Fukushima Daiichi Nuclear Power Station
Results of Station-wide High Integrity Container Exhaust Filter Damage Inspection

＜Reference material＞
October 8, 2021
Tokyo Electric Power Company Holdings, Inc.
Fukushima Daiichi D&D Engineering Company

■ In light of the damage found to exhaust filters (high performance (HEPA) filters) in high integrity containers connected to multi-nuclide removal equipment (ALPS), exhaust filters used at the Fukushima Daiichi Nuclear Power Station that should be inspected are being identified. (Announced on September 21)

■ 102 exhaust filters (HEPA filters) that meet the three following conditions were identified through the station-wide inspection. (Excluding 76 exhaust filters in ALPS)

- Filters that must be able to contain radioactive substances
- Filters installed in system equipment, or used for construction or other tasks
- Filters in use

■ The integrity of the 102 identified exhaust filters was examined using the following criteria:

① Filter integrity can be indirectly determined【Usage aspects】
(Abnormalities can be detected through differential pressure management and back stage dust monitors, etc.)

② Filter use complies with system design specifications/equipment design specifications【Design aspects】
(Filters are not subjected to extreme pressures due to changes in usage methods)

③ No abnormalities have been found with actual filters during recent filter inspections or replacement【Maintenance aspects】

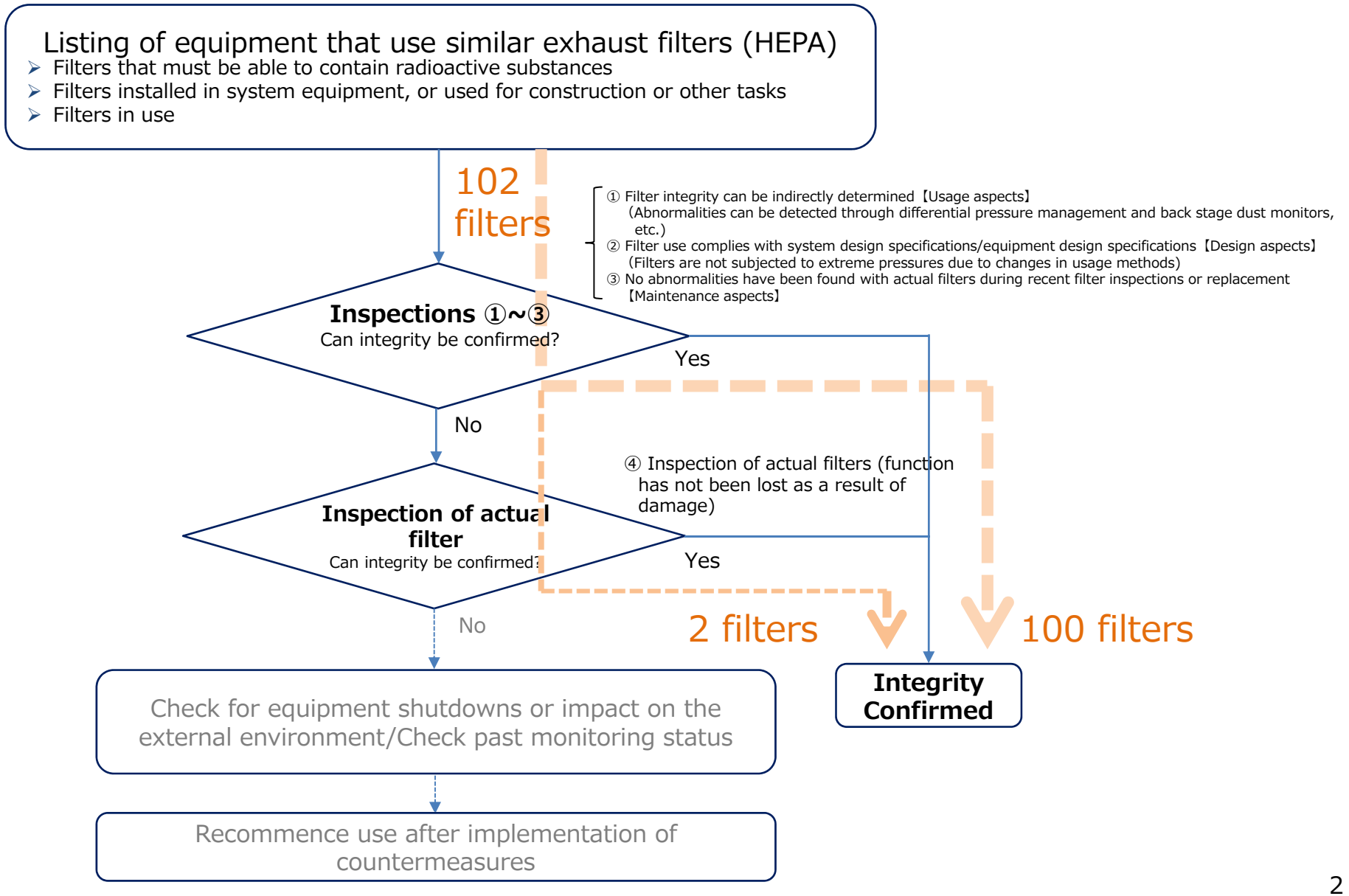
④ Inspection of actual filters (function has not been lost as a result of damage)
※An ④ inspection of actual filters will be implemented for exhaust filters for which integrity was not confirmed through inspections ①～③

■ The integrity of 100 of the 102 exhaust filters was confirmed through inspections ①～③

Inspections of the remaining two filters (Unit 5/6 hot lab used water receiving tank exhaust filter, subdrain purification equipment RO concentrated saline processing relay tank exhaust filter) were conducted on October 5th and 6th since these filters had not been subjected to regular inspection or status monitoring, and no damage was found.

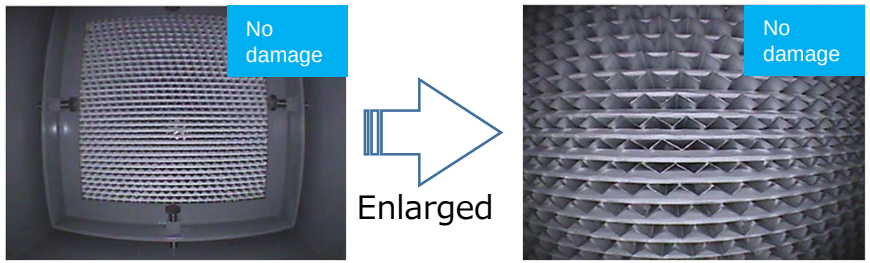
Going forward, the maintenance-management methods of these two filters will be examined and revised.

【Reference】 Flowchart for identifying/inspecting similar exhaust filters

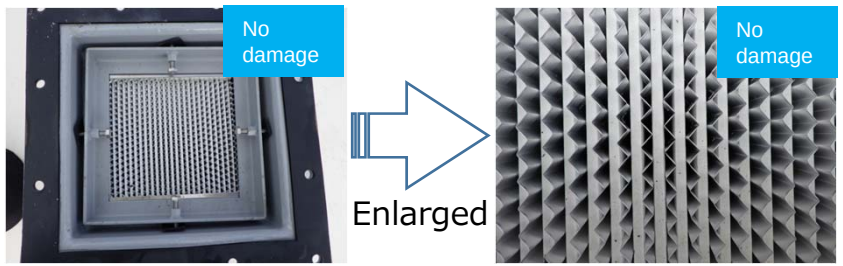


(Reference) Similar exhaust filters that were identified (details)

Results of inspection to identify similar filters	**102**	(Excluding 76 ALPS filters)					
Equipment in which similar filters were found	Quantity	Subject to inspection (no abnormalities found) or differential pressure management or monitor management		Usage method	**Field inspection necessary?**		**Result**
Unit 1, 2, 3 PCV gas management equipment	8	Yes		As designed		No	Integrity confirmed
Unit 3, 4 pool fuel removal cover exhaust equipment	7	Yes		As designed		No	Integrity confirmed
Miscellaneous solid waste incinerator equipment	26	Yes		As designed		No	Integrity confirmed
Common pool equipment	2	Yes		As designed		No	Integrity confirmed
Solid waste storage warehouse 9	2	Yes		As designed		No	Integrity confirmed
Large equipment decontamination equipment	10	Yes		As designed		No	Integrity confirmed
Unit 5, Unit 6 R/B exhaust, D/W purge fan	4	Yes		As designed		No	Integrity confirmed
Unit 2 R/B exhaust, west side work platform anticum air conditioner	4	Yes		As designed		No	Integrity confirmed
Decontamination device	2	Yes		As designed		No	Integrity confirmed
Other water treatment systems, equipment systems	13	Yes		As designed		No	Integrity confirmed
Temporarily installed equipment/construction equipment	22	Yes		As designed		No	Integrity confirmed
Unit 5/6 hot lab	1		No	As designed	Yes	Filter was inspected and no abnormalities found (10/5) Used water receiving tank	Integrity confirmed
Subdrain, etc. purification equipment	1		No	As designed	Yes	Filter was inspected and no abnormalities found (10/6) SD, etc. purification equipment RO condensed water treatment water relay tank	Integrity confirmed



Unit 5/6 hot lab used water receiving tank exhaust filter (photographed on October 5)



Subdrain, etc. purification equipment RO condensed water treatment water relay tank exhaust filter (photographed on October 6)