹⁸



This chart is from;

「Airborne Plutonium and Non-Natural Uranium from the Fukushima DNPP Found at 120 km Distance a Few Days after Reactor Hydrogen Explosions」 (Published: March 13, 2014 by Taeko Shinonaga, Peter Steier, Markus Lagos, and Takehisa Ohkura)

<https://static1.squarespace.com/static/54aac5e4e4b0b6dc3e1f6866/>

<t/563a675ee4b048e29b54e771/1446668126943/Shinonaga-et-al-2015-es404961w.pdf>

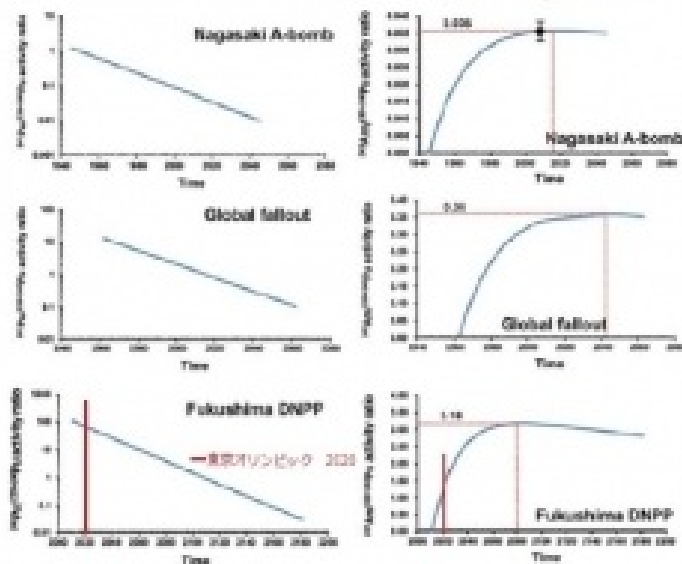
239Pu release from where?

Another research published online 8 March 2012 indicates the fall out of 239Pu is 100 times that of Nagasaki and 10 times the global fall out;

「Isotopic evidence of plutonium release into the environment from the Fukushima DNPP accident」 (by Jian Zheng, Keiko Tagami, Yoshito Watanabe, Shigeo Uchida, Tatsuo Aono, Nobuyoshi Ishii, Satoshi Yoshida, Yoshihisa Kubota, Shoichi Fuma & Sadao Ihara)
<https://www.nature.com/articles/srep00304>

添付 4

Figure 3: Curves of the calculated activity ratios of $^{241}\text{Pu}/^{239+240}\text{Pu}$ and $^{241}\text{Am}/^{239+240}\text{Pu}$ from the Nagasaki atomic bomb Pu, the global fallout Pu and the Fukushima DNPP accident Pu with elapsed time.



Isotopic evidence of plutonium release into the environment from the Fukushima DNPP accident

Jian Zheng, Keiko Tagami, Yoshito Watanabe, Shigeo Uchida, Tatsuo Aono, Nobuyoshi Ishii, Satoshi Yoshida, Yoshihisa Kubota, Shoichi Fuma & Sadao Ihara

Scientific Reports 2,
Article number: 004 (2012)
doi:10.1038/srep00304
Download Citation

Received: 12 January 2012
Accepted: 17 February 2012
Published online: 08 March 2012

Note:

Atom ratios used for the analysis indicate the decay path of weapon grade plutonium which includes more than 93% of ^{239}Pu .

$^{239}\text{Pu} \rightarrow ^{240}\text{Pu}(\text{unstable}) \rightarrow ^{241}\text{Pu}(13\text{yrs half life}) \rightarrow ^{241}\text{Am}(433\text{yrs half life})$



IAEA Technical Report states;

" Estimated based on the calculated mean inventory, **assuming** that Pu isotopes were released from **Unit 1, Unit 2 and Unit 3 reactors** with a total fuel load of 250t. Although the inventories of Pu isotopes in the reactors in Fukushima DNPP are ca. 3.5 times those in the Chernobyl accident, the percentages of core inventory released are ac. 5 orders of magnitude lower than those of the Chernobyl accident."

Fukushima DNPP

	Chernobyl ¹⁸	METI calculated	Estimation of this study	Remarks
Amount of released (Bq)				A rough estimation on the amounts of atmospheric release of Pu isotopes based on the ¹³⁷ Cs/ ²³⁹⁺²⁴⁰ Pu activity ratio observed in litter samples in 20–30 km zones relative to the total amount of ¹³⁷ Cs released estimated by METI ¹⁹ and Stahl et al. ²
²³⁹⁺²⁴⁰ Pu	8.7×10 ¹³	6.4×10 ⁹	1.0×10 ⁹ –2.4×10 ⁹	
²⁴¹ Pu	7.2×10 ¹³	1.2×10 ¹⁰	1.1×10 ¹¹ –2.6×10 ¹¹	Estimated based on the calculated mean inventory [Bq/t] by Kirchner et al. ²² , assuming that Pu isotopes were released from Unit 1 (70 t fuel), Unit 2 (90 t fuel) and Unit 3 (90 t fuel) reactors with a total fuel load of 250 t
Pu inventories of reactors (Bq) at the time of accident initiation				
²³⁹⁺²⁴⁰ Pu	2.4×10 ¹⁵	—	8.3×10 ¹⁵	
²⁴¹ Pu	1.9×10 ¹⁵	—	7.0×10 ¹⁵	
Percentage of core inventory released (%)				Although the inventories of Pu isotopes in reactors in the Fukushima DNPP are ca. 3.5 times those in the Chernobyl accident, the percentages of core inventory released are ca. 5 orders of magnitude lower than those of the Chernobyl accident
²³⁹⁺²⁴⁰ Pu	3.5	—	1.2×10 ⁻⁵ –2.9×10 ⁻⁵	
²⁴¹ Pu	3.5	—	1.6×10 ⁻⁵ –3.7×10 ⁻⁵	

¹⁸Data on the Chernobyl accident are cited from Kruger et al.¹⁷, IAEA (1986)¹⁸, Harrison et al.¹⁹, and Devell et al.²¹.



If the authorities insist that there was no significant release of Plutonium from Fukushima DNPP despite the strong evidence of massive fall out of 239Pu observed at three locations including the US, there is no where else but from Unit 4, either SFP, somewhere else inside Unit 4 or both.

4) Counterargument

From the cruising records of Ronald Reagan, there is no doubt that the sailors were exposed to the worst radiation plume of various radioactivity including deadly ^{239}Pu from Fukushima DNPP. However, the class action filed by hundreds of U.S. sailors was allegedly dismissed by a judge.

A federal judge on Friday dismissed without prejudice the latest class action filed by hundreds of U.S. sailors exposed to radiation in the Fukushima, Japan, nuclear disaster, finding a San Diego courtroom isn't the right place for the case.

U.S. District Judge Janis Sammartino issued a 15-page [order](#) dismissing the class action against Tokyo Electric Power Co. (TepCo) and General Electric, finding the service members who were stationed aboard the USS Ronald Reagan in San Diego have failed to establish how the Japanese utility's acts were directed at California.

"There is no targeting here. Plaintiffs' allegations that the effects of TepCo's conduct were felt by American citizens while on U.S. ships, one of which with a home port of San Diego, are too attenuated to establish purposeful direction," Sammartino wrote.

Sammartino added the sailors "have provided no information to support an assertion that TepCo knew its actions would cause harm likely to be suffered in California."

「[Judge: Sailors' Fukushima Radiation Case Doesn't Belong in US](#)」 (BIANCA BRUNO January 5, 2018)

It is our turn now to repay for their favor.

It is not difficult for the sailors to provide "solid information to support an assertion that TepCo knew its actions would cause harm likely to be suffered in California" and also to avoid a catchy question of clinical causal relation.

There are plenty of scientific studies on toxicology of Plutonium since the Manhattan Project, which every one in the nuclear industry should have known. Other wise they are fake people and don't deserve any argument they may raise to dogde their responsibility.

Tell them to read at least these documents before the argument.

The first one is the most comprehensive toxicology summary published November 2010 by U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES.

Read at least 3.2.1 Inhalation Exposure of Chapter 3: Health Effects page 22 and on.

You will know then that you have no choice but rely on animal studies to evaluate human risks.

TOXICOLOGICAL PROFILE FOR PLUTONIUM

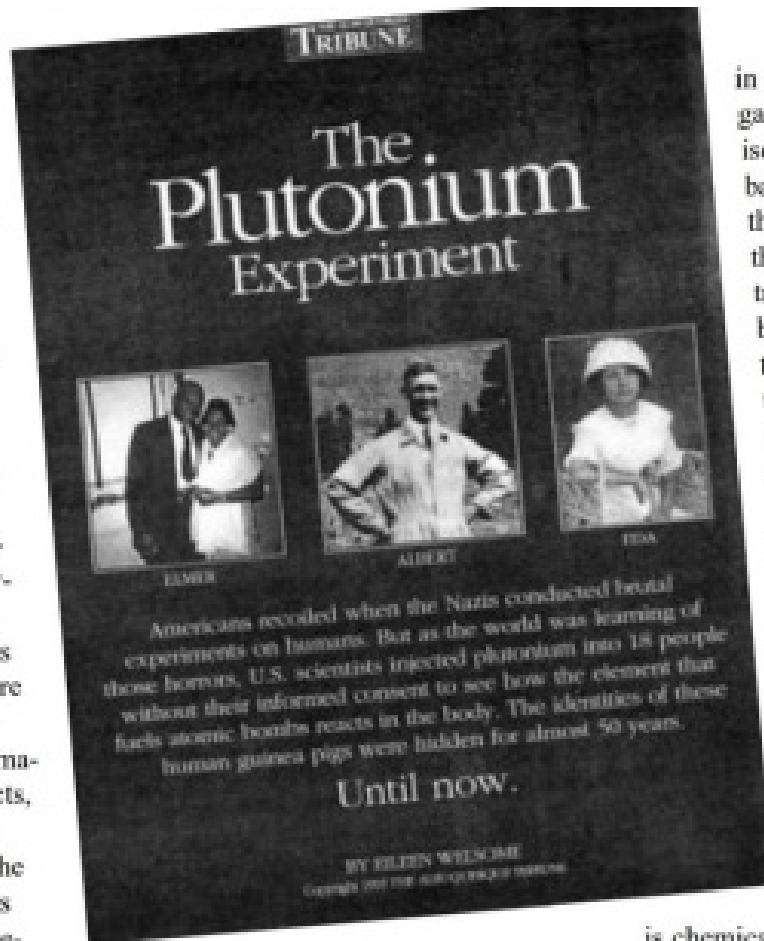
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Agency for Toxic Substances and Disease Registry

November 2010

□ The second must-read is the record on the Manhattan Project how those excellent scientists struggled to find out the toxicity of this man-made actinoid human being had never known. You would be more humble, if you read, to work with plutonium and other radioactive materials and feel more responsibility for the society.

similar radiation experiments with humans.

This article is intended to tell the Los Alamos story of these experiments and their aftermath. The article is based on memos and other documents that were collected by one of the authors (Moss) and were released to the public as a result of Secretary O'Leary's openness initiative. Los Alamos was not directly involved in choosing the subjects for the experiments nor in carrying out the clinical studies. Nevertheless, the motivation for the experiments arose at Los Alamos and scientists at Los Alamos were involved in planning the experimental protocols, preparing the material to be injected in the subjects, and analyzing the results. They were involved both at the time the experiments took place and years later when it became clear that re-analysis was appropriate.



in the gaseous isotope barrier that d thousands from bean thro the lar j div

In wh 23 su to in J d s c l

as they were. For that we need is chemically was thought tl

□ However, there must be some people to argue such as this;

"Laboratory studies with experimental animals have shown that exposure to high levels of plutonium can cause decreased life spans, diseases of the respiratory tract, and cancer. The target tissues in those animals were the lungs and associated lymph nodes, liver, and bones. However, these observations in experimental animals have not been corroborated by epidemiological investigations in humans exposed to lower levels."

Corroboration by epidemiological investigation in humans exposed to lower levels?

This is the latest study which answers to such question.

Epidemiologically, much lower exposure was confirmed risky for human health.

Risk of Lung Cancer Mortality in Nuclear Workers from Internal Exposure to Alpha Particle-emitting Radionuclides

Grellier, James^{a,b,c,d}; Atkinson, Will^e; Bérard, Philippe^f; Bingham, Derek^g; Birchall, Alan^{h,i}; Blanchardon, Eric^j; Bull, Richard^k; Guseva Canu, Irina^l; Chailion-de Vathaire, Cécile^m; Cockerill, Rupertⁿ; Do, Minh T.^o; Engels, Hilde^p; Figuerola, Jordi^{a,b,c}; Foster, Adrian^q; Holmstock, Luc^r; Hurtgen, Christian^s; Laurier, Dominique^t; Puncher, Matthew^{u,v}; Riddell, Anthony E.^h; Samson, Eric^j; Thierry-Chef, Isabelle^w; Timarche, Margot^x; Vrijheid, Martine^{a,b,c}; Cardis, Elisabeth^{a,b,c}

Epidemiology, September 2017 - Volume 28 - Issue 5 - p 675-684

doi: 10.1097/EDE.0000000000000684

Cancer

Abstract

In Brief

Author Information

Article Outline

Background: Carcinogenic risks of internal exposures to alpha-emitters (except radon) are poorly understood. Since exposure to alpha particles—particularly through inhalation—occurs in a range of settings, understanding consequent risks is a public health priority. We aimed to quantify dose–response relationships between lung dose from alpha-emitters and lung cancer in nuclear workers.

Methods: We conducted a case–control study, nested within Belgian, French, and UK cohorts of uranium and plutonium workers. Cases were workers who died from lung cancer; one to three controls were matched to each. Lung doses from alpha-emitters were assessed using bioassay data. We estimated excess odds ratio (OR) of lung cancer per gray (Gy) of lung dose.

Results: The study comprised 563 cases and 1,333 controls. Median positive total alpha lung dose was 2.42 mGy (mean: 8.13 mGy; maximum: 316 mGy); for plutonium the median was 1.27 mGy and for uranium 2.17 mGy. Excess OR/Gy (90% confidence interval)—adjusted for external radiation, socioeconomic status, and smoking—was 11 (2.6, 24) for total alpha dose, 50 (17, 106) for plutonium, and 5.3 (–1.9, 18) for uranium.

Conclusions: We found strong evidence for associations between low doses from alpha-emitters and lung cancer risk. The excess OR/Gy was greater for plutonium than uranium, though confidence intervals overlap. Risk estimates were similar to those estimated previously in plutonium workers, and in uranium miners exposed to radon and its progeny. Expressed as risk/equivalent dose in sieverts (Sv), our estimates are somewhat larger than but consistent with those for atomic bomb survivors.

See video abstract at, <http://links.lww.com/EDE/B232>.



Thus, only if there is evidence to prove the sailors were exposed to radiation plume from

Fukushima including the inhalation of Plutonium and other alpha emitters, the issue of clinical causal relations would be out of question.

Yes, there is solid evidence.

This is the evidence

The research at IAEA laboratory previously discussed for ^{239}Pu fall out did the numerical study of plutonium particles in the atmosphere at the same time, which indicates that the sailors in question is most likely to have inhaled more than 8 million particles which is almost equal to 100 million plutonium atoms in my rough calculation.

Airborne Plutonium and Non-Natural Uranium from the Fukushima DNPP Found at 120 km Distance a Few Days after Reactor Hydrogen Explosions

Taeko Shinonaga,^{1*} Peter Steier,² Markus Lagos,³ and Takehisa Ohkura⁴

¹ Helmholtz Zentrum München, German Research Center for Environmental Health, Institute of Radiation Protection, D-85764 Neuherberg, Germany

² Fakultät für Physik, Isotopenforschung und Kernphysik, Universität Wien, Währinger Straße 17, A-1180 Wien, Austria

³ Karlsruher Institut für Technologie (KIT), Institut für Nukleare Entsorgung, D-76344 Eggenstein-Leopoldsdorfer, Germany

⁴ Japan Atomic Energy Agency, Department of Radiation Protection, Nuclear Science Research Institute, Tokai Research and Development Center, Ibaraki 319-1195, Japan

The content of

²³⁹Pu in sample 5 determined by isotope dilution was $(8.9 \pm 1.4) \times 10^6$ atoms in the analyzed sample aliquot. Assuming that Pu is distributed homogeneously on the filter, the activity concentration of ²³⁹Pu was calculated as (130 ± 21) nBq/m³.

The activity of ²⁴¹Pu was decay corrected to the March 15, 2011 (Figure 3C). The results of $n(^{240}\text{Pu})/n(^{239}\text{Pu})$ and $n(^{241}\text{Pu})/n(^{239}\text{Pu})$ in five Pu-rich samples analyzed by AMS in this study are clearly different from the global fallout in Japan, and correspond to the ratio observed in the litter sample near the FDNPP (Figures 3B and 3C). While the lower $n(^{240}\text{Pu})/n(^{239}\text{Pu})$ value of sample C might indicate mixing with Pu from global fallout, the observed $n(^{241}\text{Pu})/n(^{239}\text{Pu})$ does not support such an assumption. We have presently no explanation for this deviation. The atom ratios obtained for the 12 samples with low ²³⁹Pu count rate are $n(^{240}\text{Pu})/n(^{239}\text{Pu})$: 0.141 ± 0.032 and $n(^{241}\text{Pu})/n(^{239}\text{Pu})$: 0.0224 ± 0.0084 which are in agreement with global fallout in Japan during 1999–2000¹⁷ as well as 1963–1979¹⁸ within uncertainties.

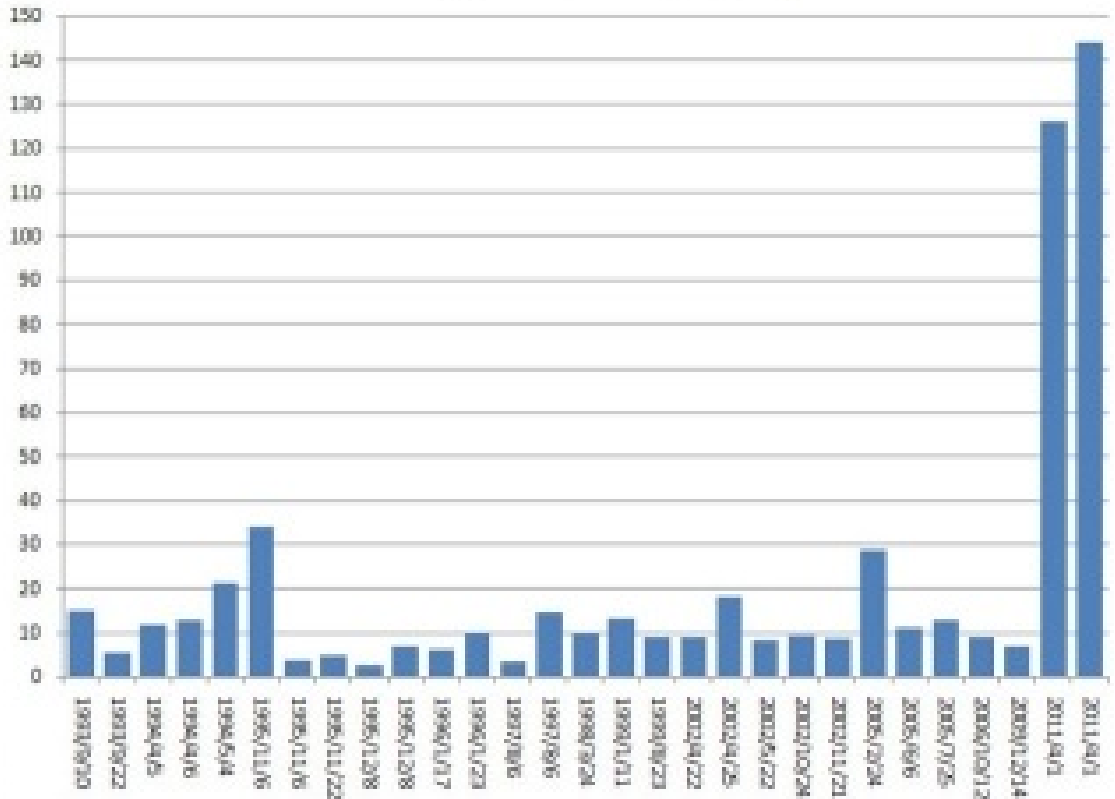
The data obtained in this study strongly suggest that this series of unusual Pu and U were transported from the FDNPP over 120 km distance after the incident.



This study also concluded that unnatural Uranium was released from Fukushima DNPP and US EPA monitored the surge of ²³⁴Uranium in Alaska on April 1, 2011.

Alaska, U234	
1993/9/10	14.9
1993/9/22	5.33
1994/4/5	11.9
1994/4/6	12.7
1994/5/4	21.4
1995/11/6	34.1
1995/11/6	3.56
1995/11/22	4.6
1995/12/8	2.6
1995/12/8	6.69
1996/1/17	6.29
1996/1/23	9.93
1997/8/6	3.36
1997/8/6	14.6
1998/3/24	9.78
1999/1/11	13.3
1999/8/23	9.12
2002/4/22	8.9
2002/4/25	18.3
2002/5/22	8.13
2002/10/24	9.3
2002/11/21	8.48
2005/2/24	28.6
2005/6/6	11
2005/7/25	12.9
2006/10/12	8.9
2008/12/14	6.9
2011/4/1	126
2011/4/1	144

Alaska, U234 in Air [aCi/m3]



234Uranium is alpha emitter, too.

It is scary to imagine how much alpha emitters the sailors have inhaled.

Uranium-234	
Complete table of nuclides	
General	
Name, symbol	Uranium-234, ^{234}U
Neutrons	142
Protons	92
Nuclide data	
Natural abundance	0.0054%
Half-life	246,000 years
Parent isotopes	^{238}U (alpha, beta, beta) ^{234}Pa (β^-) ^{238}Pu (α)
Decay products	^{230}Th
Decay mode	Decay energy
alpha emission	
spontaneous fission	



The question why so much ^{239}Pu and very unnatural ^{234}U were released from Fukushima DNPP remains but a logical corollary is possible to be discussed some other time soon.

5) Conclusion

San Diego is the right place for sailors to establish purposeful direction because;

- ① TepCo as well as GE knows as a common sense of nuclear industry that the radiation exposure is chronically-disabled.
- ② TepCo knew the massive radiation release from Unit 4 of March 15 2011 and could act to warn USS Ronald Reagan to leave the predicted area of plume dispersion in coordination with both Japanese and US government, IAEA and GE because there were some employees of GE-Hitachi in Unit 4.
- ③ There are much more credible radiation toxicology scientists in the US than any other countries in the world, particularly for alpha emitters.
- ④ As this kind of health hazard case is given to doing unfair treatment for plaintiff, San Diego being a venue is adequate because the US is the country of fairness.

with Love,

Notice:

Part II was urgently published on February 13, 2018 as additional information about ²³⁴Uranium monitored in Alaska.

Please read at:

<http://p.booklog.jp/book/120295/read>





or at;

<http://stratpreneur.jugem.jp/?eid=1448>