

THIRD PARTY DAMAGE OF DVPL-I

- Emergency Management & Restoration

Location : Noida
Date : 15 June 2022

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#hawabadlo



GAIL India Limited





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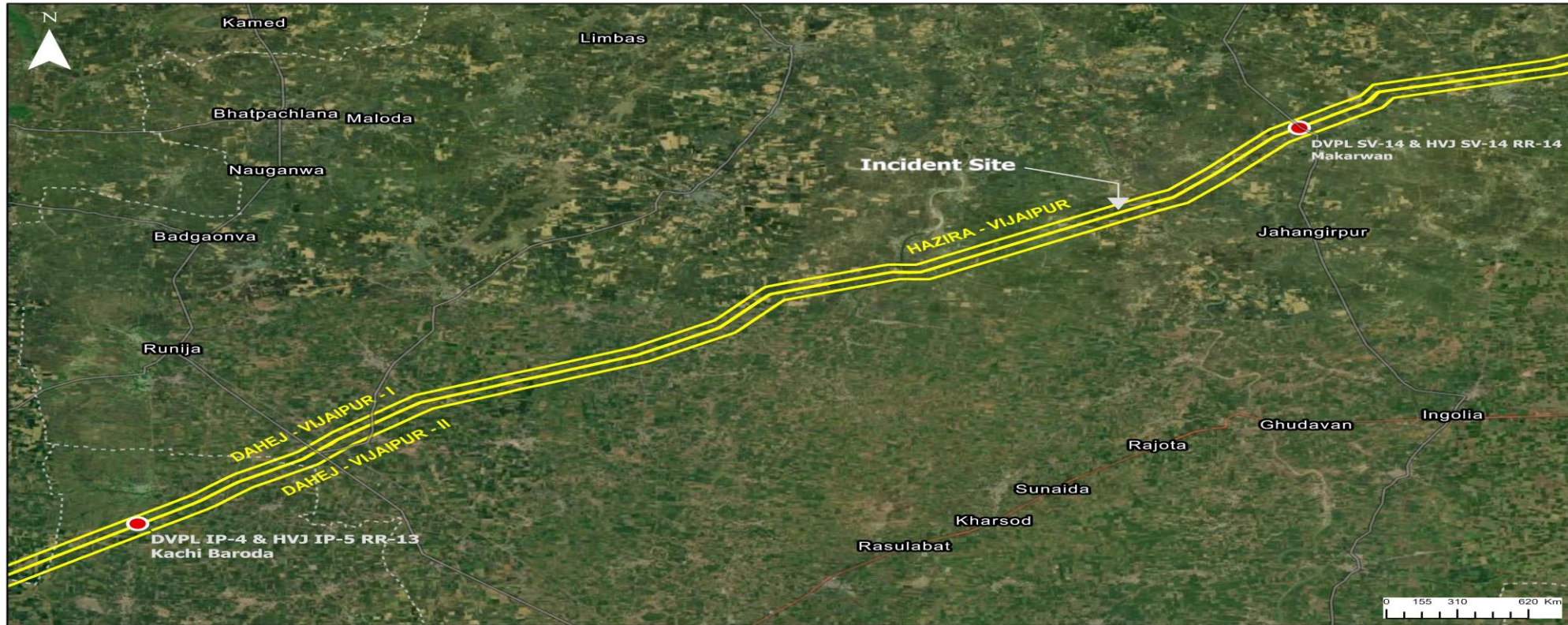
Case Description

S.No	Parameter	Details
01.	Name of the Pipeline	42" Dahej – Vijaipur Pipeline (DVPL-I)
02.	Length of the Pipeline	611.64 km
03.	Design Pressure	92 kg/cm ²
04.	Operating Pressure	84 kg/cm ²
05.	Right of Use (RoU)	48 m wide common ROU for 36" Hazira-Vijaipur Pipeline, 42" & 48" Dahej-Vijaipur Pipelines
06.	Chainage of the Incident Location	377.38 km
07.	Other Pipelines in the Vicinity	BORL's [Bharat Oman Refinery Limited] Pipeline at approx. 100 m from ROU
08.	Incident Type	Heavy Gas Leakage (Jet Leak without Fire)
09.	Cause	Third Party Damage → Borewell Digging
10.	Reported Time of Incident	08:40 AM





Case Description



Root Cause Analysis

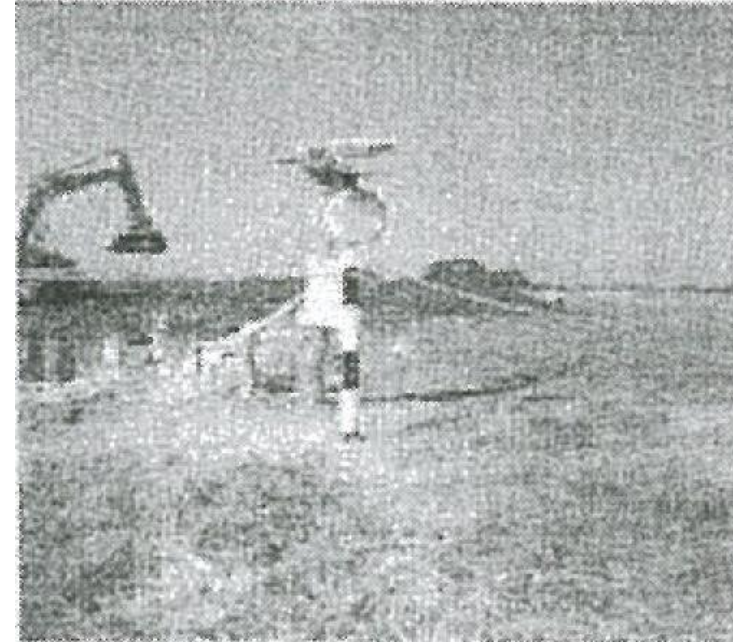
- GAIL has constituted a committee for the root cause analysis.
- Committee has made following observations upon detailed analysis of the incident
 - ✓ It was evident that the damage to the pipeline had been caused by a mechanical device like a boring excavator of 06" to 08" size.
 - ✓ It seems that the operator is unaware of the presence of a buried pipeline.
 - ✓ Incident has happened in odd (early morning) hours



Root Cause Analysis (Contd..)

- Committee Observations (Continued..)

- ✓ Land owner has given the land on lease to a third party and they have not informed the borewell operator about the presence of pipeline.
- ✓ Boring has been done with out ascertaining the exact location of pipeline (by contacting GAIL) even though the direction cum warning marker is available in the vicinity of the incident location.



- Committee has concluded that the Negligence of the third party and borewell operator are the probable causes of incident.





Emergency Management

- Upon receipt of the information at RGMC/NGMC from the security guard of BORL pipeline regarding the incident, GAIL has activated its Emergency Action Plan.
- Persons from nearest maintenance base have rushed to site.
- After reaching the site & assessing the condition from the accessible distance (100 m), it was suspected that the leakage was from 42" Dahej – Vijaipur Pipeline and accordingly the section was isolated.
- After venting for few hours and substantial reduction of pressure in the section, rate & intensity of the leakage was found in decreasing trend.
- To cross check the pipelines, cross trail pit was also made at accessible location.
- Upon digging trail pit, it was established that the leakage is from 42" Dahej – Vijaipur Pipeline.





Emergency Management (Contd..)

Excavation



Cold Cutting



Emergency Management (Contd..)

Mud Plugging



Lowering of Pipe Spool



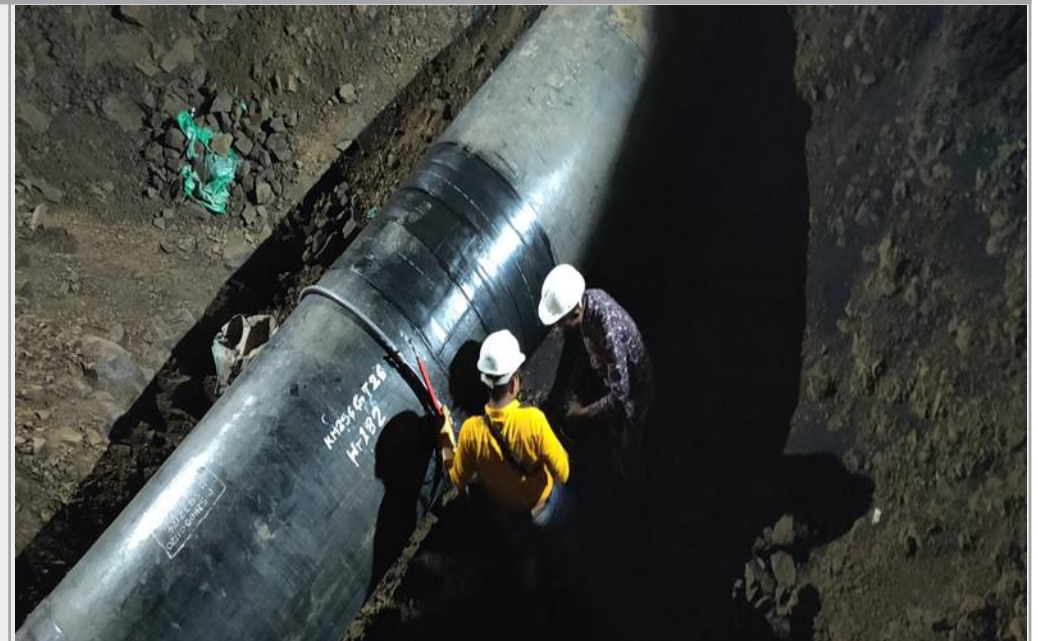


Emergency Management (Contd..)

Welding



NDT & Coating





Learnings

- There shall be a mechanism in place to get the permission for digging a borewell / developmental activities in the vicinity of pipeline ROU from local administration.
 - ✓ Submission of application to the local administration.
 - ✓ Local administration forwarding the application to the pipeline operator for NOC.
- Spreading Public Awareness along the ROU.
 - ✓ Public Awareness program in villages, along GAIL's pipelines in each tehsil / taluka level.
 - ✓ Advertisement in local newspapers.
 - ✓ Advertisement campaign in local FM / AM radio.
 - ✓ Nominating GAIL Sahyogi in each village to spread awareness and report abnormality if any.
- Collecting the mobile numbers of ROU land owners to spread the awareness on pipeline safety through group SMS.





Learnings

- Mechanism to Identify the affected pipeline in a common ROU with multiple pipelines shall be in place to avoid delay in rectification measures.
 - ✓ Locating all the pipelines with a pipeline locator at the closest accessible location.
 - ✓ Digging a cross pit across the ROU after locating the pipelines.
 - ✓ Using an acoustic receiver device such as geo-phone to identify the affected pipeline.
- Installation of pipeline warning markers specific to each pipeline in the common ROU.
 - ✓ It shall have the details of the operator and pipeline
 - ✓ Toll free number and warning message (High Pressure Gas Pipeline; Before excavation or in emergency contact the toll free number)





Conclusion

- Pipeline Operators shall strive for the continual improvement of ROU Management along with the pipeline integrity.
- Support of Local administration is much needed in ensuring the pipeline safety.
- Pipeline Operators shall also need to explore all the possibilities to spread the awareness on pipeline safety among the stake holders.
- Centralized GIS of all the pipelines in INDIA including the details of ROU shall be available to the government authorities for considering the same.
 - ✓ While allotting the land for developmental/infrastructure activities.
 - ✓ While giving permission to the other entities.
- Nodal Agency for “ **CALL BEFORE DIG**” at each district level to be available so that before digging/Boring, a request for location of buried utilities be marked to avoid unintentionally dig by Third party into an underground utility line.





Thank You!

