

The restoration activity of the disaster corresponding headquarter



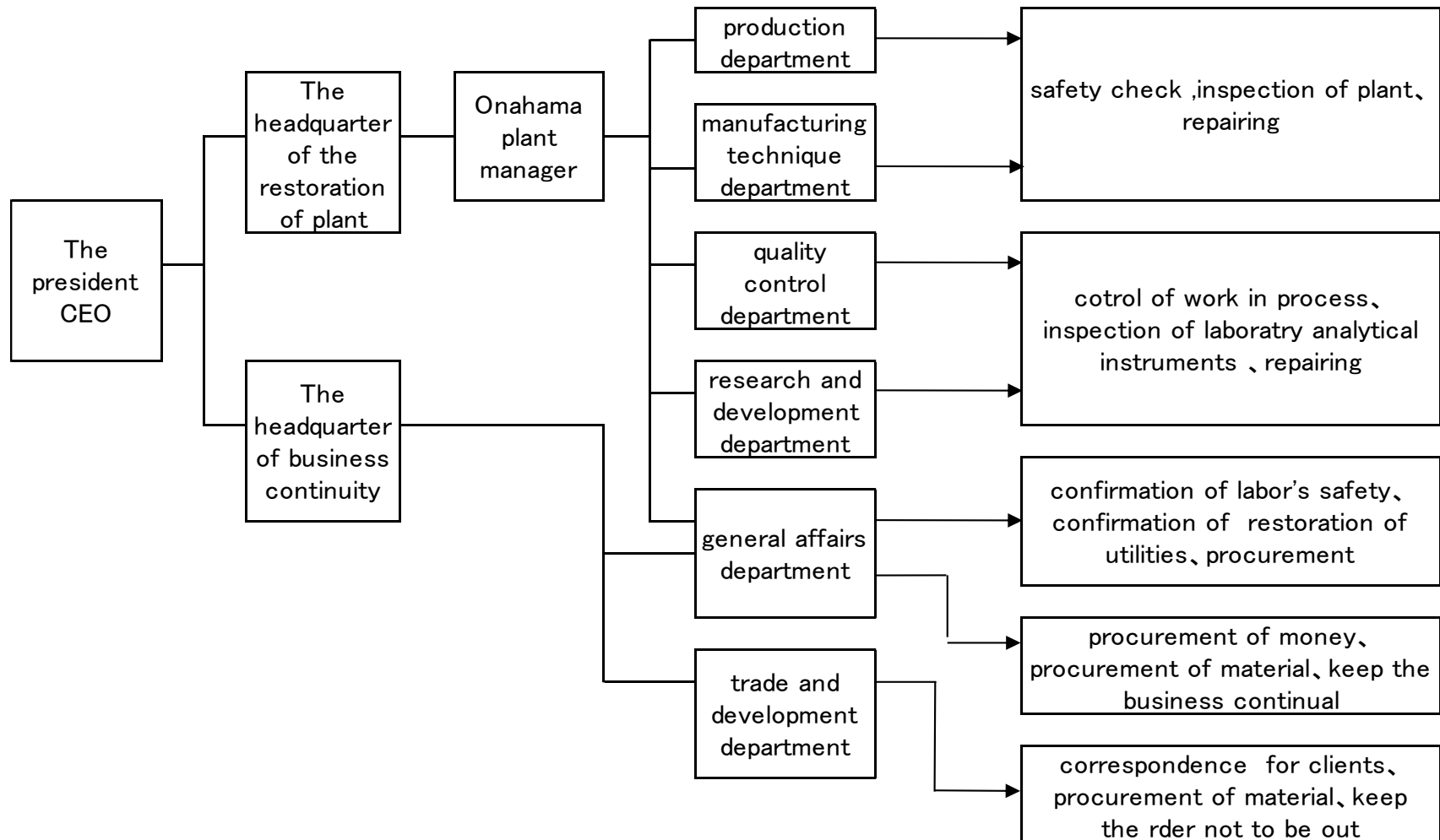
UKIMA CHEMICAL CO.,LTD.
Photo: taken in 3.11.2011

When the great east Japan earthquake
occurred at 3.11.2011,
we established

the head quarter against disaster

We started to make the plan for
restoration against it and act for it.

The map of organization of the head quarter against disaster

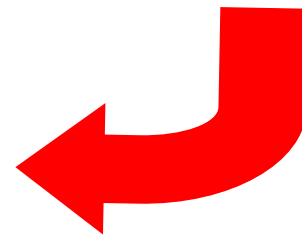


To restart our plant,

1. No damage with utilities
2. No damage with process equipment and no problem at restart of it process equipment
3. Restoration of electricity, public water service and water for industrial use service
4. No damage with waste water treatment plant

It is important for us how quickly to recover this 4 points.

we need the above 4 points to be completed.

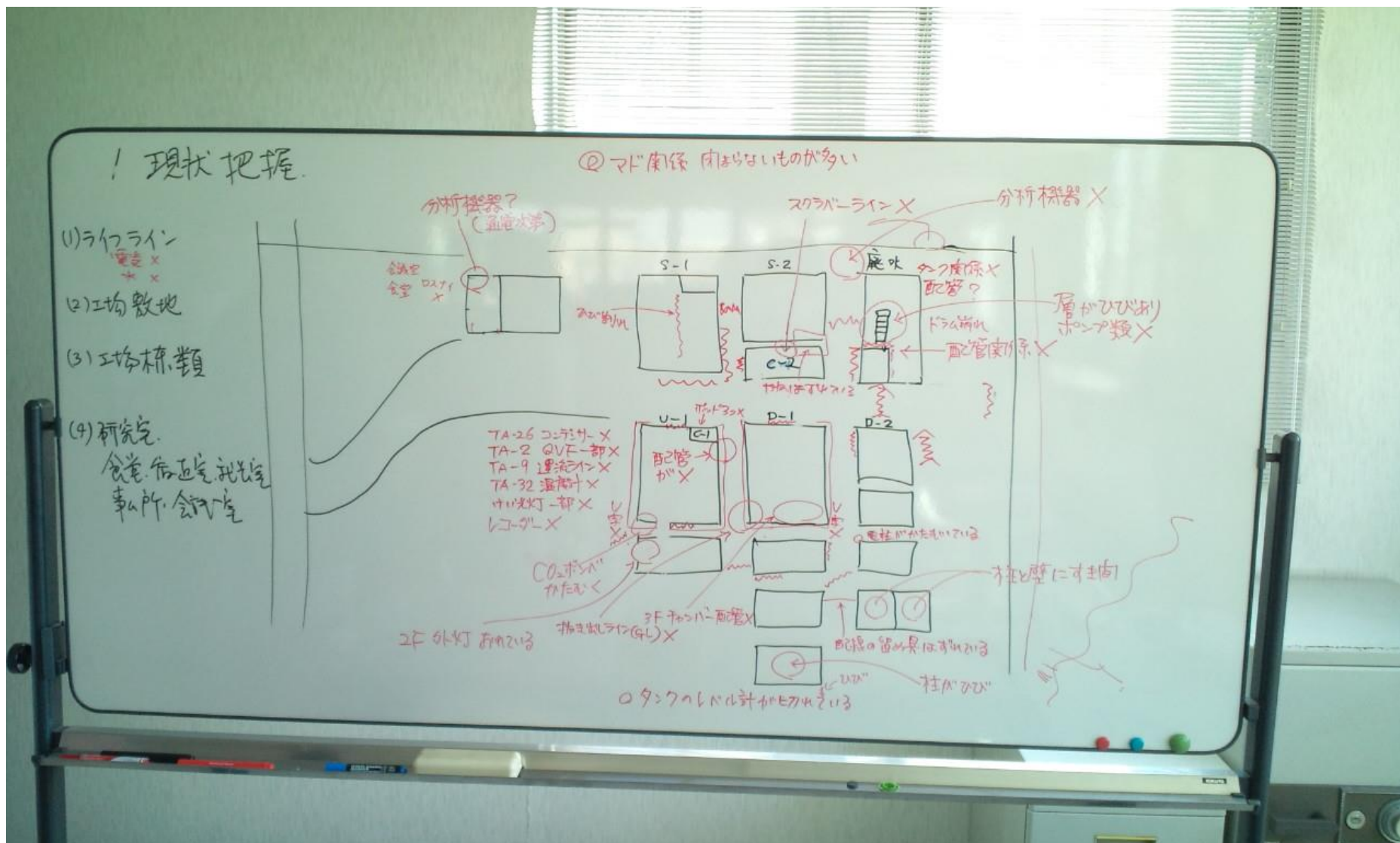


Soon after disaster occurred, it was almost dark, and power and water supply was cut and earthquake continued to occur.

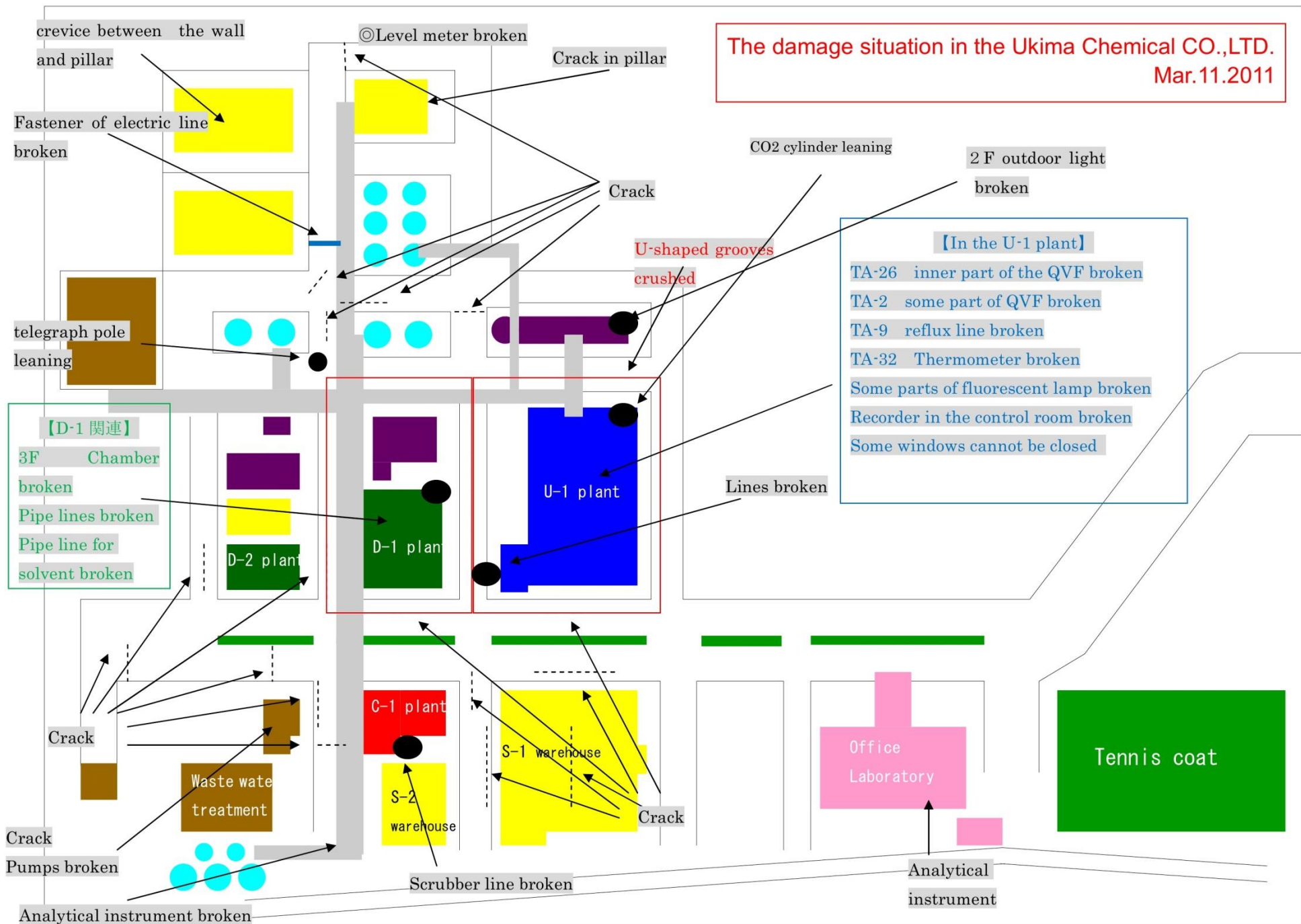


We decided not to stay here and to get our stuff to go home safely, and the day after that, to make them able to come investigate plant and utilities.

The situation of the investigation of our plant 3.12



The damage situation in the Ukima Chemical CO.,LTD.
Mar.11.2011



One of our damage : 1.Office



One of our damage : 2.entrance and exit of U-1 plant



One of our damage : 3.entrance and exit of
D-1&2 plant



One of our damage : 4.The cutting of pipes



One of our damage : 5.The Land subsidence



One of our damage : 6.Other damages



One of our damage : 7.our plant's traffic damages



One of our damage : 8. The damages with process equipment



About our plant's equipment, there was only the damage with pipes because I thought that our plants were built on the solid rock.

making the summary for resumption of production 3.12

安否確認
○

高木
吉田
成山
杉山
小銀治
佐藤区
荒川
松本
林田
山口
菅原

○

3/14(月) 15(火) 16(水) 17(木) 18(金)

U-1 整理 ①配管(名直)
D-1.2 整理 ②実施(工務長)
S-1.2 整理 ③マンホール排水確認
C-1.2 整理 } U-1 確認できた順次実施
廃水 整理 } 通電したら生産できる状態に持っていく

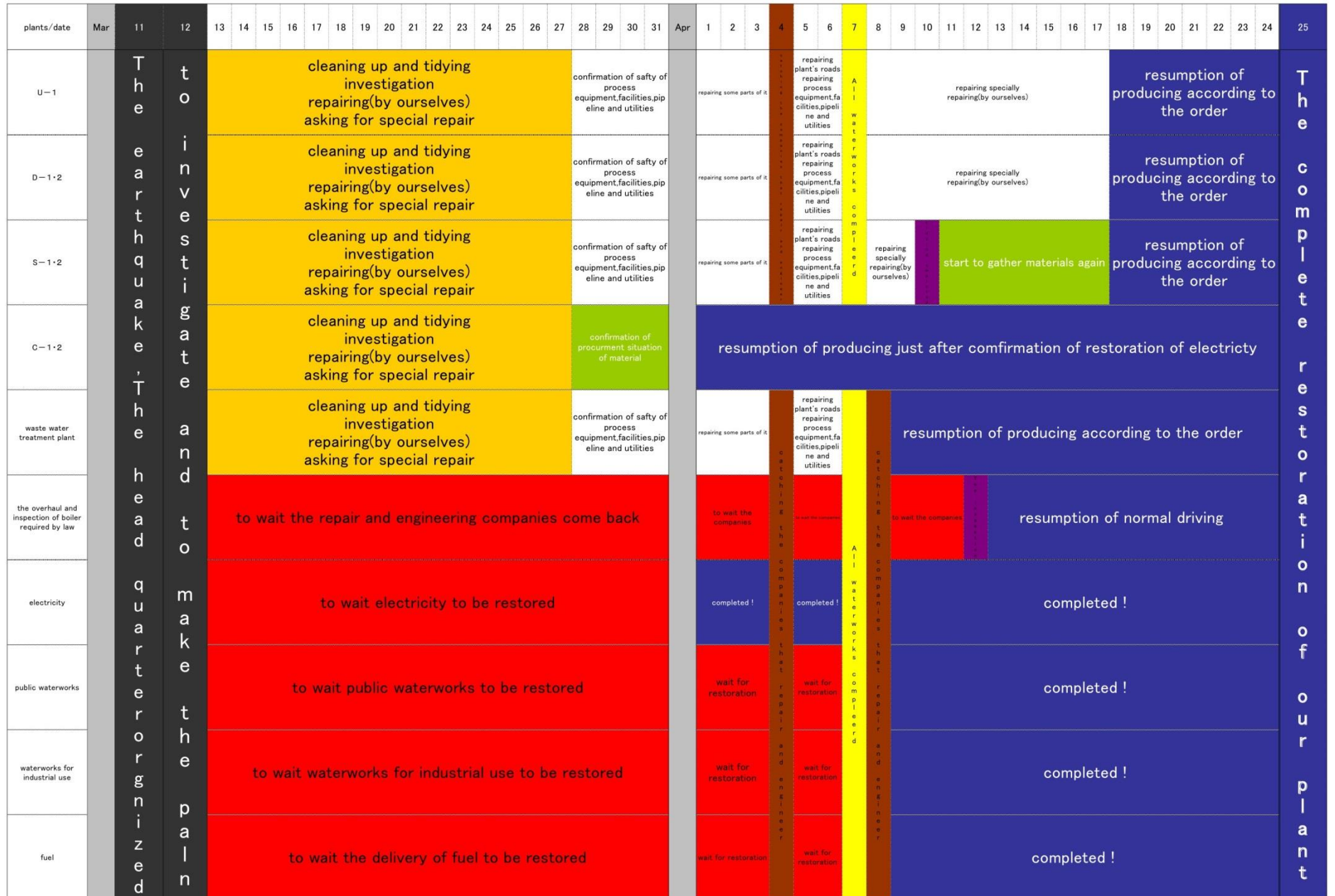
電気関係確認 ← } 担当: 総務部
市水 ←
工業 ←

ボイラー 検査の調整 3/14以降で確認(総務部)

3/14以降は整備状況を考えて出勤者を調整

①G.L釜の固定配管の整備
<電気・水復旧した場合>
①各設備の確認
②シフト確認

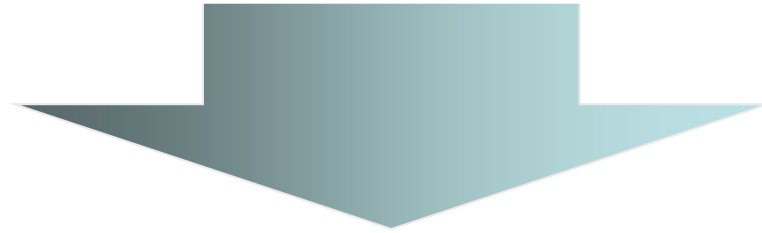
The plan of restoration of Onahama plant



We intended to resume our production according to the above plan from Mar.14.



But, at Mar.12



The explosion of Fukushima 1st nuclear power plant occurred.

Tracks did not come to deliver something in our area because they thought that the radiation substances would cover around here at that time.

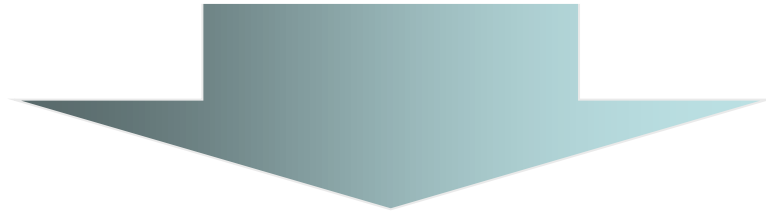


We could not get foods, gasoline and other daily necessities.

We couldn't only go to work but also live.



So, we kept our stuff stay their home.



The president, the manager of the headquarter of the restoration of the plant ,and executive stuffs only ensured the plant safety , the live of activated sludge process ,and waited restoration of electricity, public water service and water for industrial use , with considering the situation of nuclear power plant.

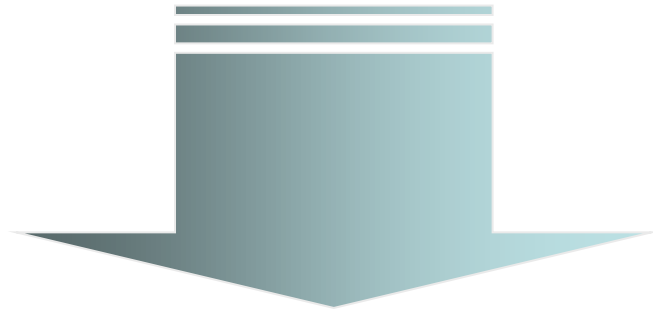
Of course, the member of the department of sales and development explained situation of our plant and how long time to resume to produce, and did the following activity.

- 1.To appeal the safety of Iwaki city
- 2.To confirm the order that clients would be able to
- 3.To adjust delivery time of the orders that we already got



We acted to work quickly and hardly after resumption.

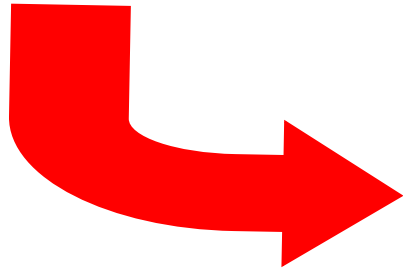
In Tokyo, we got some foods, and so the member of the department of sales and development, delivered them to our plant.



We could only act like that one week after the earthquake.

In that period, public utilities were being restored.

◆ electricity→restoration at Mar.19



Electricity
resumed the
fastest of all.

We confirmed it in the presence of
the Tohoku Electrical Safety
Inspection Association
not to leak the electricity.

⇒to complete one of 4 points

⇒resumption of waste water
treatment facility

⇒to complete No.4 point.

We conducted electricity to every plants and facilities from Mar.22.

- At that time, about the products that made by using only electricity, we could confirm that making process and could make them
⇒ We could restart to produce something by only using electricity.
⇒ To complete No.2 point.
- We could communicate with Tokyo branch office.

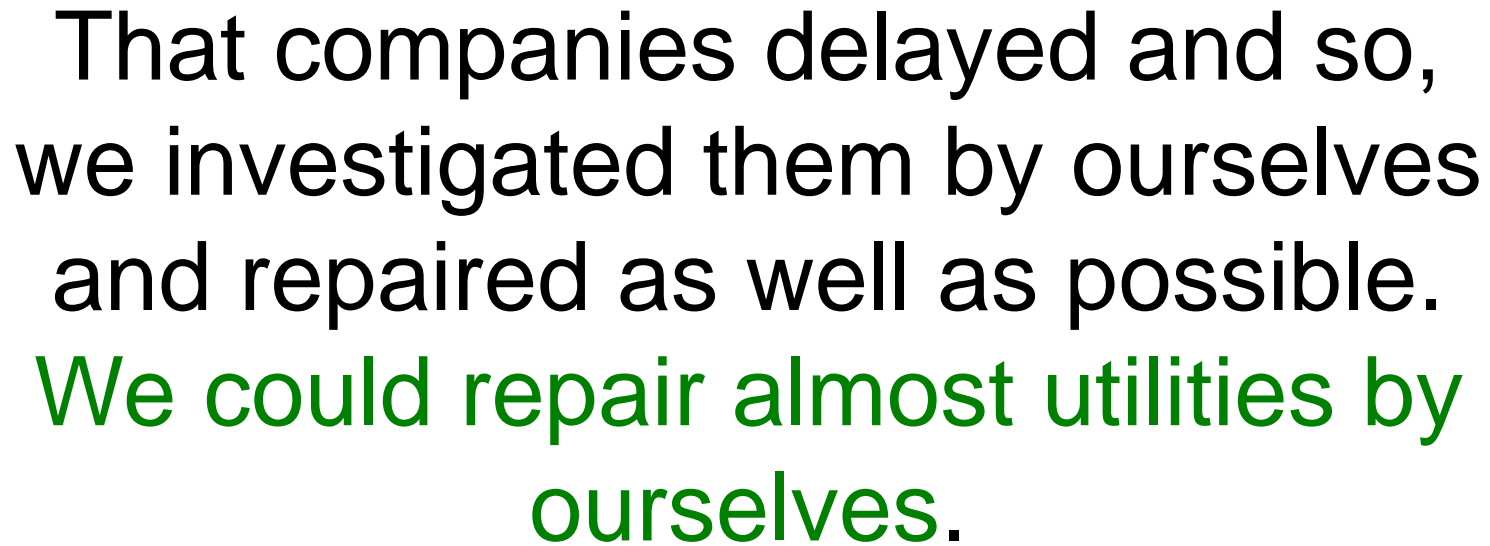
We got electricity again and could communicate with another and could use machines that it is necessary to resume,



From Mar.21, the stuffs that could come to our plant, went to work and put breakages and falling objects away and repaired utilities and equipment.

And we could contact some companies that resume plant by using specialized machines.

Especially, about investigation of utilities of plant,

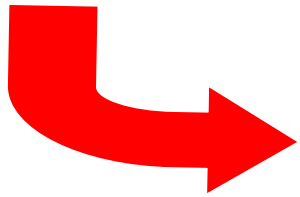


That companies delayed and so,
we investigated them by ourselves
and repaired as well as possible.
We could repair almost utilities by
ourselves.

⇒ To complete No.1 point

The companies that escaped from the explosion of the nuclear power plant ,came back Iwaki city from Mar.21,and so, public utilities were resumed more and more.

◆Waterworks→restoration at Mar.28



Waterworks
were restored
according to the
previously plan.

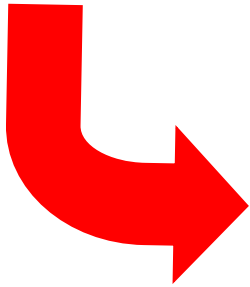
▪ Then, we could fill the reactors with water and test the resumption of driving.

⇒To complete some parts of No.3 point

⇒To complete some parts of No.2 point

▪ We could use laboratory facilities.

◆ water for industrial use→The plan for restoration from April.4 to 8



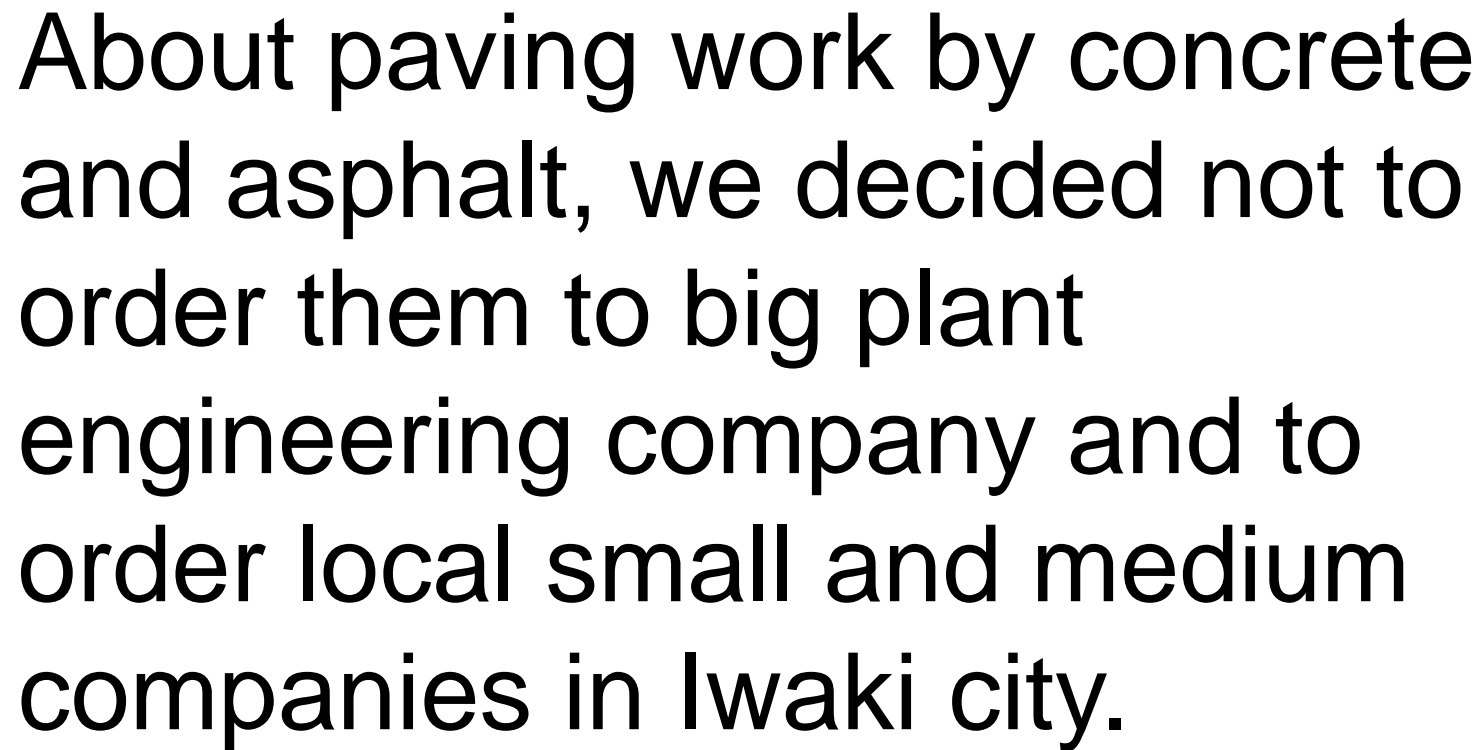
Water for industrial use were delayed.

- We could pour water into condensers and get water to be boiled and to be refluxed. And so, we could dream the restoration of our plant.

⇒ To complete all part of No.3 point, and at the same time,

⇒ To complete important part of No.2 point, and We could restart to produce.

About restoration work and constructions for repairs...



About paving work by concrete and asphalt, we decided not to order them to big plant engineering company and to order local small and medium companies in Iwaki city.

The situation for restoration : 1



The situation for restoration : 2

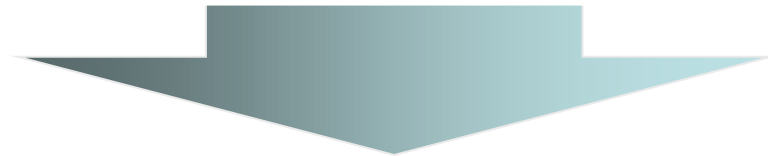


◆ Although all facilities and equipment of our plant have not completed in late March, we assumed the following stories.

- Waterworks for industrial use→to Apr.8
- Kerosene→to get it from other prefecture→to Apr.5
- Final check of facilities and equipment→to Apr.15
- to get all materials that might not be supplied→Apr.8



To assume all above points,

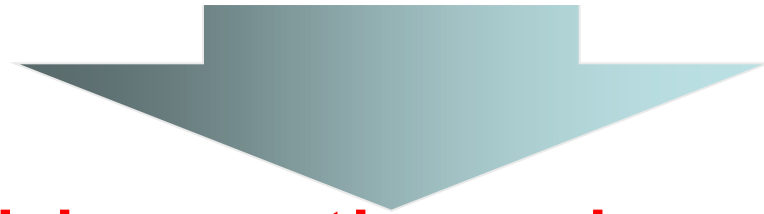


We aimed to restart the production from Apr.18.

Public waterworks were restored according to previously plan, and we waited to get only waterworks for industrial use in order to produce...



but, at Apr 11 and 12, the day that the restoration were almost completed...



We had a big earthquake, “aftershock”, as seismic intensity 6 earthquake, again

Those were inland Earthquakes. In Iwaki city, we had bigger earthquake than 3.11. Of course, we had to make our activity start again.



But,

We had no time to spook
and got the previous plan
to be changed quickly.

The plan of restoration of Onahama plant (because of the after shock)



We considered whether we were good or not to get our plant to be restored as before, because we were during shutdown for a long time.



We decided to change one reactor at this opportunity in order to raise our production capacity. What is called, all's grist that comes to his mill.

About restoration after Apr.11,12 earthquakes,



Activities for restoration against Mar.11 earthquake were being achieved. And so, the restoration against this new earthquake were being forward than we had thought.

⇒ To complete some part of No.3 point, at the same time, we started to investigate utilities and process equipment.

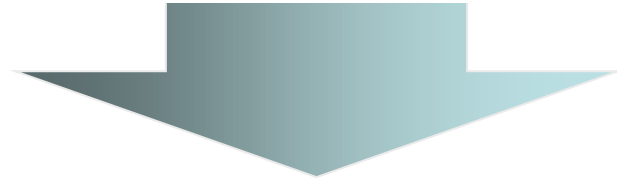
⇒ To complete No.1&2 points of all.

And...

Waterworks for industrial use were planned to connect to our plant at Apr.25 at last,



to complete No.3 point finally,



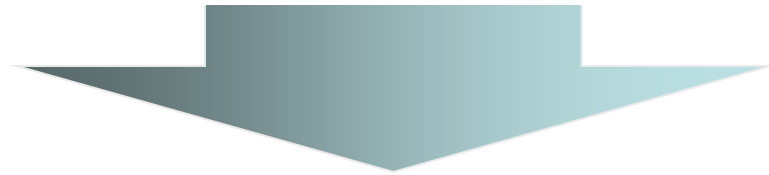
After we confirmed that the waterworks were restored, we got some part of the production line to be restarted.

⇒ To complete all points for the restoration of our plant!!!

We got administrative inspection for the change of reactor to be finished at May.10.



At May.11, two menthes after the earthquake,



Complete restoration of our plant

is achieved!!

The actual history of the plan of restoration of Onahama plant

