Fukushima Daiichi Nuclear Power Station
Unit 3 PCV Internal Investigation
(non-submerged area) using Micro-drones

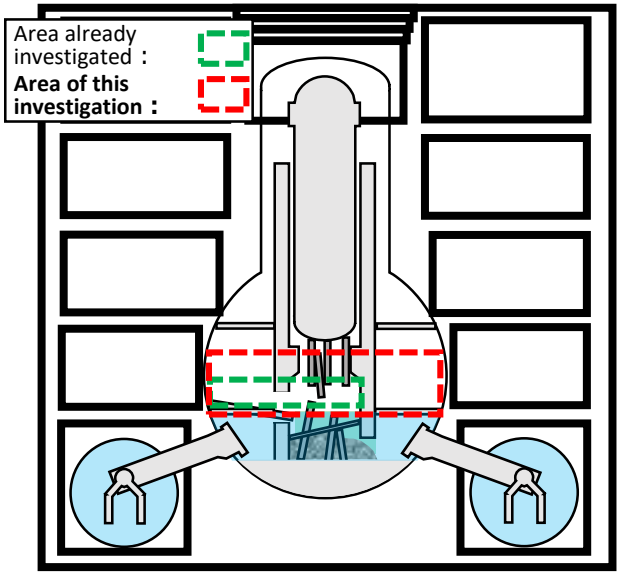
November 27, 2025

TEPCO

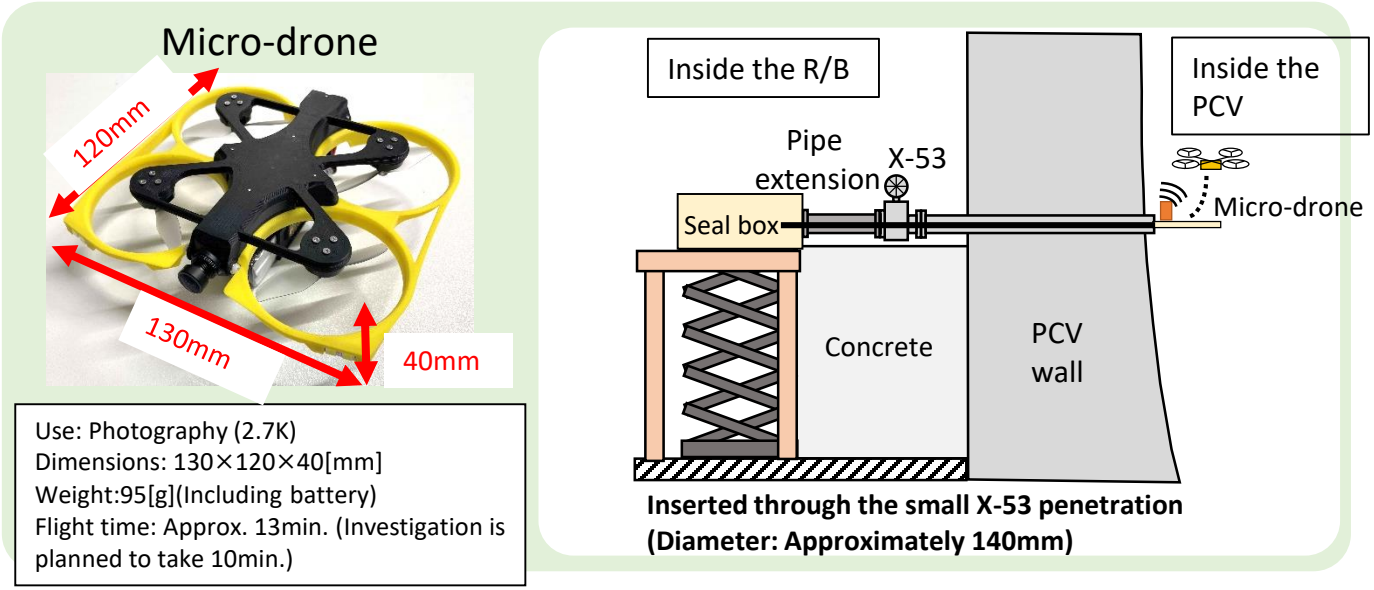
Tokyo Electric Power Company Holdings, Inc.

1. Summary

- In July 2025 we announced that we were deliberating design plans for the retrieval of fuel debris from Unit 3, and **that more information needs to be gathered about the inside of the PCV as we prepare for full-scale debris retrieval**.
- However, the water level inside the PCV has remained high since the accident and the penetrations we can use are limited with the **small X-53 penetration (Diameter: Approximately 140mm) being the only penetration currently available for access.**
- Therefore, the investigation devices that have proved successful at other units cannot be used and a new larger diameter access route must be constructed. However, this would require time so **our current plan is to conduct a PCV internal investigation using a small "micro-drone."**
- During this investigation, we plan to investigate the **as of yet unexamined first floor of the D/W and also perform a more meticulous investigation of the inside of the pedestal** that was investigated in 2017 using a submersible ROV.



Cross-sectional diagram of the Unit 3 PCV internal investigation area

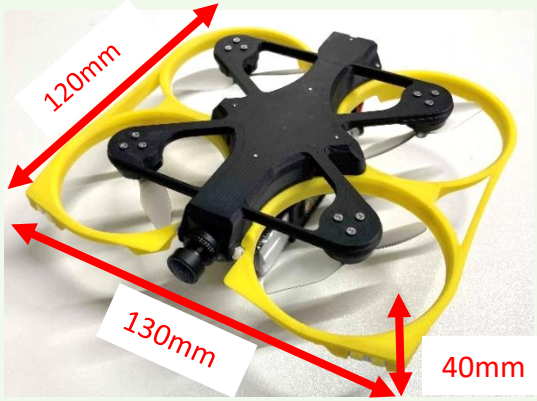


Concept diagram of Unit 3 micro-drone investigation

[Reference] Investigation devices

- Since the area inside the PCV is cramped and dark, an extremely small and highly mobile **"micro-drone"** with photographic capabilities will be installed through the small X-53 penetration.
- As with past investigations**, a seal box will be attached to the X-53 penetration so as to allow the micro-drone to be inserted into the PCV while maintaining PCV isolation**.
- The seal box will contain a total of six drones and two drones will be able to be installed inside the PCV simultaneously (how the six drones are to be used will be determined during mockup/training).

Micro-drone



Held in the palm of the hand for size comparison

Use: Photography (2.7K)
Dimensions: 130×120×40[mm]
Weight:95[g](Including battery)
Communications method: Radio
Flight time: Approximately 13 minutes (the investigation is planned to take 10 minutes)
Camera performance: Image quality: 2.7K, frame rate: 60fps
Angle of view: diagonal 140°, Horizontal 135°, vertical 107°
Lights: 2 LEDs on the left and right sides (total: 380lm)
Radiation resistance: 200Gy
Notes: Corresponds to IP52, Two types of cameras: portrait and landscape

Seal box

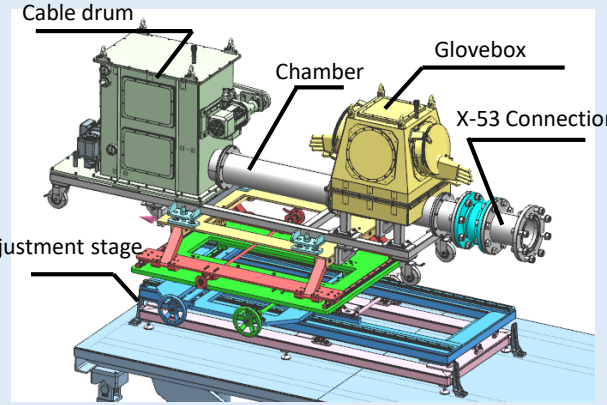


Diagram of Seal box

The drones to be installed are housed in the chamber through which they are installed into the PCV.

Standby drones and recharging equipment are inside the glove box so that drones on the liftoff/landing pad can be switched out while maintaining airtightness.

Dimensions: Approx. 2.6m×0.6m×1.1m
Weight: Approx. 315kg

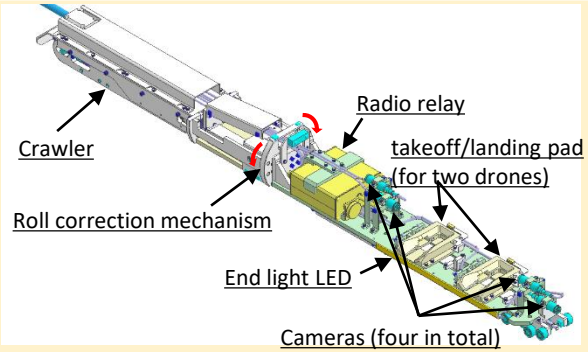


Diagram of installation equipment

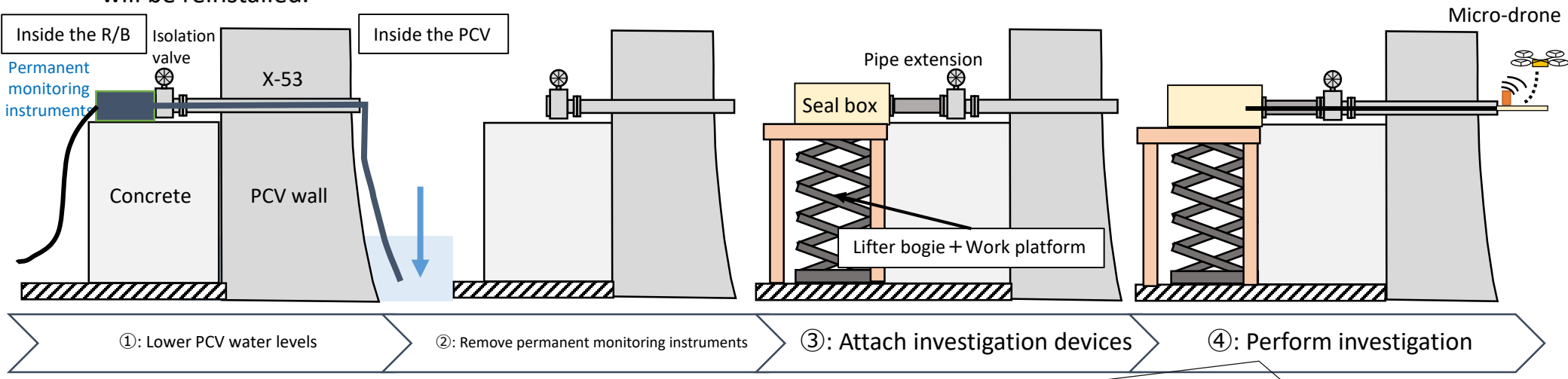
The crawler enables self-installation thereby reducing worker exposure.

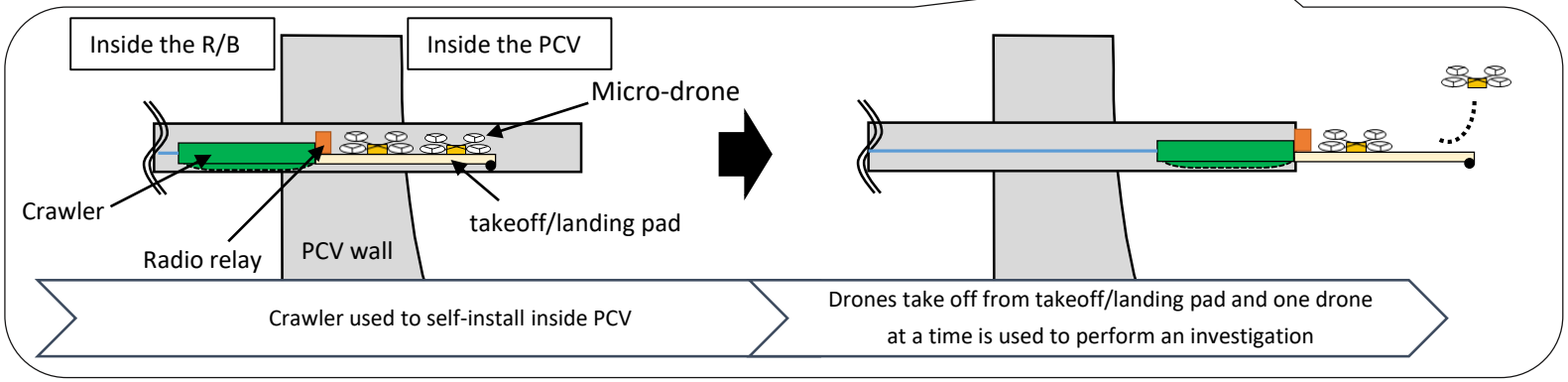
Two drones can be installed simultaneously.

Dimensions: Approx. 1.3m×Φ130mm
Weight: Approx. Approximately 20kg

[Reference] Work flow

- Permanent monitoring instruments (water level/temperature gauge) newly installed after the accident are currently inserted through the X-53 penetration.
- And, in order to fly the micro-drone inside the pedestal, the water level inside the PCV must be lowered to the bottom edge of the CRD replacement opening.
- Therefore, as preparations for the investigation, **PCV water level will be lowered and permanent monitoring instruments will be removed after which the investigation devices will be attached and the investigation performed**.
- After the investigation is completed, the investigation devices will be removed and the permanent monitoring instruments will be reinstalled.

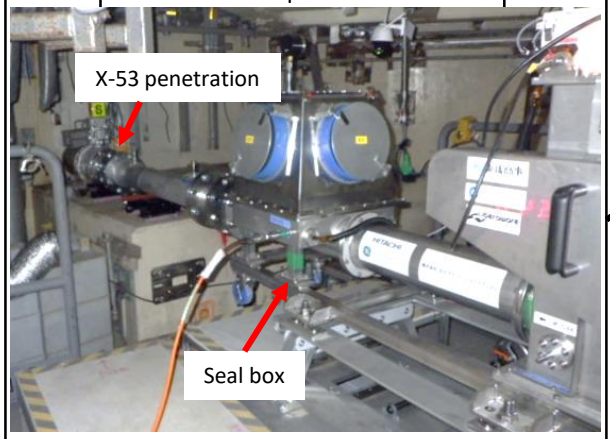




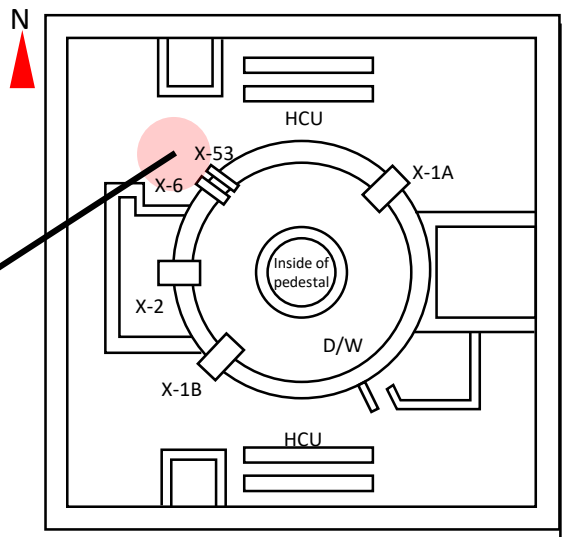
2. Status of work preparations

- Preparations began onsite at Fukushima Daiichi at the end of October, and **investigation equipment has been installed in front of the X-53 penetration. The installation of the remote operations room and field command room have also been completed.**
- Off-site Mockup/training has been completed, and field checks of equipment will be conducted going forward.

Investigation equipment in front of the X-53 penetration



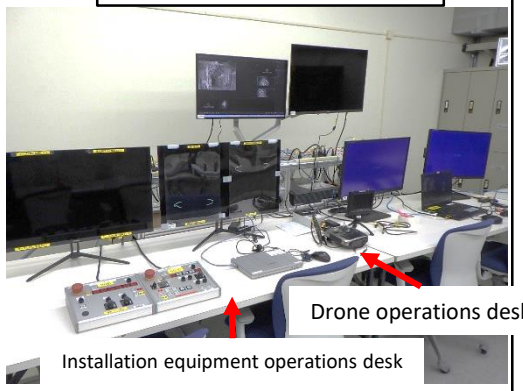
Seal box installation



Unit 3 R/B

Unit 3 T/B

Remote operations room (Main administration building)



Setup status of remote operations room

Field command room（T/B）

Setup status of field command room

- Remote operations room: Area designated for overall operational supervision and the operation of installation equipment and micro-drones.
- Field command room: Area from which instructions are given to field work teams and instructions passed down to the following shift members.

Unit 3 Field deployment of PCV Internal Investigation (non-submerged area) using a Micro-drone(planned)

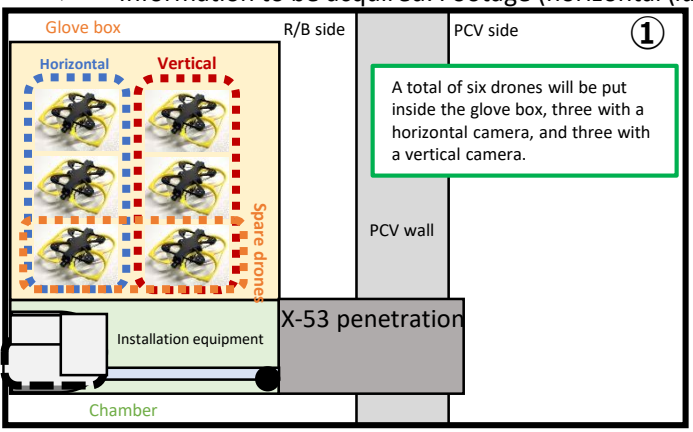
3-1. Investigation plan ~Information on the entire investigation①~

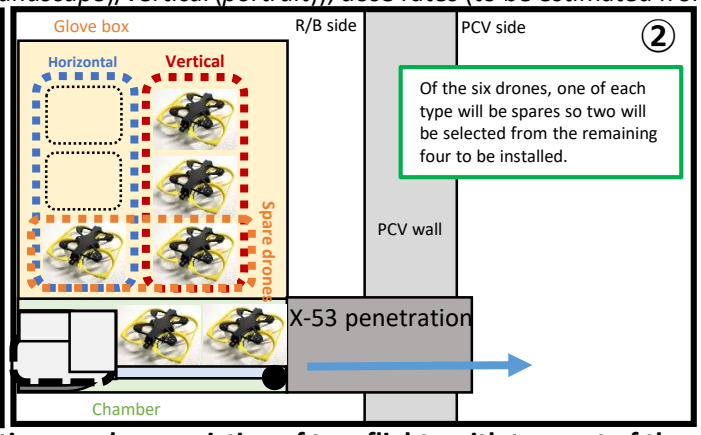
- Investigation details and flight routes will be created for each flight based on Mockup/training results.
- The method by which drones are to be used will be determined based on worker exposure doses and the radiation resistance of drones.

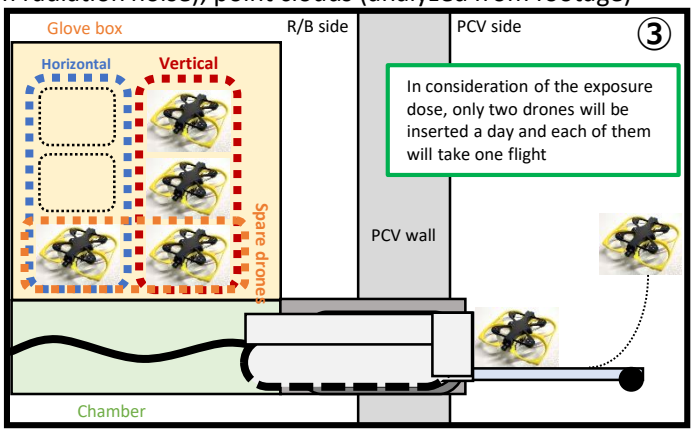
【Main objective】

Collect information in the vicinity of the X-6 penetration and inside the pedestal which will be important for accessing from the side to perform deposit investigations and retrieve fuel debris.

➢ Information to be acquired: Footage (horizontal (*landscape*)/vertical (*portrait*)), dose rates (to be estimated from radiation noise), point clouds (analyzed from footage)







Planned drone usage: One installation per day consisting of two flights with two out of the six drones to be used as spares

Investigation schedule※1(Investigation period: 11 days; Maximum number of flights: 21)

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11
Area	Outside pedestal	Outside pedestal	Outside pedestal	Outside pedestal	Inside pedestal	Inside pedestal	Inside pedestal	Added	Added	Added	Added
Type	Initial	Point cloud footage	Focal point	Focal point	Initial/ Point cloud footage	Focal point	Focal point	Added	Added	Added	Added
1st drone	Counter-clockwise (Horizontal)	South side (Horizontal)	South side (Horizontal)	CRD hatch (Horizontal)	Initial (Horizontal)	Bottom (Vertical)	Top① (Vertical)	※2	※2	※2	※2
2nd drone	Clockwise (Horizontal)	North side (Horizontal)	North side (Horizontal)	X-6 penetration (Horizontal)	Point cloud creation (Horizontal)	Middle (Vertical)	Top② (Vertical)	※2	※2	※2	※3

※1： The investigation period will be decided based on the radiation resistance of the drone. The order, number of days, and investigation details may be changed in accordance with field conditions.
※2： The scope of the additional investigation will be determined based on findings from the investigation up to the 7th day.
※3： On the final day, a dosimeter will be placed on the liftoff/landing pad for the 2nd drone, so the 2nd drone will not be flown.

3-2. Investigation plan ~Information on the entire investigation ②~

- Drone flights inside and outside the pedestal on the D/W1FL (hereinafter referred to as, “outside the pedestal”) can be broadly classified as **“Initial flights,” “point cloud footage flights,” and “focal point flights.”**
  - Initial flights: Investigations performed prior to the main investigation in order to determine the range of radio communications in new flight areas.
  - Point cloud footage flights: Used to obtain footage that can be used to improve the accuracy of point cloud data.
  - Focal point flights: Conduct detailed investigations in the areas identified in advance.
- “**Additional investigations**” shall be performed after the investigations of the outside and inside of the pedestal **in accordance with conditions inside the PCV.**
  - Additional investigations: Additional investigations implemented due to new knowledge gained during the investigations of the outside and the inside of the pedestal, and to perform tasks that time did not allow for during the original schedule.

1. Investigations outside the pedestal (4 days)

i. Initial flights: One flight around the entire circumference of the pedestal and one flight to focus on the PCV walls and the pedestal walls.
ii. Point cloud footage flights: One flight on the south side and one flight on the north side to obtain point cloud data around the outside of the entire pedestal.
iii. Focal point flights: Flights on the south side, north side, and around the X-6 penetration to acquire data on predetermined the areas identified.

2. Investigations inside the pedestal (3 days)

i. Initial flights: One flight around the entire inner circumference.
ii. Point cloud footage flights: Footage taken of the entire inside of the pedestal in order to form a point cloud.
iii. Focal point flights: Flights to be flown on the bottom, middle, and top areas in order to acquire data on predetermined the areas identified.

3. Additional investigations (4 days)

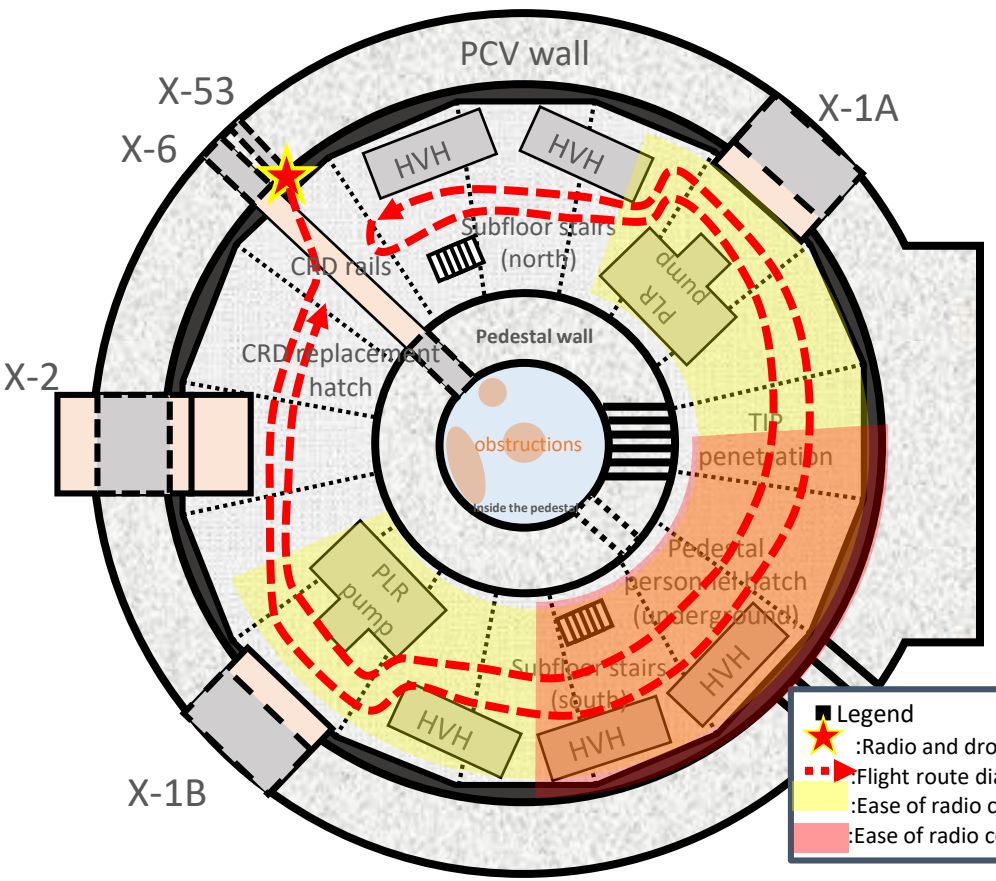
i. Additional investigations on new focal points and new knowledge.
ii. Additional investigations to perform tasks that time did not allow for during the investigations of the outside and inside of the pedestal mentioned above.

※：The order/investigation details may be changed in accordance with field conditions.

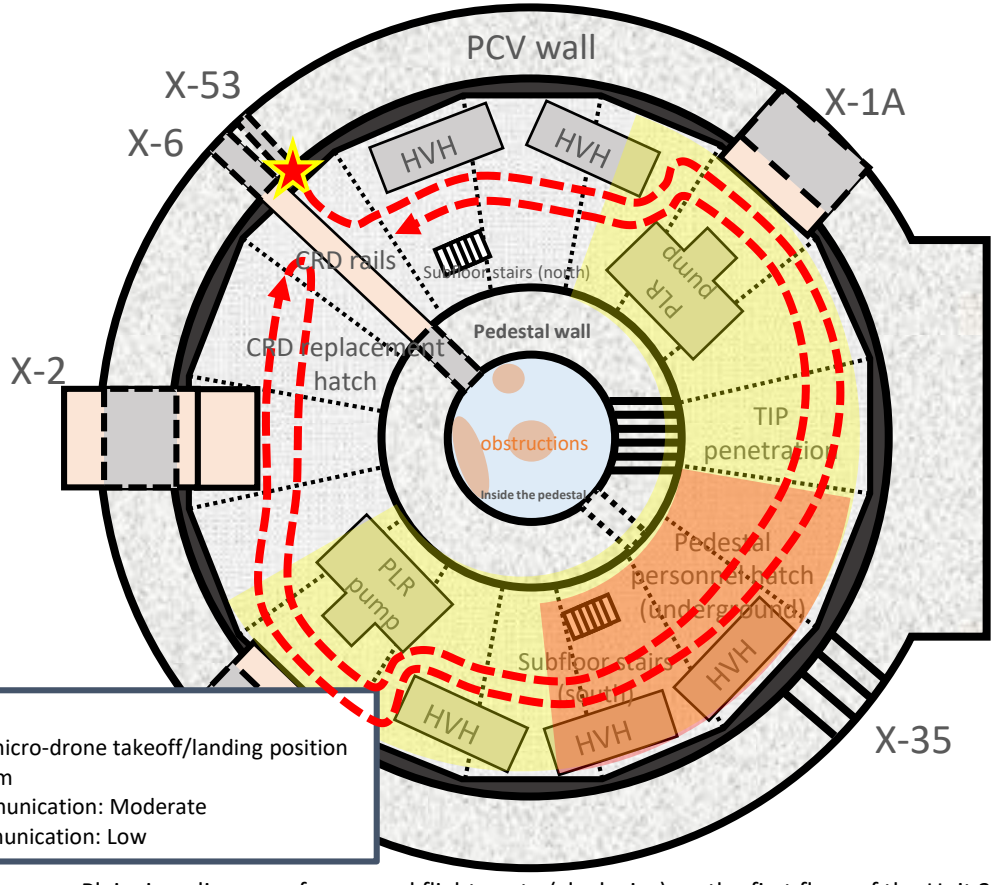
4-1. Investigation plan ~Investigation outside the pedestal① Initial flight~

Day 1: 1st flight, 2nd flight

- Since this is the first time a drone investigation will be conducted at Unit 3, we will **first conduct an initial flight to examine the conditions**.
- The objectives of the initial flight will be to **confirm the range of radio communications in the actual environment ※1, the amount of time required for a flight, and to look for any obstructions.**
- A micro-drone with a horizontal (*landscape*) camera will be used to **photograph the large space around the pedestal where it will be flying. Two flights are planned, one going counterclockwise and the other going clockwise** (the counter-clockwise investigation will follow the PCV wall and the clockwise investigation will follow the pedestal wall).



Plainview diagram of proposed flight route (counter-clockwise) on the first floor of the Unit 3 D/W



Plainview diagram of proposed flight route (clockwise) on the first floor of the Unit 3 D/W

Legend
:Radio and drone micro-drone takeoff/landing position
:Flight route diagram
:Ease of radio communication: Moderate
:Ease of radio communication: Low

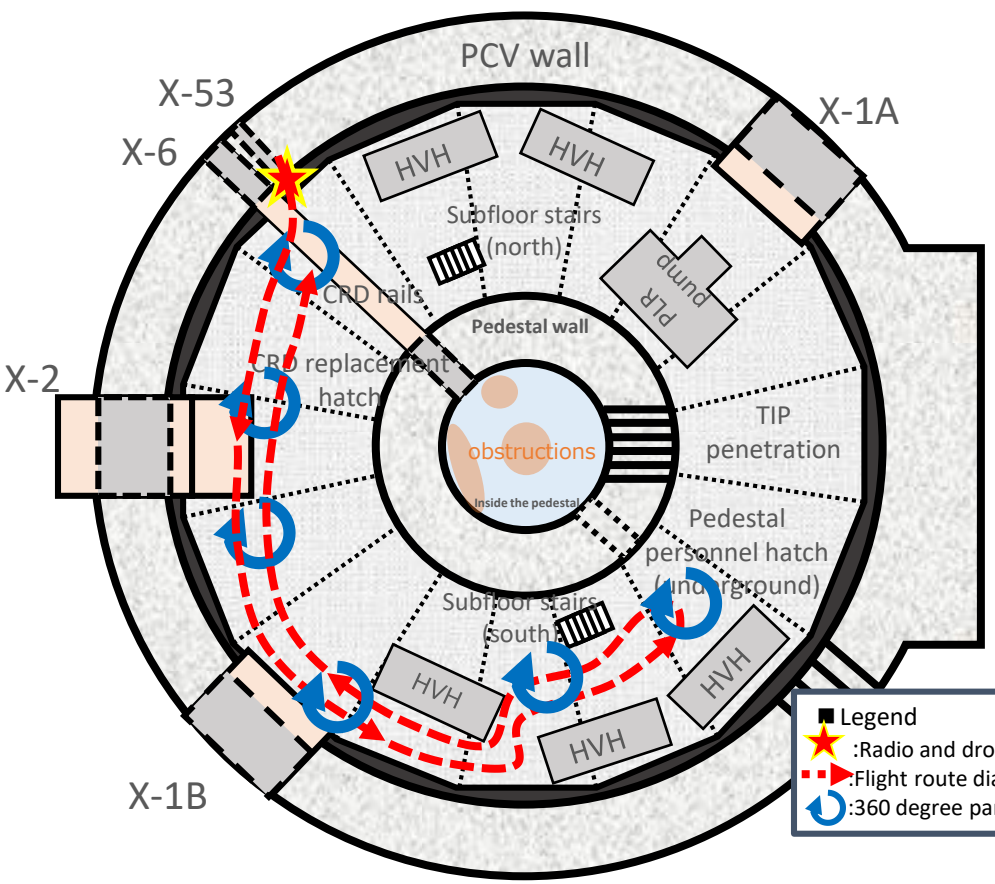
※1： Communication check on Unit 5 verified that full-area flight is possible.

※2：Investigation details/order may be changed in accordance with field conditions.

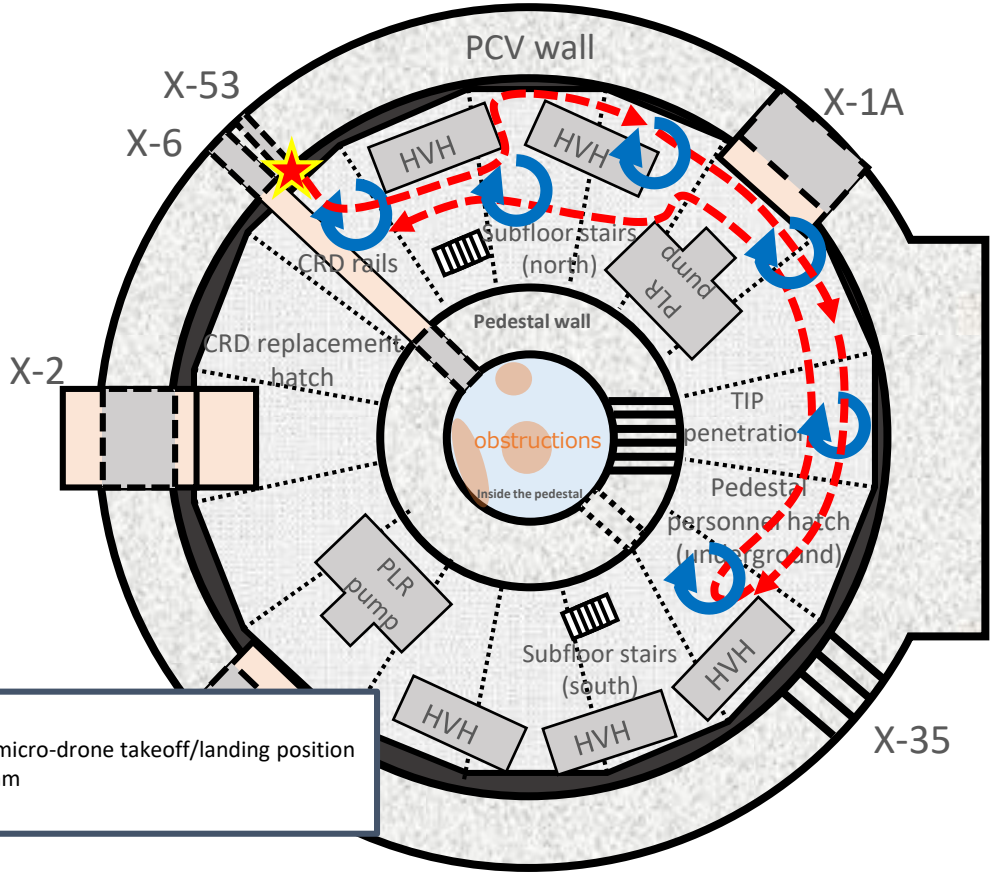
4-2. Investigation plan ~Investigation outside the pedestal ② Point cloud footage~

Day 2: 1st flight, 2nd flight

- In order to improve the accuracy of point cloud data created from the footage, **footage that lends itself to creating point cloud data** will be acquired.
- Since the entire outside of the pedestal will be photographed, the flight will be slowly paced so that as much area as possible can be put into the angle of view, and the drone shall do a 360 degree turn at each point (The number of points will be increased or decreased depending on the amount of fog during the time investigation and the extent to which light is penetrating the area).
- A micro-drone with a horizontal (*landscape*) camera will be used to **photograph the large space around the pedestal where it will be flying. Two flights are planned, one on the south side and one on the north side.**



Plainview diagram of proposed flight route (south side) on the first floor of the Unit 3 D/W



Plainview diagram of proposed flight route (north side) on the first floor of the Unit 3 D/W

※：Investigation details/order may be changed in accordance with field conditions

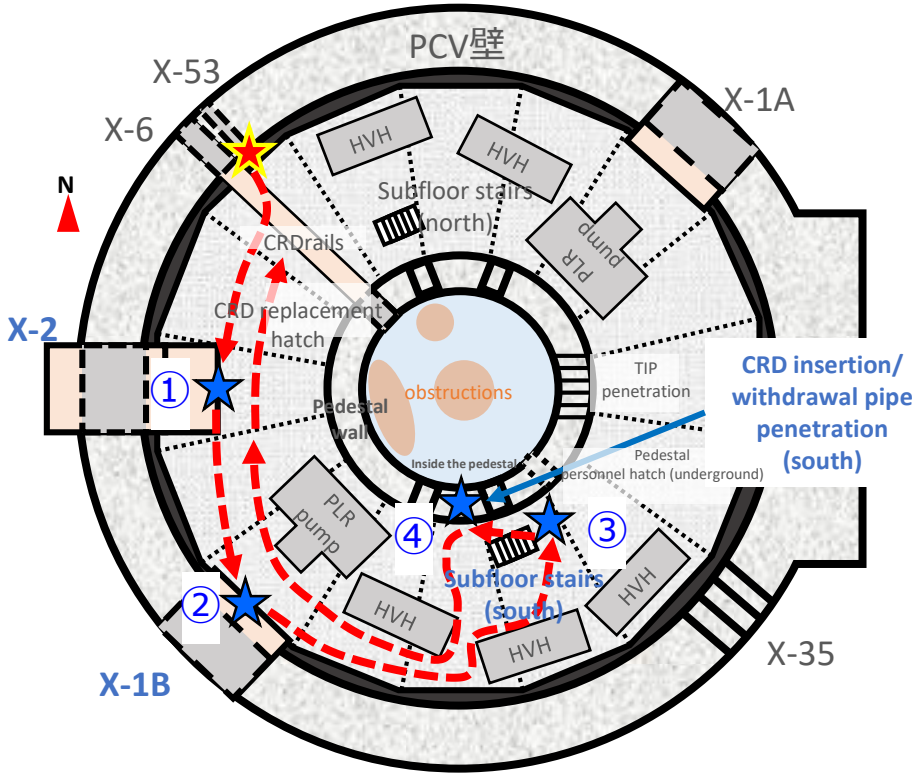
4-3.Investigation plan ~Investigation outside the pedestal ③ Focal point investigation (South side)~

Day 3: 1st flight

- During the south side investigation, detailed footage will be acquired from the following points.

Focal point	Details	Future use objective
① X-2 penetration	Conditions and obstacles in the vicinity (damage, degradation)	To deliberate the accessibility of the inside of the PCV
② X-1B penetration	Conditions and obstacles in the vicinity (damage, degradation)	To deliberate the accessibility of the inside of the PCV
③ Subfloor stairs (south)	Conditions and obstacles in the vicinity (damage, degradation)	To deliberate the accessibility of the D/W subfloors
④ CRD insertion withdrawal pipe (south)	Conditions (damage, degradation), accretions if any (if damaged)	To see how fuel-based materials flowed

- A micro-drone with a horizontal (portrait) camera will be used to **photograph the large space around the pedestal where it will be flying. One flight is planned.**



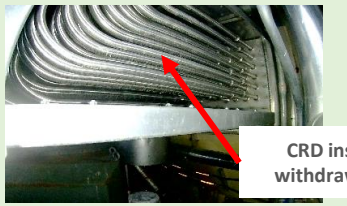
Plainview diagram of proposed flight route (south side) on the first floor of the Unit 3 D/W

Photos of each location (from Unit 5)

① X-2 penetration (Opening)

② X-1B penetration

③ Subfloor stairs (south)



④ CRD insertion/withdrawal pipe (south)

■ Legend
:Radio and drone takeoff/landing position :Flight route diagram
:Focal point
①：X-2 penetration、②：X-1B penetration
③： Subfloor stairs (south)、④： CRD insertion withdrawal pipe (south)

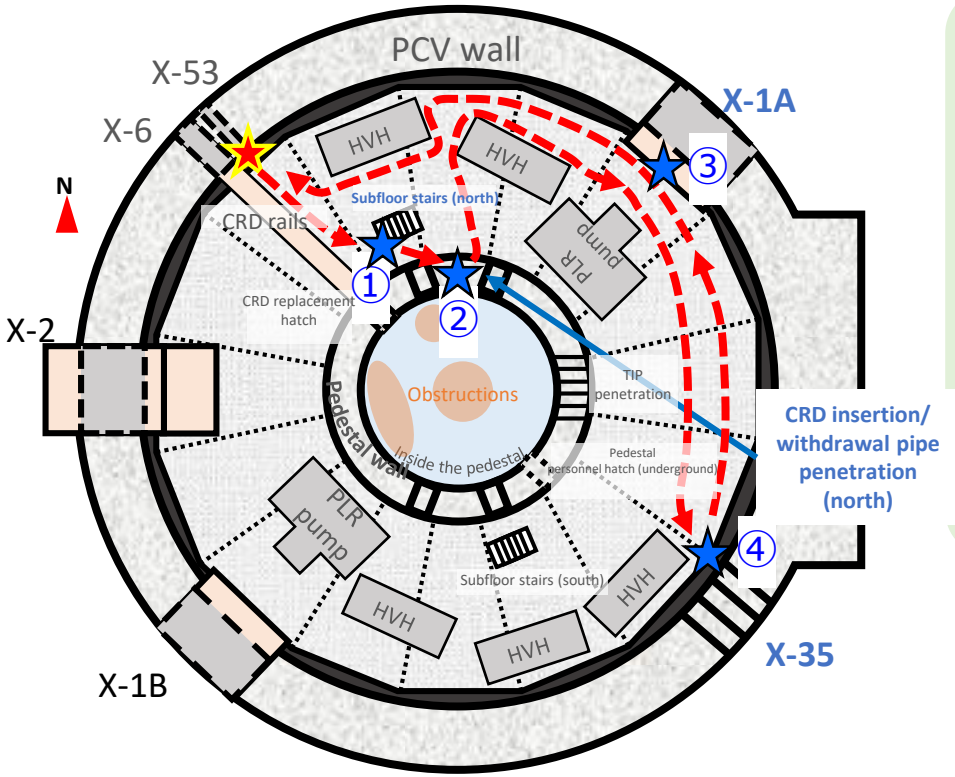
※：Investigation details/order may be changed in accordance with field conditions

Day 3: 2nd flight

- During the north side investigation, detailed footage will be acquired from the following points.

Focal point	Details	Future use objective
① **Subfloor stairs (north)**	Conditions and obstacles in the vicinity (damage, degradation)	To deliberate the accessibility of the D/W subfloors
② **CRD insertion withdrawal pipe (north)**	Condition (damage, degradation), accretions if any (if damaged)	To see how fuel-based materials flowed
③ **X-1A penetration**	Conditions and obstacles in the vicinity (damage, degradation)	To deliberate the accessibility of the inside of the PCV
④ **X-35 penetration**	Conditions and obstacles in the vicinity (damage, degradation)	To deliberate the accessibility of the inside of the PCV

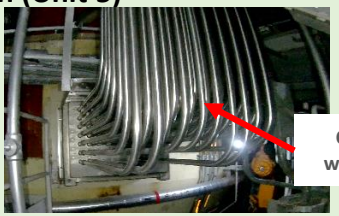
- A micro drone with a horizontal (landscape) camera will be used to **photograph the large space around the pedestal where it will be flying. One flight is planned.**



Plainview diagram of proposed flight route (south side) on the first floor of the Unit 3 D/W

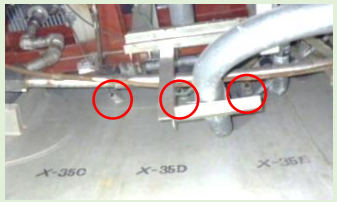
Photos of each location (Unit 5)

①Subfloor stairs (north)



② CRD insertion withdrawal pipe (north)

③ X-1A (Opening)



④ X-35 penetration

■Legend
★:Radio and drone takeoff/landing position、▪▪▶:Flight route diagram
★:Focal point
① : Subfloor stairs (north)、② : CRD insertion withdrawal pipe (north)
③ : X-1A penetration 、 ④ : X-35 penetration

※ : Investigation details/order may be changed in accordance with field conditions

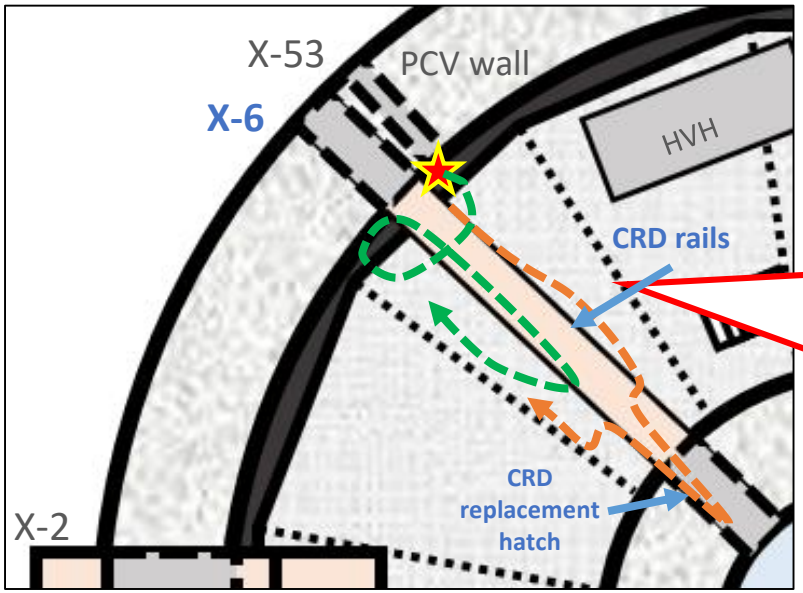
4-5.Investigation plan ~Investigation outside the pedestal ⑤ Focal point investigation (around the X-6 penetration)~

Day 4: 1st flight, 2nd flight

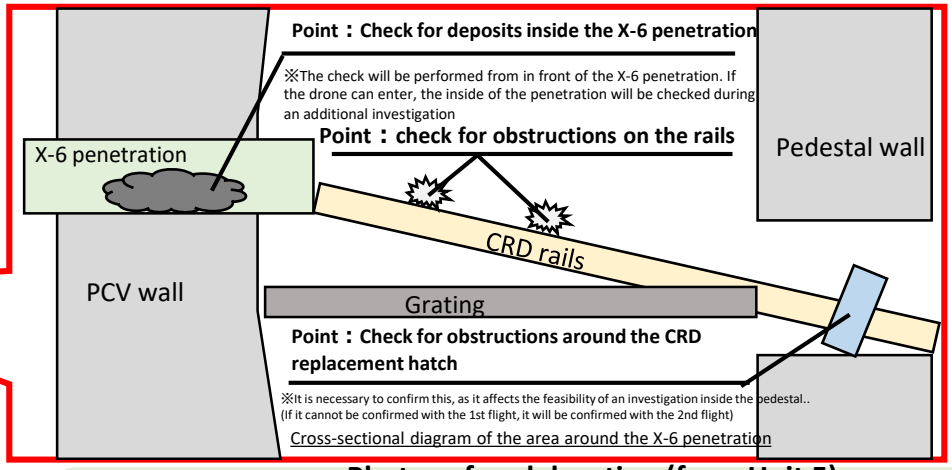
- During the X-6 penetration, detailed footage will be acquired from the following points.

Focal point	Details	Future use objective
① X-6 penetration	Check for obstructions, condition (damage, degradation), and presence of deposits	To deliberate the accessibility of the inside of the PCV
② CRD rails	Condition (damage, degradation), check for obstructions on the rails	To deliberate the accessibility of the inside of the pedestal
③ CRD replacement hatch	Check the inside and look for obstructions in the vicinity	To deliberate the accessibility of the inside of the pedestal

- A micro-drone with a horizontal (*landscape*) camera will be used to **photograph the large space around the pedestal where it will be flying. Since these are important investigation locations, two flights will be performed; one around the X-6 penetration and the other around the CRD replacement hatch.**



Plainview diagram of proposed flight route (northwest expansion) on the first floor of the Unit 3 D/W

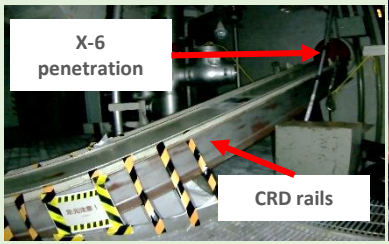


Cross-sectional diagram of the area around the X-6 penetration

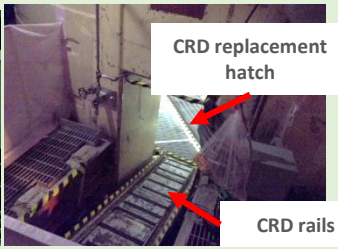
■ Legend
:Radio and drone takeoff/landing position, :Flight routes
:Focal point
①：X-6 penetration, ②：CRD rails, ③：CRD replacement hatch

Photos of each location (from Unit 5)

① X-6 penetration



② CRD rails



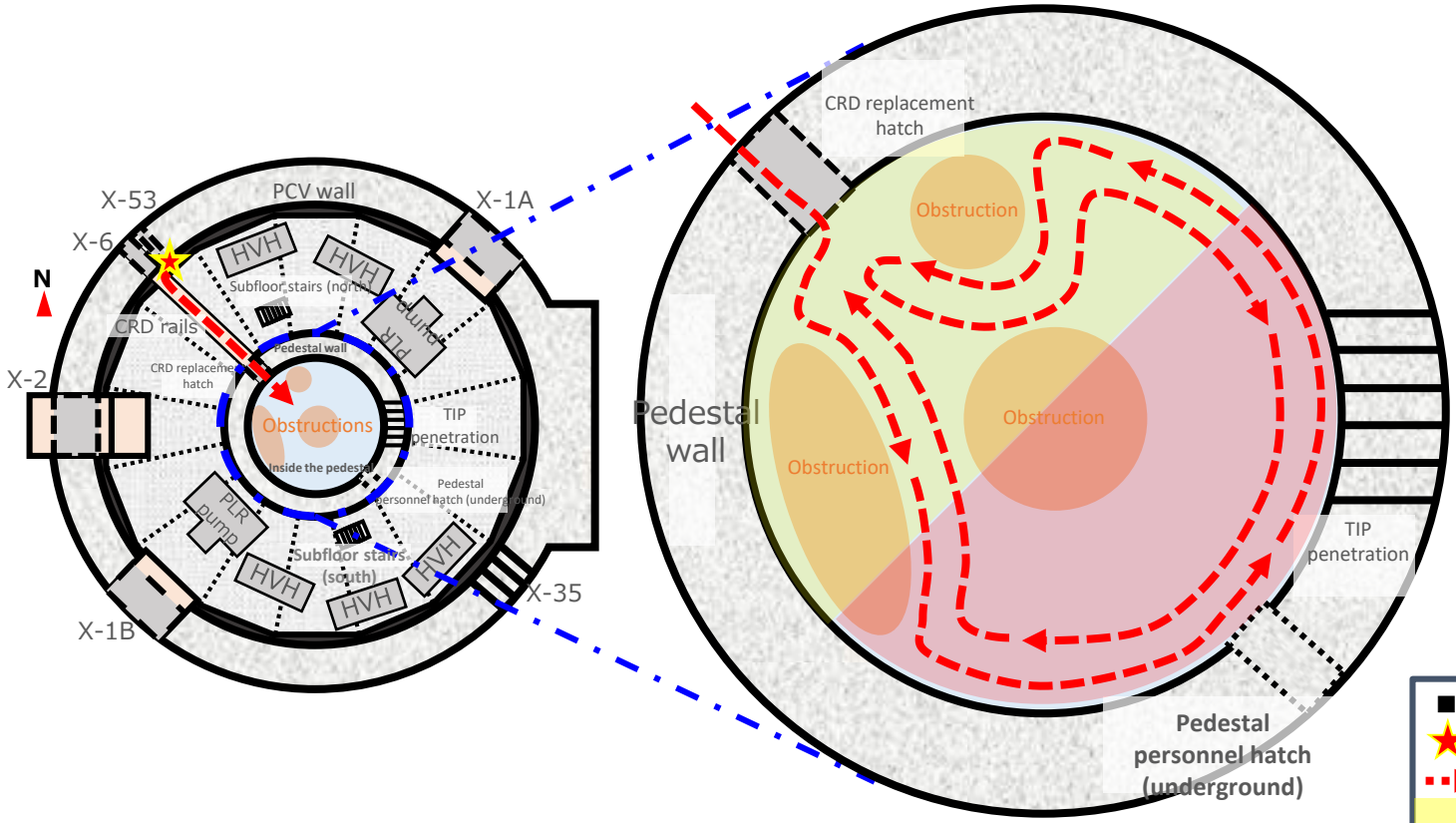
③ CRD replacement hatch

※：Investigation details/order may be changed in accordance with field conditions

5-1. Investigation plan details ~Investigation inside the pedestal ① Initial flight~

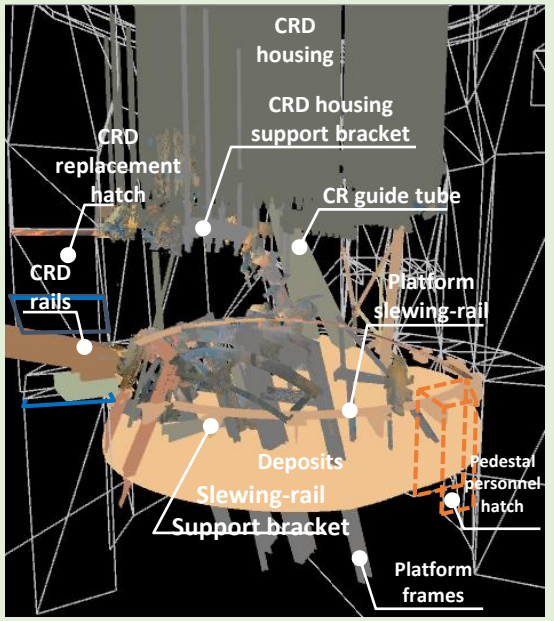
Day 5: 1st flight

- An **initial flight** will be conducted inside the pedestal as **well to check drone flight-related conditions**.
- As with the outside of the pedestal, the initial flight will be conducted to **confirm the range of radio communications in the actual environment※1, the amount of time required for a flight, and to look for any obstructions.**
- Since many obstructions have been found inside the pedestal and this will be the first flight, **a micro drone equipped with a horizontal camera will be used to ascertain conditions over a wide area.** One flight is planned (compared with outside the pedestal, the space to be inspected is small, so only 1 flight should be necessary).



Plainview diagram of proposed flight route on the first floor of the Unit 3 D/W

Obstructions found during past investigations



3D reconstruction results inside the pedestal at Unit 3

■ Legend
★ :Radio and drone takeoff/landing position
:Flight route diagram
:Ease of radio communication : Moderate
: Ease of radio communication : Low

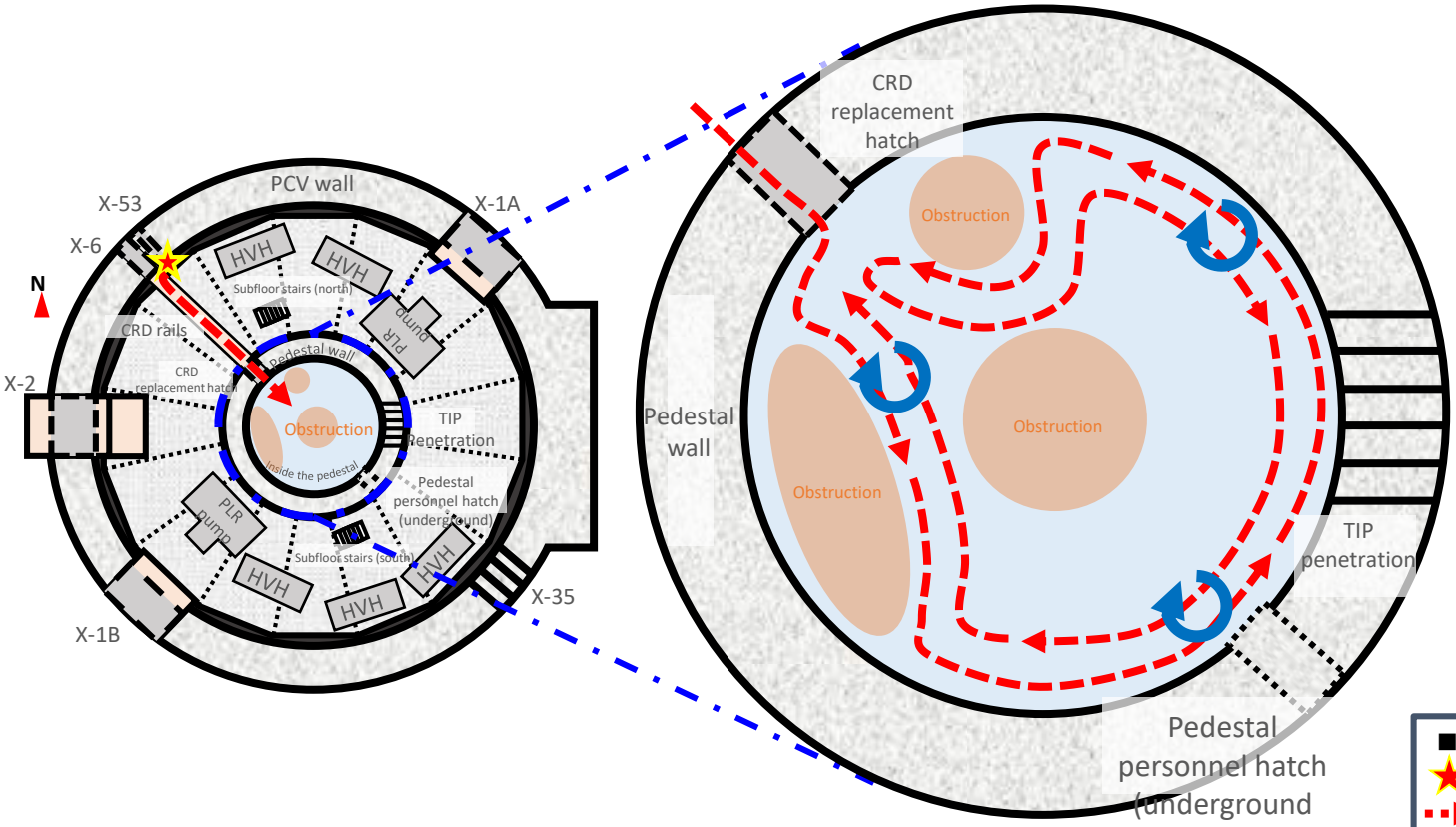
※1： Communication check on Unit 5 verified that full-area flight is possible.

※2：Investigation details/order may be changed in accordance with field conditions

5-2. Investigation plan details ~Investigation inside the pedestal ② Point cloud footage ~

Day 5: 2nd flight

- We conducted footage acquisition focused on point cloud footage to improve the accuracy of point cloud data derived from the footage inside the pedestal.
- As with the outside of the pedestal, since the entire outside of the pedestal will be photographed, the flight will be slowly paced so that as much area as possible can be put into the angle of view, and the drone shall do a 360 degree turn at each point (The number of points will be increased or decreased depending on the amount of fog during the time investigation and the extent to which light is penetrating the area).
- **A micro-drone equipped with a horizontal camera will be used to ascertain the conditions inside the entire pedestal.** One flight is planned (Compared with outside the pedestal, the space to be inspected is small, so **only 1 flight should be necessary**).



Plainview diagram of proposed flight route on the first floor of the Unit 3 D/W

■ Legend
★ :Radio and drone takeoff/landing position
:Flight route diagram
:360 degree pan

※：Investigation details/order may be changed in accordance with field conditions

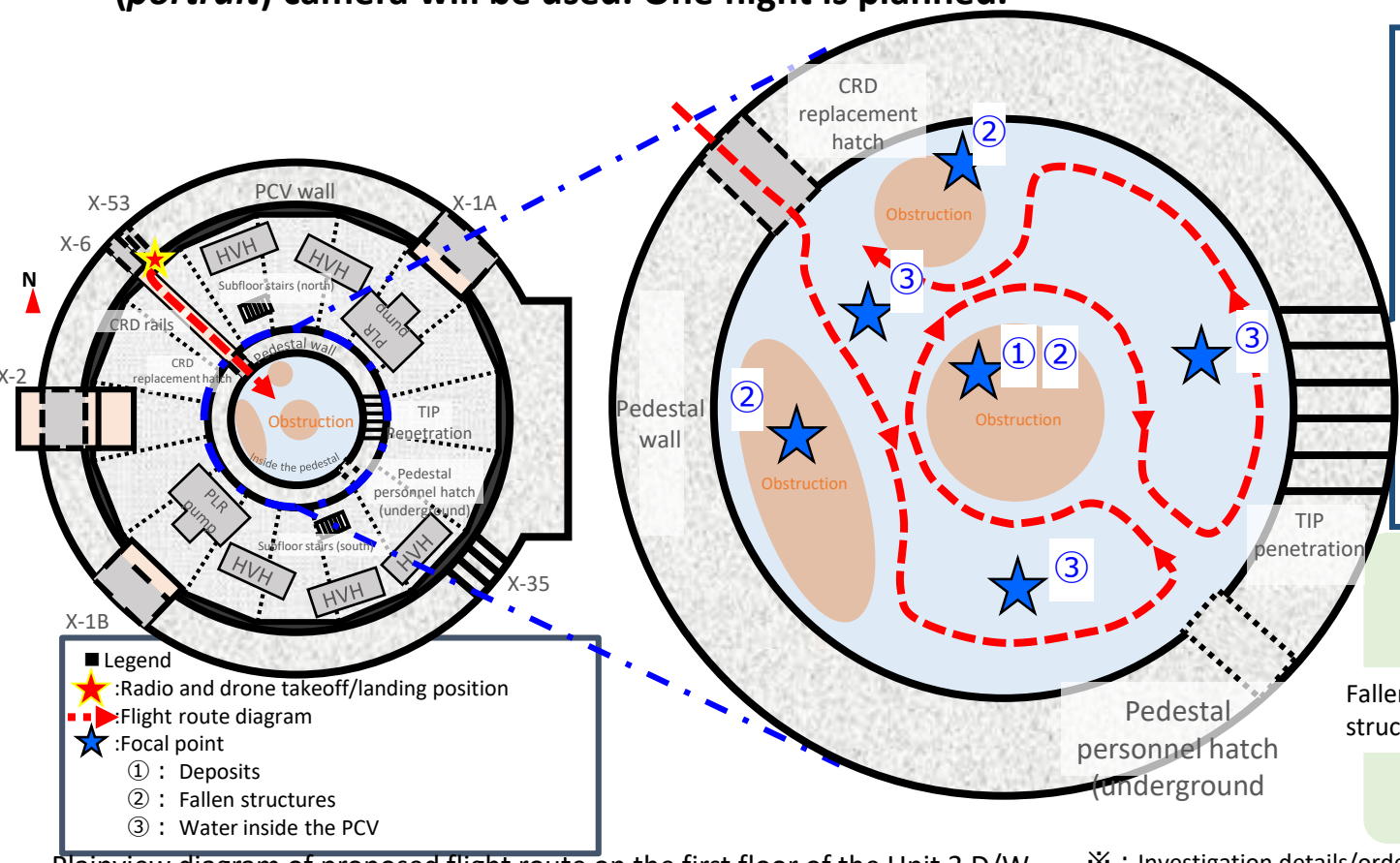
5-3. Investigation plan details ~Investigation inside the pedestal ③ Focal point investigation (bottom)~

Day 6: 1st flight

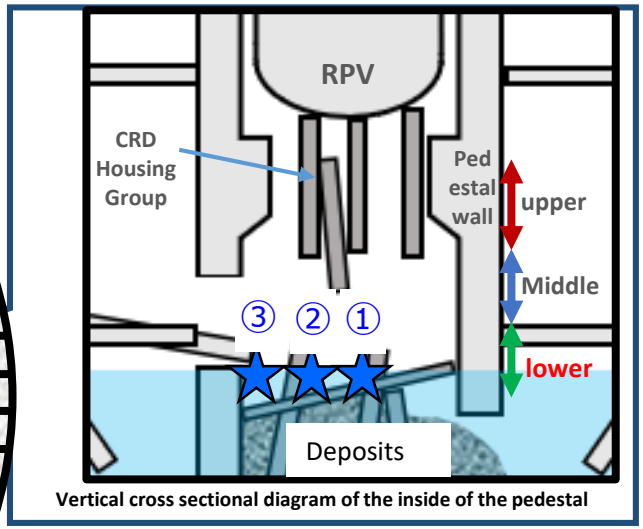
- During the investigation of the bottom, detailed footage will be acquired from the following points:

Focal point	Details	Future use objective
① **Deposits**	Deposit distribution and gradient	To deliberate retrieval methods
② **fallen structures**	Type, landing location and orientation, condition (damage, degradation)	To deliberate retrieval methods
③ **Water inside the PCV**	Confirm the height of the water surface and if there is dripping	Check water level and pathway of injected cooling water

- Since structures inside of the pedestal are oriented in the vertical direction, **a micro-drone with a vertical (*portrait*) camera will be used. One flight is planned.**



Plainview diagram of proposed flight route on the first floor of the Unit 3 D/W



Vertical cross sectional diagram of the inside of the pedestal

The condition at the bottom confirmed by past investigations

Inside the pedestal(Lower)

※：Investigation details/order may be changed in accordance with field conditions

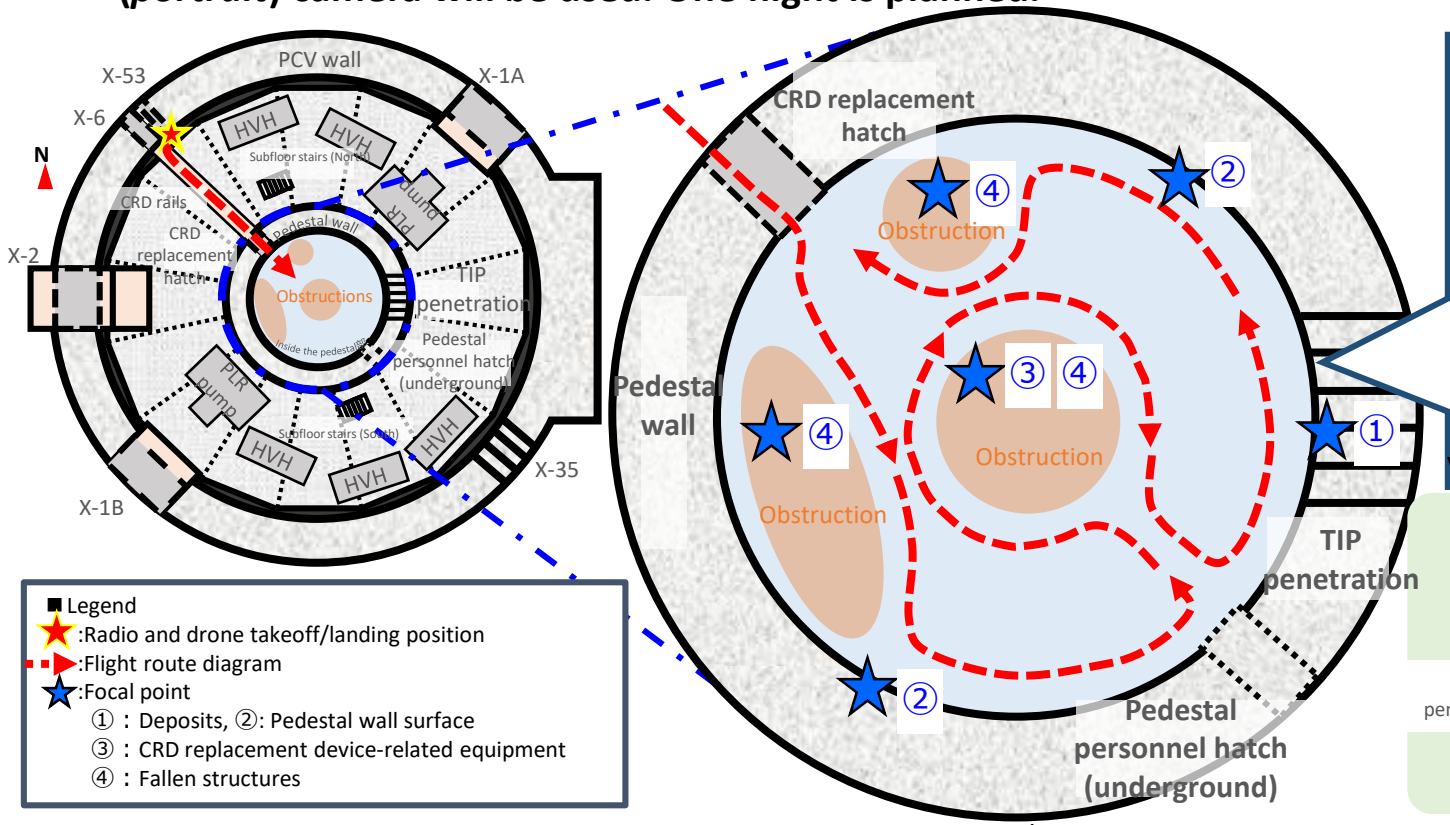
5-4. Investigation plan details ~Investigation inside the pedestal ④
Focal point investigations (middle) ~

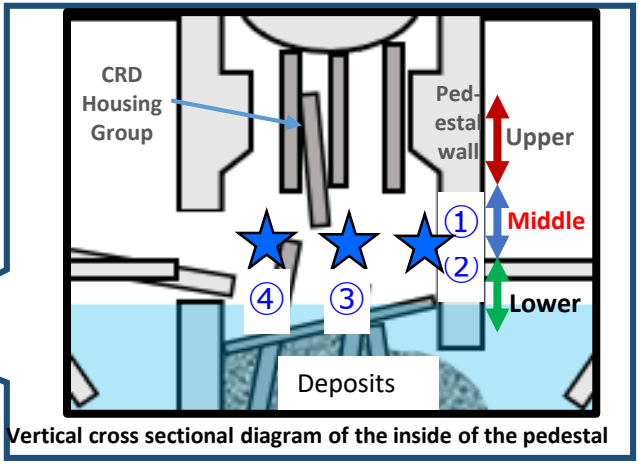
Day 6: 2nd flight

- During the investigation of the middle, detailed footage will be acquired from the following points.

Focal point	Details	Future use objective
① **TIP penetration**	Condition of the penetration and TIP pipes (damage, degradation)	RPV accessibility
② **Pedestal wall surface**	Condition of the wall surface (damage, degradation)	To understand the accident (comparison with Unit 1)
③ **CRD replacement device-related equipment**	Condition of the replacement device and platform, etc. (damage, degradation)	To deliberate retrieval methods
④ **Fallen structures**	Type, landing location and orientation, condition (damage, degradation)	To deliberate retrieval methods

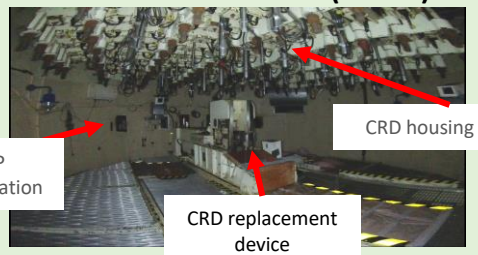
- Since structures inside of the pedestal are oriented in the vertical direction, **a micro-drone with a vertical (*portrait*) camera will be used. One flight is planned.**





Vertical cross sectional diagram of the inside of the pedestal

Photos of each location (Unit 5)



Inside the pedestal (Middle)

Plainview diagram of proposed flight route on the first floor of the Unit 3 D/W

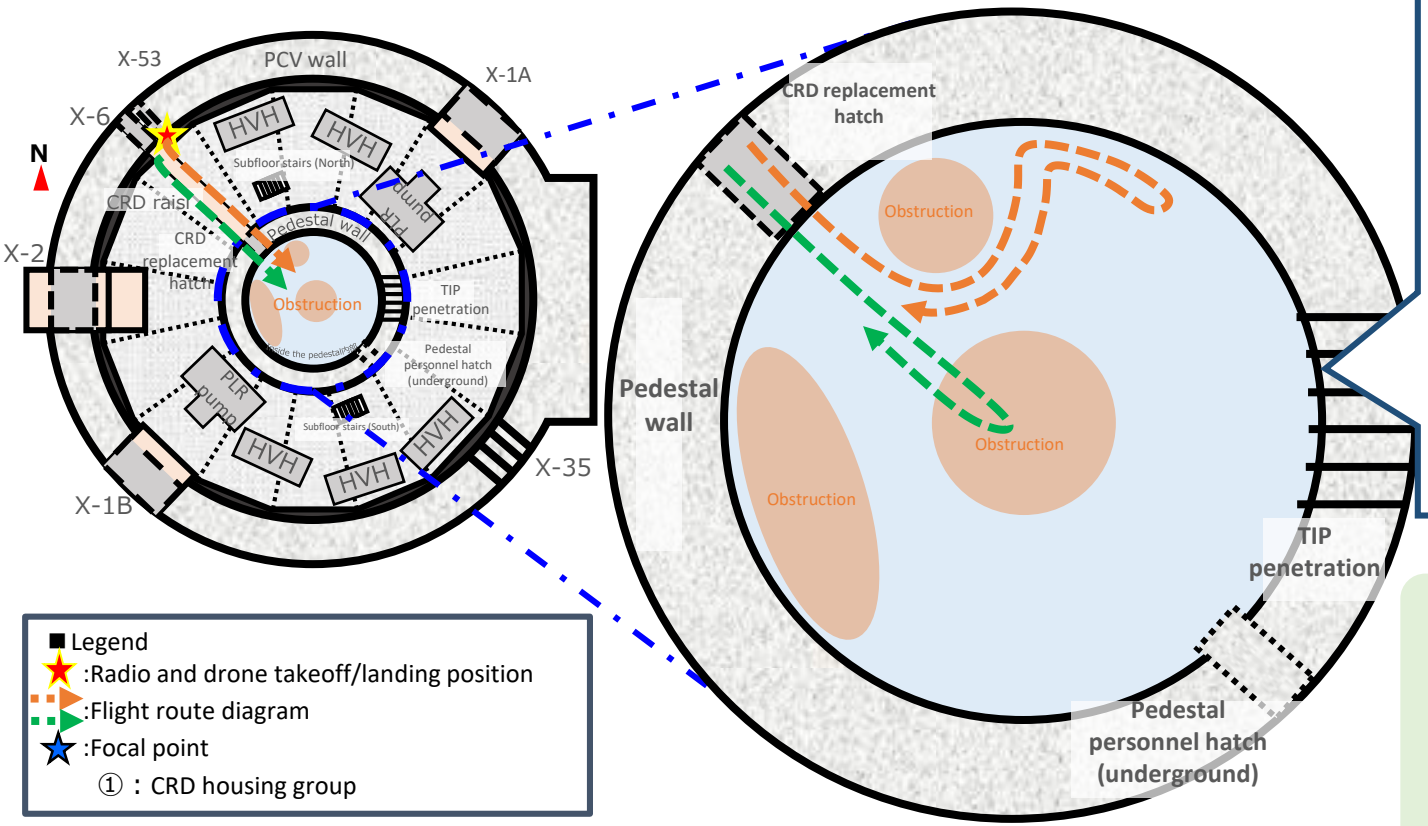
※ : Investigation details/order may be changed in accordance with field conditions

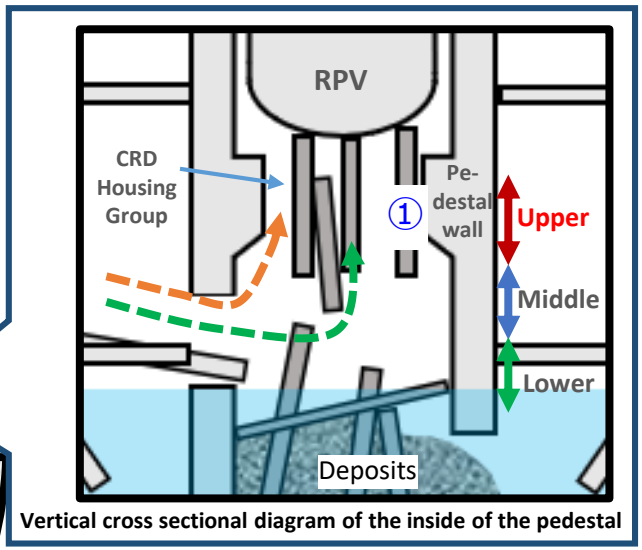
Day 7: 1st flight, 2nd flight

- During the investigation of the top, detailed footage will be acquired from the following points.

Focal point	Details	Future use objective
① CRD housing group	**Conditions (damage, degradation), presence of accretions, location of missing parts**	RPV accessibility, accident understanding

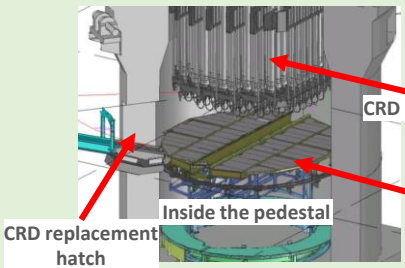
- **A micro-drone with a vertical camera will be used to perform two flights** due to the ease of confirming the top and also the multiple flight obstructions.





Vertical cross sectional diagram of the inside of the pedestal

Pedestal cross-section model



Plainview diagram of proposed flight route on the first floor of the Unit 3 D/W

※ : Investigation details/order may be changed in accordance with field conditions

6. Investigation plans ~Additional investigations~

Days 8~11

- The following additional investigations are being planned
  - **X-6 penetration internal investigation:** During the X-6 penetration internal investigation planned for the 4th day, if it is discovered that deposits do not block the inside, a drone will be flown inside to take more detailed footage.
  - **RPV bottom investigation:** If the location where the CRD housing group fell can be seen during the investigation of the top of the inside of the pedestal on the 7th day, a drone will be flown to the bottom of the RPV to check the conditions there.
  - **Investigation based on new knowledge:** If unique areas or new things that require further investigation are discovered by the investigations conducted up until the 7th day, additional investigations will be implemented to look at these areas more closely.
  - **Makeup investigations:** If there are any focuses of planned investigations that time has not allowed, additional investigations will be implemented to look at these targets.
  - **Dose rate measurements:** On the 11th and final day a dosimeter will be placed on one of the micro-drone takeoff/landing pads instead of a drone and installed to measure the dose rates in the vicinity of the X-53 penetration. These dose rate values will be used to estimate the dose rates from other footage (Only one flight will be flown on the 11th day so that these measurements can be taken).

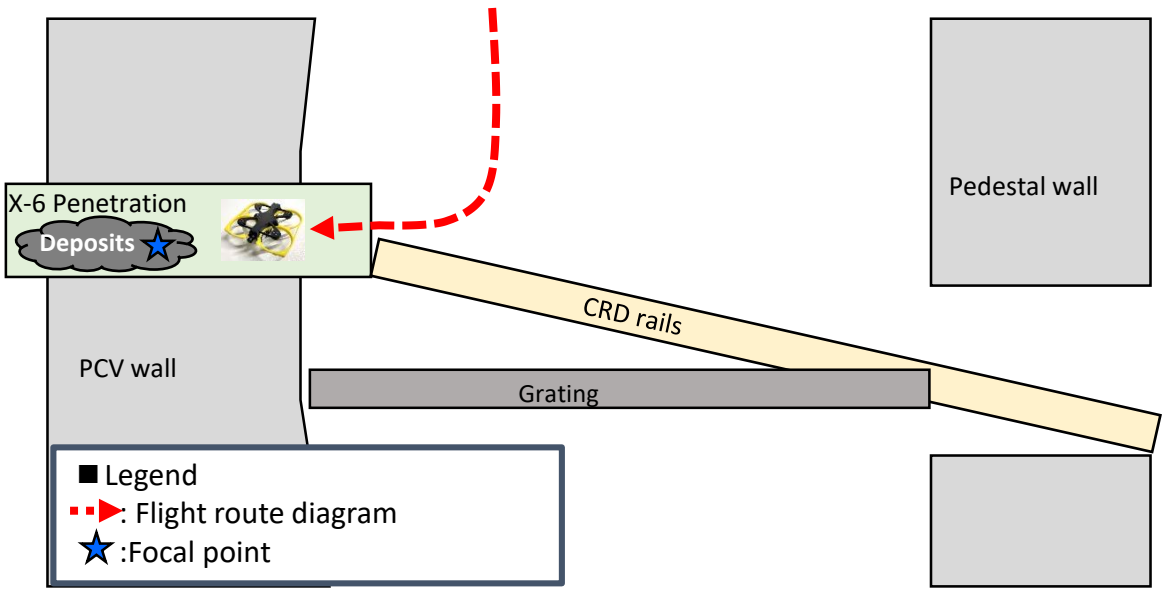


Diagram of the flights inside the X-6 penetration
(simple vertical cross section of the area around the X-6 penetration)

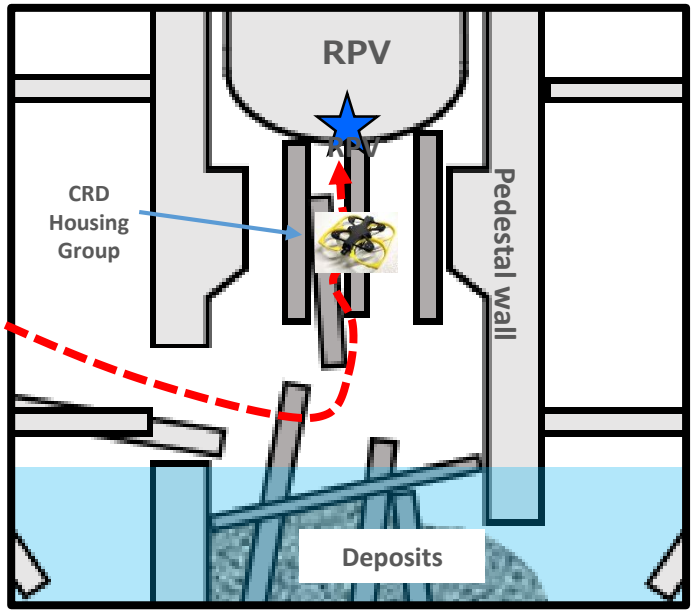
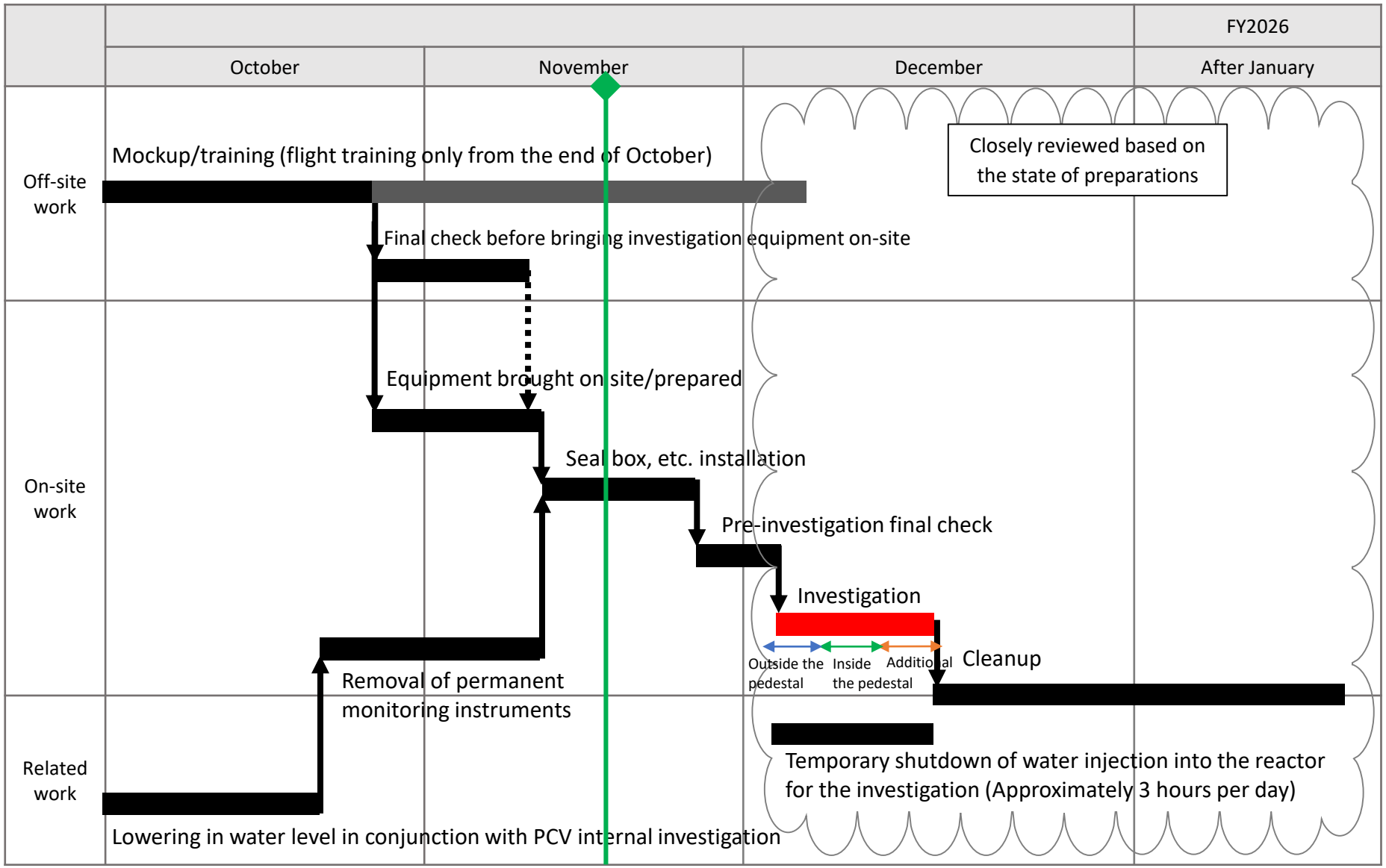


Diagram of flight to the bottom of the RPV (simple vertical cross section of the inside of the pedestal)

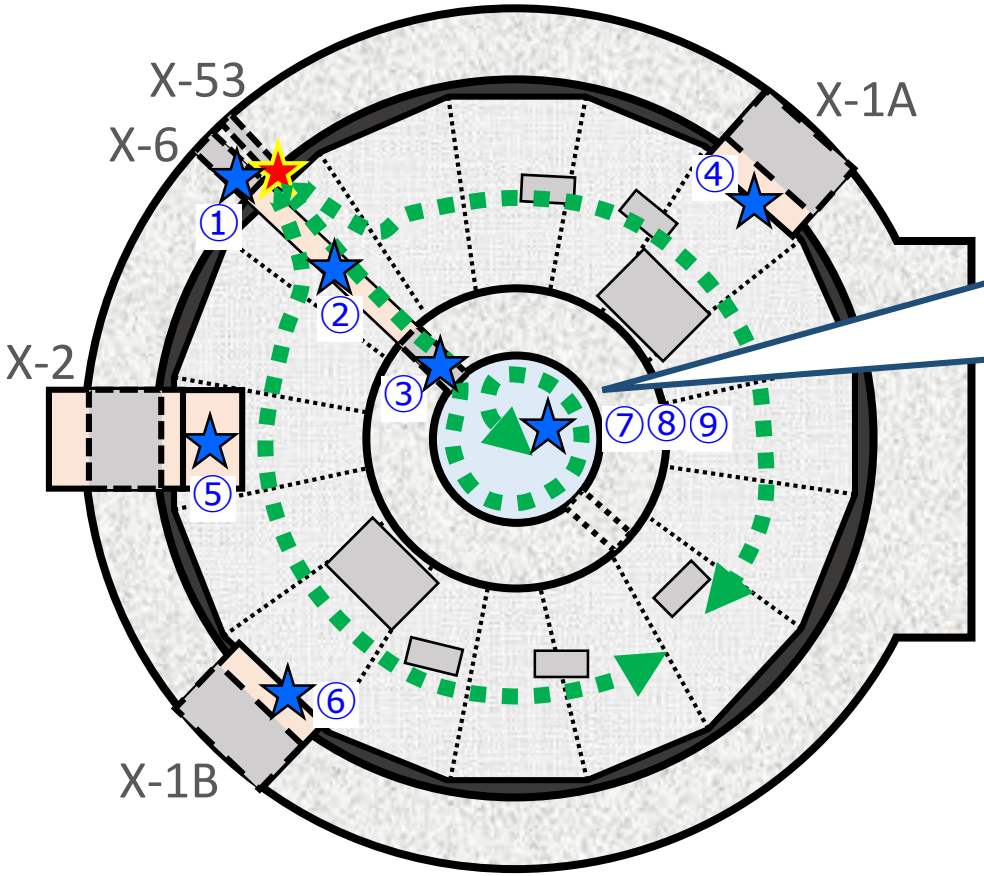
7. Investigation schedule

- The first investigations will begin in early December and will continue until the middle of the month.

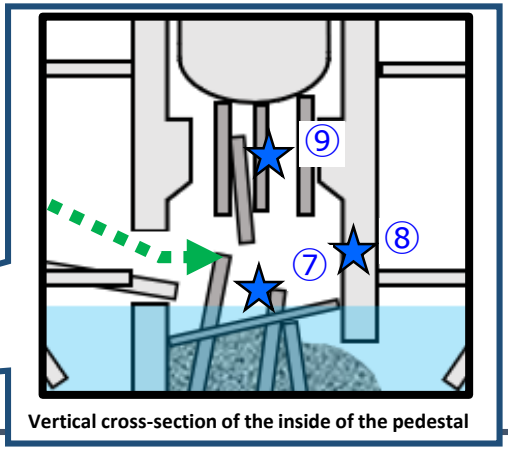


[Reference] Investigation details (overview)

- During this investigation the micro-drawn will be flown on **the first floor of the D/W and inside the pedestal to take footage.**
- The **primary objective of the investigation is to gather information about the inside of the pedestal and the area around the X-6 penetration,** which are important for the side-retrieval of fuel debris and future deposit investigations.
- As with the drone investigation of Unit 1, **the footage will be used to compile point cloud data and the radiation noise will be used to estimate dose rates.**
- Since operating the micro-drone is difficult, the scope of the investigation may be altered depending upon field conditions, however mockup/training is underway in order to acquire as much information as possible.



Plainview diagram of proposed flight route on the first floor of the Unit 3 D/W



Vertical cross-section of the inside of the pedestal

■Key
★: Radio and micro-drone takeoff/landing position
▶: Flight route
★: Areas of interest (red letters: high priority)
① : X-6 Penetration
② : CRD rails ※
③ : CRD Replacement opening ※
④ : X-1A Penetration
⑤ : X-2 penetration
⑥ : X-1B penetration
⑦ : Status of deposits/fallen objects + Water level ※
⑧ : Pedestal wall surface ※
⑨ : CRD housing, etc. ※

※ : Already partially investigated

[Reference] Risks during the investigation

- Investigation risks will be examined using the mockup and training, and countermeasures to mitigate such risks as much as possible deliberated.
- However, **since a loss of signal or obstructions in unexplored areas**, which could result in narrowing of the scope of the investigation or crashing of the drone, can only be discovered by entering the actual environment, these issues need to be examined while the investigation is underway and countermeasures formulated as necessary.

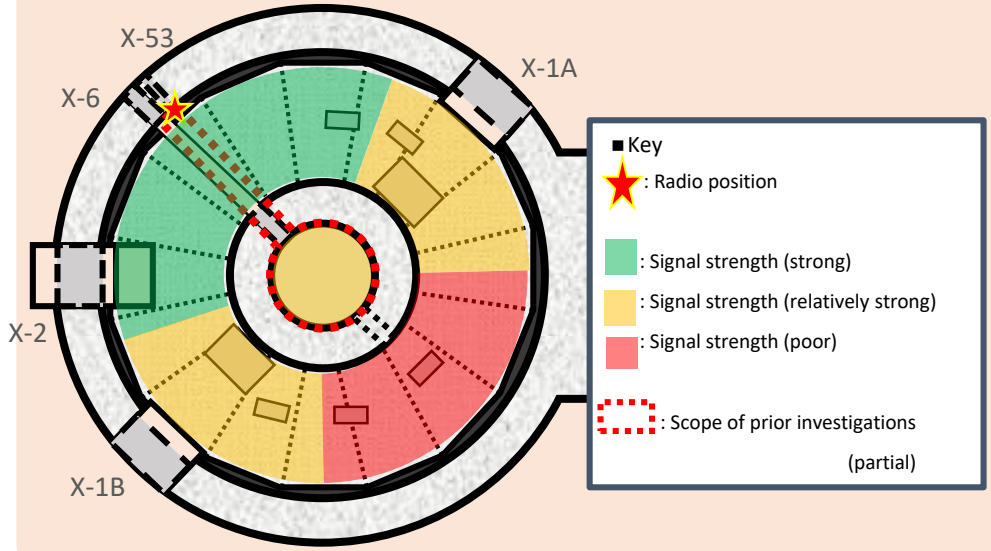
Risks that have already been examined/prepared for

- **The risk of a drone crash caused by miniaturization**
  - Micro-drones are relatively difficult to operate compared to normal drones and are more at risk of crashing.
  - In particular, since the diameter of the X-53 penetration is small, the takeoff/landing pad is also small and the risk of crash on takeoff/landing is high due to existing structures in the vicinity.
  - ✓ **Mastering operations through a mockup and training.**
  - ✓ **If a drone does crash and remains in the PCV, there will be no impact on conditions in the PCV.**
- **Risk of being unable to obtain footage due to the field environment, etc.**
  - Poor conditions such as radiation and dense fog, etc. may prevent clear footage from being acquired or cause drone malfunction.
  - ✓ **We have confirmed that footage can be taken if the drone encounters poor conditions, employed irradiation tests to confirm the resistance to the PCV internal environment, and performed waterproofness/dust prevention tests.**
  - The drone must return to the sealed box in order to acquire high-resolution video footage from the drone.
  - ✓ **The video footage sent back from the drone to the operator in real time can be saved even though the video quality is not as good.**
- **Dust dispersion risk during drone flight**
  - There is the risk that the drone may disperse dust due to the principles by which it flies.
  - ✓ **Since the drone has been miniaturized, there is little downwash and the risk of dust dispersion is low due to the damp environment inside the PCV (dust monitors will be watched during the investigation).**
- **The risk of a leak of PCV atmosphere or a decrease in PCV pressure**
  - It will be necessary to open the PCV boundary during the investigation so there is a risk that PCV atmosphere may leak or PCV pressure may decrease.
  - ✓ **Airtightness tests of the seal box will be performed at each step and the investigation will be conducted while confirming that there are no leaks.**

Risks that cannot be totally avoided

- **Risk of drone crash due to radio communication**
  - Although the radio communication performance of the drone has been confirmed during testing **the radio will be greatly impacted by the field environment and it is possible that the drone may not be able to fly as expected**.
- **Narrowing the scope of the investigation due to newly discovered obstructions**
  - Since this investigation will include areas that have yet to be investigated, such as the first floor of the D/W, unexpected obstructions may restrict the flightpath.

✓ **The strength of the radio signal will be checked during the actual investigation and the planned scope of the investigation will be reassessed in accordance with obstructions.**



Plainview of Unit 3 D/W 1Fl.

[Reference] Lowering water levels in conjunction with the PCV internal investigation

- Since September 1, we have been lowering the water level inside the PCV by reducing the amount of cooling water injected into the reactor. On October 3, we reached the hold point of approximately T.P8,000, followed closely by our objective water level of approximately T.P7,300 on October 17.
- After reaching our objective water level, we did not see any abnormalities in related parameters such as the RPV bottom/PCV temperature gauge until October 23. Consequently, work to remove the permanent monitoring instruments commenced on October 24.
- Going forward we will maintain the current water level and implement the PCV internal investigation.