

## Japan starts nuclear fuel removal from Fukushima

17th April, 2019



The Tokyo Electric Power Company (Tepco) has started removing fuel rods from Japan's stricken Fukushima No. 1 nuclear power plant. Tepco is the company that operates the nuclear power plant. It was badly damaged and suffered meltdowns following

being hit by a massive earthquake and tsunami in 2011. Tepco started the removal of the nuclear fuel on Monday, five years behind schedule. The work to remove and relocate the hazardous rods was delayed because of a whole series of malfunctions of the devices that had been designed for the removal operation. Another factor that caused delays was high levels of radiation observed in the area. Tepco said this posed a "significant challenge" for engineers.

Tepco said it is removing seven unspent nuclear fuel rods from the reactor's pool. There are a total of 1,573 spent and unspent fuel rods stored at the power plant. The rods will be transferred to safer storage pools at the plant. Tepco said the work would be completed by the end of March 2021. A company spokesman, Tomohiko Isogai, said: "I believe everything is going well so far. We will watch the progress at the site as we put safety first. Our goal is not to rush the process but to carefully proceed with the decommissioning work." Another spokesman said: "Safety is our priority. We will carefully continue this work." Prime Minister Shinzo Abe said Japan would do its best to rebuild the area.

Sources: [japantimes.co.jp](http://japantimes.co.jp) / [japantoday.com](http://japantoday.com) / [yahoo.com](http://yahoo.com)

## Writing

Do we need nuclear power?

## Chat

Talk about these words from the article.

electric / power / fuel / damage / meltdowns / earthquake / schedule / device / delays reactor / storage / company / progress / safety / decommissioning / priority / rebuild

## True / False

- Nuclear fuel rods are being removed from Fukushima's No. 3 plant. T / F
- The removal of the fuel rods is five years behind schedule. T / F
- There were problems with the devices that were made for the removal. T / F
- One reason for the delay is high levels of radiation in the area. T / F
- There are more than 1,500 rods at Fukushima's nuclear power plant. T / F
- Work on removing the fuel rods will finish at the end of 2020. T / F
- A power company worker said the company is in a hurry to finish. T / F
- Japan's Prime Minister said the area would not be rebuilt. T / F

## Synonym Match

(The words in **bold** are from the news article.)

- |                     |                  |
|---------------------|------------------|
| 1. <b>stricken</b>  | a. enormous      |
| 2. <b>suffered</b>  | b. reconstruct   |
| 3. <b>massive</b>   | c. dangerous     |
| 4. <b>hazardous</b> | d. development   |
| 5. <b>posed</b>     | e. prime concern |
| 6. <b>spent</b>     | f. troubled      |
| 7. <b>progress</b>  | g. procedure     |
| 8. <b>process</b>   | h. exhausted     |
| 9. <b>priority</b>  | i. experienced   |
| 10. <b>rebuild</b>  | j. raised        |

## Discussion – Student A

- What do you think of nuclear power?
- What do you know about the Fukushima accident?
- How safe is nuclear power?
- How comfortable would you feel living next to a nuclear reactor?
- Would you work at a nuclear power plant?
- How dangerous is the work of removing the fuel rods?
- How scary is radiation?
- What do you know about nuclear power?

## Phrase Match

- |                                      |                            |
|--------------------------------------|----------------------------|
| 1. started removing fuel             | a. radiation               |
| 2. meltdowns following being hit by  | b. going well so far       |
| 3. delayed because of a whole series | c. unspent fuel rods       |
| 4. high levels of                    | d. safer storage pools     |
| 5. this posed a significant          | e. rods                    |
| 6. a total of 1,573 spent and        | f. work                    |
| 7. The rods will be transferred to   | g. a massive earthquake    |
| 8. I believe everything is           | h. to rebuild the area     |
| 9. proceed with the decommissioning  | i. challenge for engineers |
| 10. Japan would do its best          | j. of malfunctions         |

## Discussion – Student B

- What do you think about what you read?
- What kind of power does your country use?
- What is the best form of alternative energy?
- What do you know about the history of nuclear power?
- Would you rather have nuclear power or coal power?
- How can the company make sure its workers are totally safe?
- What advice do you have for the people of Fukushima?
- What questions would you like to ask the Tepco engineers?

## Spelling

- Japan's kitchnesr power plant
- badly damaged and suffered wodnstelm
- hit by a avissme earthquake
- relocate the raazuhosd rods
- high levels of traidion
- posed a cgaitsfinni challenge
- unspent ulef rods
- transferred to safer rageost pools
- watch the eopgrsr at the site
- Our goal is not to rush the soseprc
- to carefully deoperc
- Safety is our toriiypr

### Answers – Synonym Match

1. f	2. i	3. a	4. c	5. j
6. h	7. d	8. d	9. e	10. b

## Role Play

### Role A – Nuclear Waste Remover

You think a nuclear waste remover is the most dangerous job. Tell the others three reasons why. Tell them why their jobs aren't as dangerous. Also, tell the others which is the least dangerous of these (and why): F1 driver, deep-sea diver or crocodile farmer.

### Role B – F1 Driver

You think an F1 driver is the most dangerous job. Tell the others three reasons why. Tell them why their jobs aren't as dangerous. Also, tell the others which is the least dangerous of these (and why): nuclear waste remover, deep-sea diver or crocodile farmer.

### Role C – Deep-Sea Diver

You think a deep-sea diver is the most dangerous job. Tell the others three reasons why. Tell them why their jobs aren't as dangerous. Also, tell the others which is the least dangerous of these (and why): F1 driver, nuclear waste remover or crocodile farmer.

### Role D – Crocodile Farmer

You think a crocodile farmer is the most dangerous job. Tell the others three reasons why. Tell them why their jobs aren't as dangerous. Also, tell the others which is the least dangerous of these (and why): F1 driver, deep-sea diver or nuclear waste remover.

## Speaking – Hazardous jobs

Rank these with your partner. Put the best at the top. Change partners often and share your rankings.

- |                       |                         |
|-----------------------|-------------------------|
| • miner               | • nuclear waste removal |
| • construction worker | • stunt performer       |
| • deep-sea diver      | • F1 driver             |
| • crocodile farmer    | • soldier               |

### Answers – True False

a	F	b	T	c	T	d	T	e	T	f	F	g	F	h	F
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Answers to Phrase Match and Spelling are in the text.