

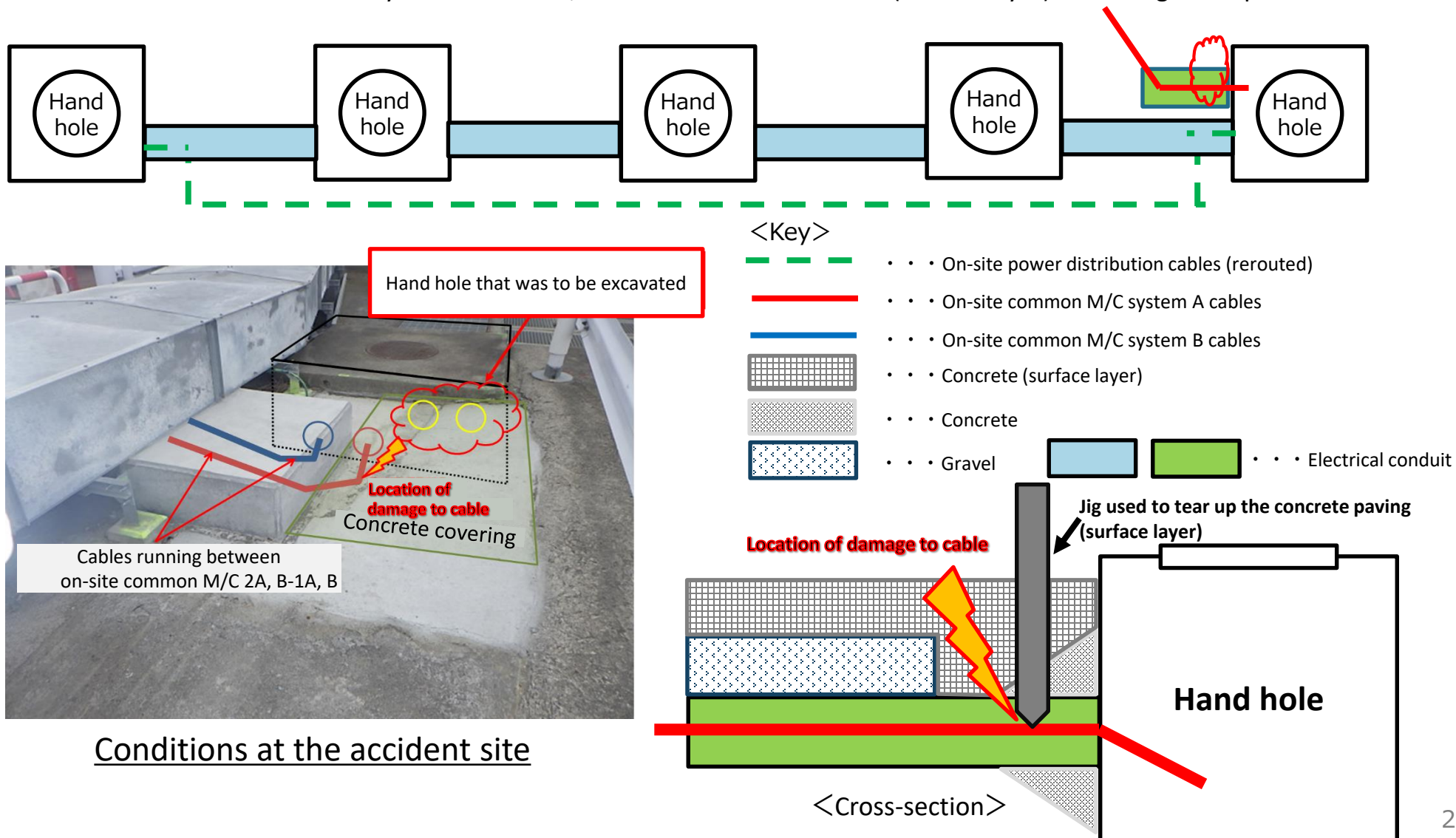
- At around 10:43AM today (April 24), the on-site electric power system A shut down.
- Functions that keep each plant stable (reactor cooling water injection, spent fuel pool cooling, primary containment vessel gas management system, etc.) remain in operation, and no significant fluctuations have been seen in parameters for monitoring posts or site boundary continuous dust monitors.
- In conjunction with the loss of on-site electric power system A, the ALPS treated water dilution/discharge facility, which was in operation, was automatically suspended, thereby suspending the discharge. Since no abnormality was seen with the ALPS treated water dilution/discharge facility, discharge was recommenced at 5:16 p.m. on the same day.
- At around the same time that the on-site electric power system A was lost, a contract worker engaged in excavation work (tearing up concrete paving (surface layer)) on the west side of the on-site large equipment inspection building was injured. A field inspection of the site of the accident found that the cable was damaged during the aforementioned excavation work resulting in the suspension of the on-site electric power system A.
- The injured person is conscious and has not been contaminated with radioactive substances. A doctor from the entrance/exit control building emergency medical center at the power station treated the injured person and deemed that the injured person required emergency medical transport to hospital, and an ambulance was called at 10:57 a.m. The injured person was transported to the hospital and was diagnosed with second-degree burns on the right cheek and the right forearm, but was released without the need for hospitalization.

### <Reference>

- At around 10:43AM on April 24, the on-site electric power system A was lost, causing a loss of voltage to the seismic isolation building M/C (metal-clad switchgear), thereby constituting a deviation from the limited conditions of operation (LCO) (“AC voltage power bus needed to maintain the seismic isolation building is receiving power”) as stipulated in Part 1 Clause 29 of the Implementation Plan at 10:43a.m.. The seismic isolation building gas turbine generator automatically started up at 10:43 a.m., and it was confirmed in the field at 11:30 a.m. that voltage had been restored to the seismic isolation building M/C bus, so the LCO deviation was deemed to have been rectified.
- At around 2:23 p.m. on the same day, the power system of the seismic isolation building was lost during a process of restoring the on-site electric power system A, thereby constituting a deviation from the limited conditions of operation (LCO) (“AC voltage power bus needed to maintain the seismic isolation building is receiving power”) as stipulated in Part 1 Clause 29 of the Implementation Plan at 2:23 p.m.. The power supply from the on-site common M/C 5A was established at 2:43 p.m., and it was confirmed in the field at 2:43 p.m. that voltage had been restored to the seismic isolation building M/C bus, so the LCO deviation was deemed to have been rectified.

# 1. Construction overview

Outdoor paving was being torn up in conjunction with the maintenance (rerouting) of buried electrical conduits for the on-site power distribution cables. On the day of the accident, the surface of the concrete (surface layer) was being torn up.



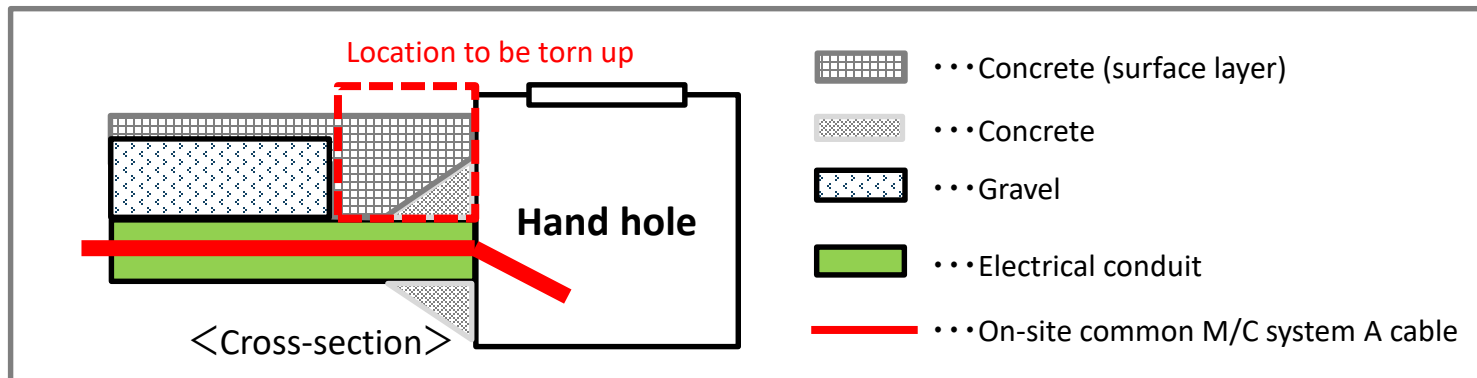
## 2. Sequence of events

|          |                   |   |
|----------|-------------------|---|
| March 18 |                   | <ul style="list-style-type: none"> <li>• TEPCO safety preassessment implemented</li> </ul>  |
| March 25 |                   | <ul style="list-style-type: none"> <li>• Contractor holds pre-work deliberation meeting and conducts general field inspection</li> </ul>  |
| April 8  |                   | <ul style="list-style-type: none"> <li>• Work begins at the aforementioned location, including preparations</li> </ul>  |
| April 24 | Around 9:30 a.m.  | <ul style="list-style-type: none"> <li>• Concrete paving (surface layer) around the hand hole starts to be torn up</li> </ul>   |
|          | Around 10:43 a.m. | <ul style="list-style-type: none"> <li>• On-site common M/C1A shutdown in conjunction with damage to the on-site common M/C system A cable<br/> <ul style="list-style-type: none"> <li>✘ Power shuts down (the seismic isolation building M/C, M/C3A, 5A, 7A)</li> <li>ALPS treated water dilution/discharge facility (transfer facility) shut down</li> </ul> </li> <li>• Arcing electricity injures worker</li> </ul> |
|          | Around 11:34 a.m. | <ul style="list-style-type: none"> <li>• Injured worker is transported from the entrance/exit control building emergency medical center to the hospital</li> </ul>  |
|          | Around 4:03 p.m.  | <ul style="list-style-type: none"> <li>• Electric power is restored</li> </ul>  |
|          | Around 5:16 p.m.  | <ul style="list-style-type: none"> <li>• ALPS treated water discharge recommences</li> </ul>  |
|          | Around 7:45 p.m.  | <ul style="list-style-type: none"> <li>• Injured worker diagnosed with second-degree burns to the right cheek and right forearm, but is not hospitalized</li> </ul>   |

### 3. Facts

【Work being done on the day of the accident】

- On the day of the accident, concrete paving (surface layer) was to be torn up so a work team (work team leader: 1, workers: 3) was engaging in said work in accordance with the guidelines.
- In the area to be torn up (near the hand hole), the concrete paving is integrated with the concrete portion that secures the buried electrical conduit and the hand hole.
- Therefore, the aforementioned work team continued to tear into the concrete portion that secures the buried electrical conduit and the hand hole, thereby damaging the buried electrical conduit and the cable inside.



- TEPCO and the aforementioned contractor inspected the work site together prior to this construction and were both aware that there was a buried electrical conduit and a live cable underneath.
- TEPCO was aware of the risk of the cable being damaged during the course of this construction, but on this particular day, only the concrete paving (surface layer) was to be torn up so TEPCO estimated there is no risk of damaging the cable. Therefore, TEPCO did not instruct the contractor to give particular precautions to the work team.
- The aforementioned contractor made the same estimates as TEPCO, and therefore did not give particular precautions to the work team.

## 4. Problems and countermeasures

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### ❑ Problems with TEPCO

- TEPCO estimated that there was no risk of the cable being damaged during the tearing up of concrete paving (surface layer) and therefore did not instruct the contractor to give particular precautions to the work team.

#### <Countermeasures>

- During risk assessments performed prior to work close to charging area\*, TEPCO shall identify particular precautions for work team based on the pre-work field inspection, and make sure that the contractor thoroughly instructs all members of its work teams to take precautions.
- Regardless of the details of the construction, when work close to charging area is being performed, a risk assessment that assumes the risk of cable damage shall be performed and it shall be deliberated whether or not the power should be turned off during such construction and whether or not the work plan should be revised.
- When work close to charging area is being performed, for example, this work to tear up the concrete paving (surface layer), pre-work inspection shall be made beforehand, and TEPCO employees shall be on-site to observe.
- TEPCO shall ensure that the contractor implements these countermeasures.

### ❑ Problems with the contractor

- The aforementioned contractor did not give particular precautions to the work team that there is a risk to damage the cables.

#### <Countermeasures>

- In light of the risk assessment and the instruction by TEPCO, the aforementioned contractor shall identify in detail the precautions that should be taken based on the pre-work field inspection for each daily task, and shall thoroughly convey this information to work teams through TBM-KY, and field KY.

\* work close to charging area: work that is performed near live high-voltage power cables, etc.

<Reference> Fukushima Daiichi Nuclear Power Station Diagram.



Fukushima Daiichi Nuclear Power Station Site Diagram