SHEQ COMMUNICATION

Ref: 7-2016 Title: Near Miss – fall into Trial Pit

INTERIM INVESTIGATION SUMMARY

Type of Incident

HIPO (High Potential) Near Miss

Reportable

No

Location of Incident

Delamere, UK

Date/Time

Tuesday 16th February 2016, 1445hrs

Business Unit

Geosciences

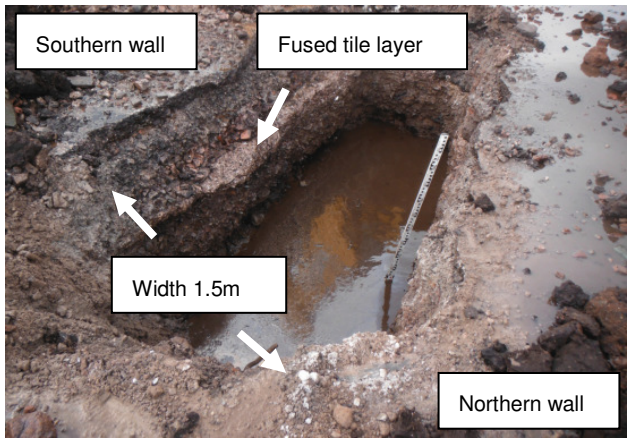
Brief Account of Incident

Whilst completing the sampling of a final trial pit of a site investigation, an experienced third party engineer, present on-site to undertake a watching brief upon RSK, on behalf of the land owner, stumbled at the side of the northern wall of the trial pit and fell onto the edge of the southern wall.

The incident arose when the third party engineer placed a 5m long aluminium measuring survey staff into the trial pit in order to measure its depth without RSK's authorisation. This occurred when the pit had been completed and excavation had ceased to allow the RSK engineer to log the findings and obtain samples from the arisings stockpile alongside the pit. The staff was understood to have been lowered to a depth of 5.2m below ground level, at which point it became lodged in soft peat at the base of the pit, which subsequently resulted in the third party engineer initially falling back away from the pit, before throwing himself forward toward its southern wall in a moment of panic.

Whilst the engineer was not able to leap the entire width of the pit (1.5m), he was fortunate enough to grab hold of some cemented tiles located approximately 0.5m below ground level. Furthermore, the pit was located in hard standing and re-cemented/ fused made ground, and was therefore relatively stable thus preventing the collapse of the upper side walls of the pit.

The pit had filled with groundwater, to a depth of approximately 1m, and subsequently the engineer was wet from the waist down. As the excavation of the area was being overseen by an RSK operative in attendance carrying out sampling from the arisings, both she and the operator of the excavator being used to dig the trail pit (also present) were able to quickly mobilise to the side of the pit and pull the engineer to safety by hand. The entire incident was understood to have ended within thirty seconds.



The engineer was shaken by the incident; however no injuries were believed to have been sustained. Works were stopped immediately; the engineer got changed into a clean set of clothes, following which the incident was reviewed by the persons present on site.

The incident was immediately reported to RSK regional management, who in turn escalated the report of events to the client, as well as internal divisional and SHEQ management.

How is the item to be cascaded and implemented?

Toolbox talk ☒ Team briefing ☒ SHEQ notice board ☒ Process change ☐ Supply chain ☒
SHE induction ☐ Other ☐

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Interim findings - what went wrong?

- The scope of the engineer's activities had not been established nor risk assessed by RSK prior to works commencing. It had been anticipated that the individual would be observing RSK operations, and not undertaking any technical activities (i.e. measuring & sampling etc).
- The engineers behaviour had not been challenged prior to the incident occurring.
- The engineer had positioned himself at the longer sides of the pit (rather than at the narrower end), presenting a greater risk of falling in, as well as the increased potential for pit wall collapse.
- The measuring survey staff was forced into the base of the trial pit, resulting in the engineer stooping toward the pit (below ground level), the momentum from which appeared to contribute to the engineer falling.

Lessons Learned

1. **RISK ASSESSMENT**: All tasks, including those undertaken by third parties whilst operating under RSK supervision, must be assessed on a step-by-step basis in order to provide a comprehensive job hazard analysis.
2. **STOP WORK:** All employees, clients, managing contractors, and subcontractors must stop work if they have concerns over safety. This includes intervening in unsafe operations undertaken by third parties.
3. **TRIAL PIT SAFETY:** A risk assessment must be in place for all trial pit investigations, and shall usually fulfil the requirements of the SHEQMS (TP204 Trial Pit Investigation) as well as the guidance provided within this bulletin. **Do not enter any excavation unless there is a safe system of work set up**. This may involve an approved design for a battered pit or shoring and personnel training for entry into confined spaces. **For shallow pits not exceeding 1.0m in depth, an on-site risk assessment should** be completed by a competent person to assess stability prior to entry (for example, to CAT scan the base of the pit). **Do not enter any pit where the pit contains standing water.**

   Further information on excavation safety can also be found within HSE publication HSG150 (www.hse.gov.uk).

Trial Pit Safety

1. **Unprotected edges on an excavation can allow people, materials or vehicles to fall in.** During the excavation of the trial pit site personnel and any visitors must stand away from the pit and within the field of view of the operator of the mechanical excavator.
2. **Wherever possible, alternative approaches to taking measurements of the pit shall be employed.** You must be aware of the possibility of the sides of the pit collapsing, particularly in sands and gravels and in made ground. Where it is absolutely necessary to approach the pit, measurements should be taken at the end of the pit, rather than the sides.
3. **Where plant is being used adequate stops or wheel chocks should be put in place to prevent vehicles running into the excavation**. Plant must not work too close to the edge of the excavation.
4. **Operators of plant must turn off ignition** and ensure that brakes and other locking mechanisms are engaged before exiting the cab. Keys must be removed when the machine is not in use or is unattended.
5. **Safe control of material being dug from an excavation shall be addressed by ensuring that any stock piles are set well back from the edge of the excavation**. This prevents material falling back into the excavation, or the weight of the excavated material undermining the edges of the excavation. Excessive rain may increase instability of stockpiles and excavations. On-site/point of work risk assessments are required in poor weather conditions.
6. **Never approach the edge of the pit if the excavation is showing signs of being unstable** – e.g. water ingress or excessive spalling. Do not lean over pit.
7. **Open pits are not to be left unattended at any time.**
8. **Trial pits are to be illuminated during night shifts and clearly marked, with road plates deployed where possible.**
9. **Open excavations including those in which tests are underway shall be secured with fencing** suited to the site conditions (e.g. netlon, heras, toe boards etc), where there is potential for accidental or unauthorised entry into the pit, and in all cases where an open excavation is to be left unsupervised.
10. **Fencing shall be of sufficient strength/height and for livestock** in close proximity a repellent structure – fences can be electrified for livestock – shall be in place to prevent access.

How is the item to be cascaded and implemented?

Toolbox talk ☒ Team briefing ☒ SHEQ notice board ☒ Process change ☐ Supply chain ☒
SHE induction ☐ Other ☐

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