

## **Planning prior to drilling and establishment of a new drilling site**

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### **Purpose**

These instructions describe planning ahead of a new drilling project and the establishment of a new drilling site in the field. The purpose of the instruction is to ensure that activities affecting safety and environment are allocated between the contractor and client, and that the workplace is properly equipped and designed for safety.

### **Instructions**

Drilling rigs are portable workplaces and can be placed in most areas. There are several things to go through before and during establishment in order to make the workplace as safe as possible. Below is a list for this procedure. To ensure that all the points have been looked at, there is also a check list documenting the points below – see Appendix 5A (“Check list – Planning prior to drilling and establishment of a new drilling site”).

### **Coordination**

Before the project is started the division of responsibility between the client and contractor is to be established and a number of tasks must be distributed. Things that need to be clarified/done before the project is started include:

- Nominate individuals responsible for coordination.
- Division of responsibility for work environment matters and matters concerning the external environment.
- BAS U – building work environment coordinator for execution (if required by the provisions on building and civil engineering work AFS 1999:3).
- Decide who is responsible for permits for Hot Work.
- Training requirements for personnel (e.g. work environment and safety, Hot Work, CPR, chainsaw training, driving licences, loader/forklift licence).
- Permits and agreements (valid permits, e.g. plans of operations, exemption from off-road driving ban etc.)
- Need for water and water supply.
- Dealing with cuttings (do they need to be collected, e.g. cuttings tank).

### **Start-up meeting**

Before the drilling is started, i.e. before machinery is established, a start-up meeting is held which is to be attended by all the contractors taking part in the project.

The following are to be checked/clarified at the start-up meeting:

- Permits and conditions for the performance of the activities
  - Review of valid plans of operations, including any special permits from landowners and affected parties
  - Review of permits from authorities, Bergsstaten (the Mining Inspectorate of Sweden), the County Administrative Board (e.g. exemption from off-road driving ban, decisions from consultation in accordance with Chapter 12 Section 6 of the Environmental Code etc.)
  - Clarification concerning permits

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- Are there special agreements to take into consideration, e.g. routes proposed by property owner, tree felling or disposal of felled trees?
- Do decisions by authorities contain any provisions or requirements concerning precautions to be taken in the exploration work? How is the work to be carried out and how are provisions and commitments to be monitored?
- External environment –
  - Are there ancient remains or cultural heritage in the area? Need for protective measures in order to avoid damage?
  - Are there natural assets (habitats, sensitive wetlands and watercourses, nature reserves etc.)? Need for protective measures in order to avoid damage?
  - Driving routes, need for planning and field visits? Need for preventive measures to combat ground damage?
  - Are there cables in the ground or overhead power lines in the area around the drilling site or in areas that could affect transport?
  - Suitable water extraction point – is permission required?
  - Dealing with cuttings – whether they need to be collected (cuttings tank).
- Reporting:
  - Decide who is to register work environment deviations and to whom these are be reported.
  - Decide who is to register deviations impacting the environment and how these are be reported.
  - Decide who is to report major deviations and incidents, both in the work environment and in the external environment, to the right authority (e.g. county administrative board, Swedish Work Environment Authority, municipality) (e.g. discharge of chemicals/pollution).
- Preventive work environment and environmental protection
  - Implementation and documentation of risk assessments.
  - Planning of safety inspections (environmental and work environment inspections); who convenes inspections, regularity and participants.
- Other
  - Training requirements for personnel (e.g. specific training in the work environment and safety, Hot Work, CPR, chainsaw training, driving licences, loader/forklift licence.
  - Local safety regulations
- Briefing on project folder

### **Project folder**

Before the start of the drilling, the health and safety coordinator prepares what is known as a project folder. The project folder is a compilation of the documentation that needs to be present in the workplace. The content of the folder is to be reviewed and established at the start-up meeting. All personnel working at the drilling site should sign to show that they have studied the documentation in the folder.

The folder should contain the following:

#### 1. Client and workplace details

- Contact persons
  - Client, contractors, field personnel

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- Agreements
  - Permits
    - Exploration permit, plan of operations, exemption from off-road driving ban, decisions from consultation in accordance with Chapter 12 Section 6 of the Environmental Code etc.
  - Overview map and pictures of drilling site
  - Other
2. Work environment
- Safety and environmental inspection records
  - Record of risk assessment carried out
  - Any work environment and environmental plan from client
3. External environment
- Natural environment
    - Map showing areas with sensitive/protected environment; any communication concerning specific protective measures or areas where transport is not to take place
  - Cultural heritage and ancient remains
    - Map and any communication concerning location and transport around ancient remains or cultural heritage
  - Water extraction point
    - Map or description of water extraction point
  - Dealing with cuttings – any instructions concerning collection of drill cuttings
  - Check list – Environmental control for drilling site (daily checks on drilling equipment and area of activity)
  - SveMin's Guidance on Exploration
4. Instructions and routines
- Contingency plan for emergencies (incl. GPS coordinates, contact details and map of local healthcare centre)
  - Any equipment at the drilling site (sketch of drilling site)
  - Instructions and routines relevant to the project.
5. Chemicals
- Chemicals list
  - Material safety data sheets (MSDS)
6. Servicing and maintenance of machinery
- Maintenance chart
7. Weekly reports and records
8. Other
- Phone contacts list
  - Shift schedule
  - Directions
  - Personnel list (with space for signing to show documentation has been read)

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### **Before establishment**

Ensure that the following has been gone through and that the following materials/equipment are present at the drilling rig:

- The project folder has been gone through and signed by the relevant personnel
- Approved fire extinguisher
- Decontamination equipment (oilcloth and absorbents)
- First aid equipment and eyewash, and information signs concerning where these can be found
- Other safety equipment that may be relevant (e.g. protective trousers, visor, fall protection equipment)
- The fall protection equipment must be checked to ensure that it is clean and has been inspected by a qualified person
- Hand-held tools are in good condition
- Emergency stop and residual-current circuit breaker work
- Safety data sheet for all chemicals
- All chemicals, oils and fuels are stored in an acceptable manner and are correctly labelled (including waste oil)
- Only ADR(UN) containers are used to store large volumes of diesel
- Check that lights work: don't forget transport vehicles, e.g. forestry tractors – is supplementary lighting needed?

### **On establishment**

Communication:

- Is there coverage for mobile phones, so that rescue personnel can be alerted in an emergency?
  - If not, the workplace must be equipped with a satellite phone

Study the area to minimise ground damage:

- Has the client suggested a driving route?
  - If not, which is the best driving route from a safety perspective and to minimise ground damage?
- Has the client decided how water should be supplied?
  - If not, contact the client and ask

Placement of equipment:

- To reduce the risk of falls and stumbling, the workplace should be planned in such a way that the distance between the equipment is short
- As early as possible in the establishment phase, floodlights should be mounted so that the workplace has sufficient lighting

### **After establishment**

- The workplace area and walkways must be made free of obstructions (e.g. roots, stones, ditches etc.)
- There must be nothing flammable in the vicinity of the exhaust pipe
- Check that hydraulic hoses work, that they have not been damaged during the establishment and that the protection around the hydraulic hoses is in place
- Generators are earthed
- Any lockable legs are locked

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When the establishment of the workplace is complete, the area should be fenced off. This is done by placing barricade tape around the workplace area and "No access to unauthorized persons" signs by the access roads to the area.

### **Documentation**

To ensure that the above points are followed, the checklist *Planning prior to drilling and establishment of a new drilling site* must be completed for each drilling project (see Appendix 5A).

### **Person responsible**

The manager in charge is responsible for these instructions being followed.

EXAMPLE