सुरक्षा अलर्ट / SAFETY ALERT

OISD/SA/2026-27/PL/05 **Date: 28.04.2026**

INTRODUCTION

Title: Incident during pit excavation work for pipeline inspection

Location: Sectionalizing Valve (SV) station in mainline

Loss/ Outcome: Fatality of the contract worker.

BRIEF OF INCIDENT

Manual excavation work by the contractor for inspection of underground by-pass lines and mainline valves was going on at SV station. The pit was almost ready to the depth of approx. 2 meters for starting shuttering and shoring activities. During lunch break time at around 14:00 hrs, the security guard on duty heard some screaming sound for help. He immediately rushed to the spot and observed that 03 workers were standing outside the excavation area, one worker was trapped inside the excavated pit up to waist height and another worker was entrapped under the loose soil due to trench wall collapse.

Immediately both the entrapped workers were rescued with the help of workers outside and they were taken to the nearby hospital where one of the workers was declared dead.

Actual site pictures

This Safety Alert is based on the Investigation report submitted by industry and published for information purpose only. This information should be evaluated to determine if it is applicable in your operations, to avoid recurrence of such incidents.

OBSERVATIONS

- Manual excavation for inspecting the underground bypass lines and mainline valve at SV station has been going on since last 20 days.
- Due to space constraints arising from nearby station piping & PCC, formation of a sloped excavation could not be carried out as specified in OISD standard. Rather excavation with vertical side walls was undertaken.
- The excavated depth to expose the buried mainline valve with stem was approx. 2m. Due to presence of murrom soil, the soil around the buried valve was not found compact. Excavation alongside the PCC area and keeping excavated loose soil on surrounding area may have led to increased pressure on the surface and a gradual decline in soil compactness may have resulted in sudden collapse of trench wall.
- Although the job was executed under a work permit system, the permit classification was not in compliance with company's guidelines and OISD-STD-105. Excavation Work Permit needs to be taken for any type of excavation job and excavation activities exceeding 1.2 m must be conducted under a confined space entry permit; however, only Cold Work Permit was taken for execution of the job.
- The authorized list of permit issuers and receivers was maintained duly approved by the competent authority. On the day of the incident, the issuer and receiver were confirmed to be in compliance with the approval. However, for some days in between issuer and receiver of the permit was same person.
- Continuous supervision by company's officials was found missing.
- Although the job was being carried out under the supervision of the Contractor's supervisor, he was not present at the site at the time of the incident.
- Training records of contract workers covering the job and associated risks & hazards were not available.
- Job procedure for excavation under restricted conditions was not available.
- Job Safety Analysis (JSA) to identify probable hazards and control measures of the activity was not conducted.
- Tool box talk record was also not available.

ROOT CAUSE

- Non-compliance to work permit system by not adhering to excavation and confined space entry permit.
- Non-availability of Job specific procedure for excavation.
- Non-compliance to excavation process for depth more than 1.5 m without proper shoring and strutting to prevent cave-in or slides.
- Lack of supervision by official/ contractor supervisor for critical activities involving excavation in restricted area with loose soil beneath PCC.

RECOMMENDATIONS

- Considering soil conditions, suitable techniques like sloping, benching, shoring or shielding etc. shall be provided to prevent soil collapses during excavation activities. Reference of OISD-GDN-192 should be used in developing safe procedures during excavation.
- Any type of excavation work shall be covered under the Work Permit system. Specific work permit or Composite work permit shall be taken for excavation activities. Further, for excavation more than 1.2 m

deep, confined space entry permit shall be taken in line with OISD-STD-105.

- Regular training shall be imparted to O&M personnel on Work Permit System, specifically to authorized permit issuers & receivers. The work permit shall not be issued and received by the same person i.e. a person shall not issue a permit to himself.
- It is mandatory to carry out job location specific Job Safety Analysis (JSA) before issuing the work permit as per clause No. 6.3.1 of OISD-STD-105.
- Job specific tool box talk shall be conducted as per clause No. 6.3.3 of OISD-STD-105.
- Supervision of experienced personnel from Owner / Contractor / Consultant should be ensured keeping in mind the risk factors associated with any job along with their mitigation measures. Critical work should be allowed only in presence of competent supervisor.
- Mainline valve & underground bypass piping should be provided with pits i.e. masonry retaining wall around the valve area inside stations.
- Site specific job procedure/ work practices shall be developed for the safe execution of jobs like excavation as per clause No. 6.1 of OISD-STD-105 and typical requirements to be included in safe work practices as per Annexure-V OISD-STD-105.
- Training and competencies of the contractor workers shall be ensured so that work is executed responsibly and safely as per clause No. 7.4 of OISD-GDN-206.
- The awareness about unsafe act (UA) & unsafe condition (UC) among contract workers shall be enhanced by imparting training to contract workers about UA/UC as per OISD-STD-154.

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