



NEDMAG TR-5 Fire Fighting and Rescue Plan

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	State Supervision of Mines	Inspector General Mines
	NEDMAG	General Manager
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	BPC	Operations
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1. Introduction

1.1 Custodian

NEDMAG is the custodian of this document. This implies that this organisation is ultimately responsible for ensuring the contents of this document are correct, kept up-to-date and distributed in accordance with requirements.

1.2 Validity

This document remains valid for the time the well intervention operations on the TR-5 well are in progress. Should a delay occur, the validity of this document will be extended in line with the delay period.

The activities except the mobilisation and demobilisation might take place in a continuous schedule (day and night).

The activities for workover are scheduled to start in Week 1 of 2020 and are expected to be completed in Week 9 of 2020, including demobilisation.

2. General

2.1 Objectives of this document

The purpose of this Firefighting and Rescue Plan (FFRP) is to provide all personnel involved in the TR-5 intervention operations with information that is necessary to deal safely with firefighting and rescue situations. This document is supplementary to the regular NEDMAG Emergency Plan for the Mining location (Calamiteitenplan), as the workover operations involving BPC's unit on TR-5 are not routine.

Furthermore, this document provides the local authorities and fire department with additional information on the location and ensures compliance with the legislative requirement for reporting to the State Supervision of Mines (Staatstoezicht op de Mijnen).

2.2 Information on the TR-5 operations

The main goal of the operation on TR-5 is to remove the completion from the well, investigate 10-3/4" last cemented casing and isolate the well from the cavern cluster by placing a permanent barrier at the bottom of the 10-3/4" casing. The workover operations will be performed with the BPC HWU Space saver unit. This FFRP is applicable to the periods during which the BPC unit is performing activities. Wireline operations outside the scope of the TR-5 operations reside under the existing NEDMAG Emergency plan for the Mining location.

2.3 Document references

The Firefighting and Emergency Plan is based on legal requirements and is related to the following safety documents:

- **Specific Safety Case BPC HWU Space saver unit**

This document describes the system and measures that BPC has in place to carry out responsible and safe well intervention operations with the BPC HWU Space Saver II unit.

- **Project Specific Safety & Health Document for NEDMAG TR-5**

This document focuses on the co-ordination and cooperation between all parties during the TR-5 operations.

- **NEDMAG Safety & Health Document (M-01)**

This document covers the Safety and Health issues during normal operations. This document is available in Dutch language.

- **NEDMAG Safety & Health Document (M-08)**

This document covers a.o. the Safety and Health issues during special operations. This document is available in Dutch language.

- **NEDMAG Emergency Plan Mining (M-02) & NEDMAG Blowout script (M-12)**

In the unlikely event of an emergency situation arising whereby there is an immediate danger to persons or the environment directly outside the perimeter of the TR-5 location, both the NEDMAG and the local and/or regional authorities are in possession of contingency plans. These documents also include scenarios for a brine blowout. These documents are available in Dutch language.

2.4 Cooperation with local fire brigade

The Veendam public fire brigade will provide firefighting services to the TR-5 location. The Veendam Fire Brigade is equipped with at least the minimum amount of firefighting equipment required by legislation. Assistance can be given if necessary, by regional fire brigades.

Prior to commencement of the work the local Fire Brigade is informed of the general activities and time frame. In close consultation it will be decided whether it will be necessary to organise a joint fire drill.

3. Location Specific Information

3.1 Surroundings

The TR-5 well is situated at Wellhead Center 2 (WHC-2) at Nedmagweg 199, Veendam in a rural area.

Near surroundings of the well:

Buildings or similar objects, which are no part of the workover installation	
Romney shed	120m
Offices	60m
Neighbours	185m
Public roads or railways	
Entrance	163m
nearest road over canal	168m
Flammable substances	
Nearest heater for buildings	60m
Oil furnace	110m
60 m ³ diesel tank	60m

On the north east side of the Nedmag Mining location, on the other side of the canal, are two farmhouses. In case of an emergency the occupants and possible visitors will be warned and – if necessary - evacuated.



3.2 Equipment on location

During the activities the following workover equipment will be present on the location:

- HWU Space Saver II Unit
- Fluid pumps
- Storage tanks for brine, freshwater and mud
- Centrifugal pumps
- A Compressor and a HP cleaner
- Fuel tanks
- Office and Crew Containers
- Workshop Container
- Safety Container
- Koomey Unit
- Electrical Power pack and a diesel power pack

3.3 Dangerous locations and substances

Locations on the well intervention site where dangerous or flammable substances are stored are marked on the layout drawings, see attachment 6. FFRP equipment overview

Location	Hazard	Substance - max. amount
Diesel storage tank Nedmag (for oil roof TR-9)	Fire	60 m ³
Diesel storage tank(s) BPC	fire	5 m ³
Diesel storage tanks in fluid pump drive.	fire	Day tanks up to typically 250 ltr
Oil barrels / skids	fire	200 ltr/drum, max. 4 drums.
Contaminated waste	poisonous/fire/corrosion	Oily rag and gloves trash container.
Workshops	Fire/corrosion	WD40, grease

3.4 Chemicals

A list with daily chemical stock is available on site as well as chemical data sheets for all chemicals.

All Chemicals are in compliance with REACH. Material Safety Data Sheets (SDS) of all chemicals used on the well site are available on site. An overall list of chemicals is available on the Drilling site.

3.5 Electrical danger

The unit is electrical powered via a 20 kV power line. Working on electrical systems has an inherent risk. It is forbidden to work on systems under power except if there is an emergency plan and only after special precautions have been taken.

Electrical shock, electrical burns, fire or explosion can cause serious injury. Furthermore, electromagnetic fields can cause injuries or disease.

3.6 Escalation prevention

- **Blowout Preventer**

The well will be secured with a Blowout Preventer system. These can be operated from the workbasket and from the closing unit located on the ground. The BOP will be certified and pressure tested according to Dutch mining regulations.

- **Emergency lighting**

Only the workbasket has a back-up supply by means of batteries. Temporary and mobile floodlighting do not have emergency back-up systems, but do have separate power supplies.

- **Drain system for spills**

The whole location is provided with a drain system connected to a storage pit (hoekbak). The hoekbak can contain about 75 m³ of liquid.

3.7 Facilities in case of an emergency

Emergency communication

- A day NEDMAG Company Representative (SSV) covers the site 12/7, with a day BPC Supervisor also covering the site 12/7. When the operations are extended to 24-hour shifts, a second set of supervisors will be available on location to ensure 24-hour coverage.
- An Intermittent (on-off) signal for abandoning the workover site can be activated manually from the Supervisor Office Container. This will also be audible in the Nedmag control room.

Emergency equipment

- Fire extinguishers
Six powder (ABC) fire extinguishers will be placed on location as per **attachment 6. FFRP equipment overview**.
The firefighting equipment on site is the property of Balance Point Control BV. The firefighting equipment is checked both internally (inspection plan BPC) and externally by a qualified third party. The inspection date is indicated on a label attached to the extinguisher. Defective equipment will be replaced or repaired immediately.
- Available first aid and rescue equipment:
 - First-aid kits
 - Eye-wash bottles
 - Stretcher
 - Fire blanket
- Pumps and tank trailers are available on call-off 24 hours a day for transportation of liquids

Emergency training

- There will be sufficient trained personnel on site in order to use the rescue equipment that is available. The assistance of the fire brigade will be requested if additional rescue equipment is required.
- At the start of the workover activities, a firefighting instruction of the crew will take place. A fire drill or an abandon rig drill will be performed weekly, and will be logged in the Daily report.
- Key BPC personnel has been trained as follows:
 - Firefighting training for small fires: general training, every 4 years
 - Medical treatment training: every 2 years
 - IWCF Well control training: every 2 years

4. Firefighting and Rescue Response

In principle rescue operations in a contaminated atmosphere will be left to the local fire brigade. The personnel working on site should only undertake rescue activities if these have to be carried out without delay and can be performed safely. In such events, the fire brigade or police will still be informed and their assistance requested.

4.1 Firefighting supply

In case of fire, the fire brigade shall be alarmed directly. Upon their arrival, the fire department will assume direct control over the well site. The fire brigade may require assistance from Workover specialists on site. See location FFRP drawings.

4.2 Responsibilities in case of an emergency on the TR-5 location

- The NEDMAG Company Representative (SSV) has the overall responsibility for:
 - coordination of the necessary actions in case of an emergency on the workover site
 - coordination of activities with NEDMAG head concurrent operations (HCO) and the service companies
 - triggering the callout of public firefighting services and police
 - reporting the incident to SodM after consultation with their WEP superior and the NEDMAG HCO
 - advising the fire brigade; liaising with the BPC Supervisor and NEDMAG HCO after the fire brigade or police have taken charge of handling the emergency
 - ensuring that the press does not enter the workover location and is referred to the NEDMAG Managing DirectorThe SSV will wear a yellow vest to illustrate his coordinating role.
- The BPC Supervisor is responsible for the workover unit and the BPC workover crew, and takes temporary charge in case of unforeseen unavailability of the SSV.

4.3 Responsibilities in case of an emergency outside the TR-5 location

The responsibilities in case of emergencies outside the TR-5 workover site are defined in the NEDMAG Emergency Plan Mining (M-02).

4.4 Alarm & emergency procedure

Instructions for personnel on the site:

- Report an incident immediately to the NEDMAG Company Representative (SSV) or the BPC Supervisor.
- In case abandonment is necessary: ensure that the alarm in the NEDMAG Company Representative (SSV) Office Container is activated.
- In case of fire:
 - Always decide for yourself if you can fight the fire until the local fire brigade arrives. **Your own safety is priority number one.**
 - In order to prevent escalation: always notify the fire brigade, also in case you can fight the fire yourself.
 - Keep equipment cool and wet, and remove possible flammable substances.
- The jack operator and essential crew members may, depending on the situation, remain in the workbasket to carry out well control operations or to ensure the well will remain in an operational condition.

Response to hearing an alarm

When the abandonment alarm is given:

1. Secure the work area
2. Proceed to the muster point
3. Check while leaving, that **no one**, regardless their reasons, remains on site
4. Walk to the muster point perpendicular to the wind direction
5. Help your colleagues when necessary, without endangering yourself
6. Follow the instructions of the NEDMAG Company Representative (SSV) and the BPC Supervisor
7. Remain at the muster point until you are ordered to leave by the SSV
8. Follow the instructions of the Police, or Fire Brigade.

5. Emergency telephone numbers

Adres:

Nedmagweg 199, 9641TA, Veendam

Call 112 for police, fire brigade or ambulance.

Name	Function	Office	Mobile Phone
NEDMAG			
<input type="text"/>	Project Manager / Head Concurrent Operations	<input type="text"/>	<input type="text"/>
<input type="text"/>	Field engineer	<input type="text"/>	<input type="text"/>
Central Control Room		<input type="text"/>	<input type="text"/>
<input type="text"/>	Company representative		<input type="text"/>
<input type="text"/>	Company representative		<input type="text"/>
<input type="text"/>	Company representative		<input type="text"/>
WEP			
<input type="text"/>	WEP Operations manager	<input type="text"/>	<input type="text"/>
<input type="text"/>	Project Manager	<input type="text"/>	<input type="text"/>
<input type="text"/>	Project Engineer	<input type="text"/>	<input type="text"/>
BPC HWU			
<input type="text"/>	Operations Manager	<input type="text"/>	<input type="text"/>
<input type="text"/>	QHSE Manager	<input type="text"/>	<input type="text"/>
State Supervision of Mines/ SodM			
	Head consignee		<input type="text"/>
	2 nd consignee		<input type="text"/>
	General	<input type="text"/>	
BPC (Wild Well Control Inc.)			
BPC		<input type="text"/>	

Public services	
Local doctor emergency line 07.00 – 18.00 hrs	0598 63 57 01
Local doctor emergency line 18.00 – 07.00 hrs	0900 9229
University Hospital Groningen (Hanzeplein 1)	050 361 61 61
Hospital Scheemda (Pastorieweg 1)	088 066 10 00
Hospital Stadskanaal (refaja) (Boerhavestraat 1)	0599 654 654
Taxi Letmaath	0598 39 40 00

