Waste

## Progress of Disposal of Disaster Waste Directly Governed by the National Government in Designated Areas in Fukushima Prefecture





Now treating

OTsunami rubble in former Restricted Areas was all transported to Temporary Storage Sites in March 2016, except for such rubble left in Restricted Areas.

Katsurao Village, Namie Town,

### [Installation of Temporary Incineration Facilities]

litate Village (Warabidaira district). disaster waste, etc. Futaba Town and Okuma Town Kawauchi Village, litate Village Disposal of disaster (Komiya district), Tomioka Town, Naraha Town, and Minamisoma waste completed City



Demolition of a damaged house, etc.

\*Tamura City and Kawamata Town use existing waste disposal facilities for disposing of disaster waste. \* Futaba Town has two Temporary Incineration Facilities.



incineration work has completed and those already

demolished, etc.)



# **Ensuring Safety for Temporary Storage of Designated Waste**

# Temporary storage work (in the case of agricultural by-products)



# Structure of a Temporary Storage Site (in the case of agricultural by-products)

- •Take measures to prevent scattering and runoff of waste
- •Take required measures against radiation (isolation or shielding using sandbags, etc.)
- Take measures to prevent infiltration of rainwater using impermeable sheet, etc.



## Checking of storage status

The status of storage at Temporary Storage Sites is to be checked to ensure that designated waste is properly stored in compliance with the standards, etc. specified in the Act on Special Measures.





Staff of the Regional Environmental Office checking the storage status

# Procedures for Disposal of Designated Waste in Fukushima Prefecture

OThe Ministry of the Environment has been carrying out a program to reduce volume and stabilize properties of designated waste through incineration and drying, etc.

O With regard to designated waste generated in Fukushima Prefecture, waste with radioactivity concentrations exceeding 8,000 Bq/kg but 100,000 Bq/kg or lower is to be transported to the existing controlled disposal site, while waste with radioactivity concentrations exceeding 100,000 Bq/kg is to be transported to the Interim Storage Facility.

sludge

ewage

etc.

Agricultural waste,



Designated waste (exceeding 8,000 Bg/kg)

Waste within the Management Areas (former Restricted Areas and Deliberate Evacuation Areas)

Incineration at Temporary Incineration
Facilities (inflammable waste)

100,000 Bq/kg or

Exceeding 100,000 Bq/kg

Existing controlled disposal site

Interim Storage Facility

### Volume reduction project

Terminal treatment plant in Horikawa Town, Fukushima City

Drying treatment of dehydrated sludge, etc. was completed at the end of October 2014 and the plant was demolished at the end of March 2016.



#### Samegawa Village

Incineration of agricultural waste was completed at the end of July 2015.

Switching stations (Tamura City and Kawauchi Village)

Volume reduction of agricultural waste generated in 24 municipalities in the central and southern parts of Fukushima Prefecture; Operation started in August



#### Fukushima Prefecture Central Purification Center (Koriyama City)

Incineration of dehydrated sludge, etc. was completed in March 2014, and Fukushima Prefecture took over the work and incinerated waste with radioactivity concentrations of 8,000 Bq/kg or lower and the incineration



#### Warabidaira District, litate Village

Volume reduction of contaminated waste generated in litate Village and surrounding five municipalities; A Temporary Incineration Facility started operation in January 2016 and wide-area waste treatment was completed in November 2018.

#### Adachi District (Nihonmatsu City)

Volume reduction of agricultural waste and inflammable waste generated from decontamination activities in three municipalities in the Adachi District (Nihonmatsu City, Motomiya City and Otama Village); Preparation for the construction work is underway.

Prepared by the Ministry of the Environment

# Landfill Disposal Plan of Specified Waste Utilizing the Controlled Disposal Site

In order for reconstruction of eight municipalities in Futaba County and ultimately the entirety of Fukushima Prefecture, the issue of waste contaminated with radioactive materials needs to be solved as early as possible. It is planned to safely and promptly bury waste with radioactivity concentrations not exceeding 100,000 Bq/kg at the existing controlled disposal site, former Fukushima Ecotec Clean Center. Transport of specified waste was commenced in November 2017.



- Contaminated Wast
- Restricted Areas
- Temporary Incineration Facilities (including facilities where incineration work has completed and those already demolished, etc.)

# Specified Waste Landfill Disposal Facility (Former Fukushima Ecotec Clean Center)

### [Outline of the facility]

- [Outline of the facility]
- Location: in Tomioka Town (transport via Naraha Town)
   Area: approx. 9.4 ha
- · Area: a
- Capacity: approx. 960,000 m³ (Possible landfill capacity: approx. 650,000 m³)

## Outline of the landfill disposal program

#### O Waste to be buried

- •Household refuse of returned residents in eight municipalities in Futaba County < approx. 27,000  $\,$  m  $^{3}$  >
- •Waste within the Management Areas < approx. 445,000 m³ >
  •Designated waste in Fukushima Prefecture < approx. 182,000 m³ >
- O Period

of specified waste.

- Household refuse from eight municipalities in Futaba County: for approx. 10 years
   Waste within the Management Areas and designated waste: for approx. 6 years
- Waste within the Management Areas and designated waste: for approx. 6 year
- O Landfill disposal, radiation monitoring, etc.
- Multiple safety measures should be taken to prevent leakage of radioactive materials such as curbing elution of radioactive cesium or infiltration of rainwater.
- The status of seepage control and leachate treatment facility, etc. is to be periodically checked and ambient dose rates and radioactivity concentrations of groundwater, etc. should be monitored.
- O Responsibility of the Ministry of the Environment and its management system

  Based on the Act on Special Measures, the Ministry of the Environment will serve as the
  responsible entity and initially nationalize the disposal site and responsibly conduct landfill disposal
- The Ministry of the Environment constantly stations a supervisor at a newly established local
  office, thereby ensuring a system to properly manage landfill disposal and related facilities.

Prepared by the Ministry of the Environment

Waste

# Status of the Five Prefectures concerning Designated Waste

Miyagi Prefecture

[Municipal mayors' conference]

5th: lan 20 2014 → Three candidate sites for detailed survey were presented (Fukayamadake, Kurihara City: Shimohara, Taiwa-cho:

Tashirodake, Kami Town), 7th (held by the prefecture): Aug. 4, 2014 → The prefectural governor announced the acceptance of a

1st to 4th: Oct. 2012 to Nov. 2013

detailed survey as a consensus of all municipal mayors. Detailed surveys were commenced at the three candidate sites in August 2014. However, an on-site survey was not

possible due to protests by Kami Town (also suspended in 2015). Apr. 5, May 29, and Oct 13, 2015: Forum targeting prefectural residents Oct. to Nov. 2015 (twice): Opinion exchange with Kami Town

with the participation of experts 9th: Mar. 19, 2016 → Results of the remeasurement for designated waste and approaches of the Ministry of the Environment were

explained. Apr. 15, 2016: The prefecture requested the suspension of an on-site survey until certain prefectural policy is decided.

11th (held by the prefecture): Nov. 3, 2016 → Results of the measurement for waste other than designated waste were released. The prefecture

presented its draft policy on disposal of waste with radioactivity concentrations not exceeding 8,000 Rg/kg (excluding designated waste). 12th (held by the prefecture): Dec. 27, 2016

→ Agreement on the prefectural disposal policy was not obtained from Kurihara City and Tome City, and it was decided to have discussions again. 13th (held by the prefecture): Jun. 18, 2017 → The prefecture presented its new draft disposal policies such as to require each district to independently treat

contaminated waste generated therein. 14th (held by the prefecture): Jul. 15, 2017

→ Agreement was reached on the draft disposal policy presented at the previous meeting.

Test incineration was completed in four districts. Ishinomaki. Sennan, Kurokawa and Osaki, → Ishinomaki: Full-fledged

incineration was completed.; Kurokawa: Application to

farmland is planned: Sennan and Osaki: Full-fledged

incineration is underway.

Jul. 10, 2017: Meeting of mayors of municipalities concerning measures to ease burdens of farm households storing waste by themselves (i)

→ Draft of policy for measures to ease burdens of farm households storing waste by themselves were presented Nov. 26, 2018: Meeting of mayors of municipalities (iii)

Tochigi Prefecture

[Municipal mayors' conference]

1st to 3rd: Apr. 2013 to Aug. 2013

5th and 6th: Jul 2014 to Nov 2014

Terashimairi, Shioya Town

May 14, Jun. 22, and Sep. 13, 2015:

→ Selection method was determined

→ One candidate site for detailed survey was

presented (Terashimairi, Shioya Town),

Forum targeting prefectural residents

Survey of the effects of the heavy rain in

→ Remeasurement for designated waste was

future directions were presented

by themselves were released.

Mar. 30. 2017: Results of the confirmation of

The mayor of Shiova Town declared the surrender

of the designation as a candidate site for detailed

→ Results of the remeasurement were released and

intentions of people temporarily storing waste

4th: Dec. 24, 2013

Jul. 30, 2014

Dec 7 2015-

survev.

7th: May 23, 2016

decided.

8th: Oct. 17, 2016

→ Agreement was reached on efforts to muster opinions of municipalities, including those on remeasurement.

Mar. 19. 2019: Results of the remeasurement was

Jun. 26, 2020: Meeting of mayors of municipalities (iii) → Participants confirmed future directions.

Efforts are to be made continuously to seek agreement on detailed surveys and make adjustments with the prefecture and municipalities storing waste

regarding measures to ease the burden on farm

households storing waste by themselves.

Jul. 22. 2016:

Designation was removed for designated waste in

agreement on detailed surveys.

Jun. 28, 2016: Chiba City requested for removal of the designation.

Explanations were given to leaders and residents of Chiba City.

Chiha Prefecture

[Municipal mayors'

1st to 3rd: Apr. 2013 to Jan.

→ Selection method was

→ One candidate site for

detailed survey was

TEPCO's Chiba Thermal Power

Station (Chuo Ward, Chiba

May 20 and Jun. 2, 2015:

Chiha City Assembly

Plenary Meeting

Jun. 8 and Jun. 10. 2015:

fresh discussions.

Chiba City Assembly and

the city mayor requested

Jun. 29. Jul. 7. 13 and 20. and

conferencel

4th: Apr. 17, 2014

Apr 24 2015

determined

presented.

(Part of the premises of

2014

City))

Dec. 14, 2015:

Aug. 7. 2015:

made.

Chiha City

Efforts are to be made

continuously to seek

Response to the request for fresh discussions was

results were released. community organization

Remeasurement for designated waste, etc. in the prefecture was

was determined Mar. 31, 2017:

conducted and the

Iharaki Prefecture

[Municipal mayors'

conferencel

1st: Apr. 12, 2013

2nd: Jun. 27, 2013

3rd: Dec. 25, 2013

4th: lan 28 2015

storedl

on-site storage and promote staged disposal

1st- Apr. 6 2015 2nd: Feb. 4, 2016 → The policy to continue

[Meeting of mayors of municipalities where waste is temporarily

Prepared by the Ministry of the Environment

3rd: Dec. 26, 2016 → The policy to continue on-site storage and

Gunma Prefecture

[Municipal mayors'

conferencel

1st: Apr. 19, 2013

2nd: Jul. 1. 2013

promote staged disposal was determined.