Conditions of the gas pipeline damaged by third party constructions and prevention

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Piping Dept.
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Matters to be reported to regulatory authorities accidents

- Physical injury and damage due to Gas Facilities (Death, Poisoning, Injury)
- Hindrance Gas Production
- Supply/distribution stoppage of more than 30 houses
- Main Gas Facilities damage
- Explosion or fire due to gas leakage from Gas Facilities
- Gas Facilities damage or Supply/distribution stoppage caused by natural disasters
- Evacuation or traffic difficulties due to Gas Facilities damage
- Physical injury and damage due to the use of gas appliances or gas valve (Death, Poisoning, Injury)
- Injury or property damage caused by flammable gas leaked from the gas valve or the gas appliances
The status of occurrence of accidents that are to be reported to regulatory authorities (2003～2007)

- Gas production phase: 0.8%
- Supply/distribution phase: 58.2%
- Consumers phase: 41.1%
The status of occurrence of accidents that the supply/distribution phase

- Third party construction: 37.7%
- Gas supplier construction: 12.0%
- Gas Facilities failure: 32.4%
- Natural disasters: 4.9%
- Sandblasting: 6.2%
- Others: 6.8%
Items of damaged portion

- Service: 6.7%
- Low pressure main: 6.7%
- Low pressure branch main: 7.4%
- Middle pressure main: 4.4%
- Interior pipe: 3.4%
- Others: 0.5%
- Service tee: 70.8%
The status of prior consultation with gas supplier

On roads

- With prior consultation: 46.5%
- Without prior consultation: 53.5%
The status of prior consultation with gas supplier

Within housing sites

- With prior consultation: 25.9%
- Without prior consultation: 74.1%
Type of third party constructions

- Water Supply & sewage: 43.2%
- Road Works: 36.4%
- Others: 20.4%

On roads
Type of third party constructions

- Demolishing & Land preparation: 18.8%
- Water supply/drain system & sanitary system: 29.3%
- Building & Reforming works: 47.5%
- Others: 4.4%

Within housing sites
Major reasons of damages by third party construction

| On roads |

Without prior consultation with gas supplier

- Works using construction machineries **without confirming piping status**

With prior consultation with gas supplier

- Enough **information** of the work site such as piping status was **not given to construction machine operators**

- Third party constructions were **carried out without complying with conditions agreed with gas supplier**
Major reasons of damages by third party construction

Within housing sites

Without prior consultation with gas supplier
- Works using construction machineries without confirming piping status
- Contractors of third party constructions so misjudged the surrounding situation that no gas was running in the pipeline

With prior consultation with gas supplier
- Enough information of the work site such as piping status was not given to construction machine operators
- Third party constructions were carried out without complying with conditions agreed with gas supplier
Our major approaches to prevent damages of gas pipeline caused by third party constructions
(On roads)

- Collection of information related to third party constructions
- Driving conclusion of security agreements and protection agreements
- Collection and management of information on construction plans to be obtained at meetings for coordination of related works such as coordinated scheduling for works on roads
- Carrying out of patrols of major routes and routine site inspection for identifying works without prior consultation and discussion
- Sending direct mails to clients/owners
Our major approaches to prevent damages of gas pipeline caused by third party constructions (On roads)

- Encouraging all people concerned with third party constructions for damage prevention
- Giving explanation of importance of prior consultation and discussion
- Requesting to site workers to ensure to refrain from earthworks by machines around piping areas
- Requesting to ensure all people concerned including supervisors and site workers to share information related to piping status
Our major approaches to prevent damages of gas pipeline caused by third party constructions (On roads)

- Utilizing tools for prevention of damage accidents
  - Issuing pamphlet to ask attention to prevention of pipeline damage accidents caused by third party constructions
  - Leaflet describing request for prior consultation and prior discussion
  - PR materials for prevention of pipe damage accident caused by third party constructions
  - Any other types of novelty advertising
Our major approaches to prevent damages of gas pipeline caused by third party constructions (On roads)

- Opportunities for diversification of common knowledge
  
- Diversification of publicity for accident prevention including coordination meetings for adjustment of work schedules of works on roads
  
- Dissemination of information for accident prevention to site workers on occasions of joint site inspection and site patrol
  
- Direct mailing to contractors of third party constructors who experienced damage accidents
Our major approaches to prevent damages of gas pipeline caused by third party constructions (Within housing sites)

- Collection of information related to third party constructions
- Requesting various industry groups such as General Contractors Association to ensure prior consultation and prior discussion
- Requesting contractors of third party constructions for prior consultation and discussion in any means such as direct mailing
- Requesting contractors of third party constructions who experienced damage accidents to ensure prior consultation and discussion
Our major approaches to prevent damages of gas pipeline caused by third party constructions (Within housing sites)

- Encouraging all people concerned with third party constructions for damage prevention
- Giving full information focused on the past records of accidents and experienced damages
- Utilizing tools for prevention of damage accidents
  - Issuing pamphlet to ask attention to prevention of pipe damage accidents caused by third party constructions
  - Direct mailing to request for prior consultation and discussion
  - Any other types of novelty advertising
Our major approaches to prevent damages of gas pipeline caused by third party constructions (Within housing sites)

- Opportunities for diversification of common knowledge
  - Diversification of publicity for accident prevention and utilizing any manners of business operation
  - Distribution of PR pamphlet to counters of government agencies

- Other Initiatives
  - Any other measure including visualization of current status of work sites demonstrating locations of piping progress and status of opening of gas running
Thank you for your kind attention