
	Instruction Task Risk analysis	Instruction: I002-001
		Doc no: 2005-0084528

Task risk analysis

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Changes compared to previous version				
<ul style="list-style-type: none"> - Instruction transferred to latest template; - Added live saving rules; - Instruction revised, process more clearly described, decision model implemented in instruction (see annexes); - SAP instruction removed; - Difference between hazard and risk further explained 				
Purpose instruction				
The purpose of a TRA is to reduce or eliminate risks. In addition, this instruction describes the TRA process to be followed within RWE Generation NL.				
Related documents				
Type of document	Title		Code	
matrix	Risk Matrix		DI_001_A16	
form	TRA form		2020-7254	
manual	Manual for using the risk matrix		GEN_INF_0301_EN	

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Terminology & abbreviations	
Abbreviation/term	Meaning
TRA	Task Risk Analysis
LMRA	Last Minute Risk Analysis
RPN	Risk Priority Number

General

A Task Risk Analysis (TRA) is not a Last Minute Risk Analysis (LMRA). And an LMRA is not a TRA. In an LMRA, workers briefly look at the risks of the work and the working environment before starting work. With a TRA, the focus is on the tasks to be performed and the work environment.

Life Saving Rule(s):

"I work with a valid work permit"



In this instruction, where applicable, roles are used as described in RWEg work permits instruction I001-000 and are shown in bold.

These are the following roles: **Planner**, **Preparer**, **Provider** and **Holder**

An initial determination as to whether there is increased risk work should be done at an early stage. In daily practice, this determination will be made by the Planner in consultation with Operations and the contractor in work preparation. The Operations Department provider makes this determination for priority 1 work orders.


If there is any doubt about the potential level of risk during work preparation, this is always inquired with the supervisor or else with the Safety Expert. Leading here is always the RWE Risk Matrix, DI_001_A16.

Difference between danger and risk:

Danger is a **condition** in which there is an imminent threat to health, life, property or the environment. When we say something is dangerous, it means that harm or injury is a real and present possibility.

Risk, on the other hand, assesses the **probability** that this hazard will materialise. Risk quantifies or measures the probability of a specific adverse event occurring based on various factors. While hazard is the presence of a harmful scenario, risk assesses the probability of this scenario occurring.

Risk is thus the probability that a potential hazard will result in an actual incident or harmful effect and the severity of the resulting injury or damage. In safety terms, risk is always negative,

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Here, a third concept is important: **exposure**. Risk depends on exposure. How much of the substance gets on or into your body? How long are you exposed to the action? If a lot, the risk is higher, and if a little, the risk is lower. So to see what the risk is, you determine how dangerous the substance or action is and also look at the exposure.

Risk = Severity of impact X Likelihood (according to DI_001_A16, risk matrix)

Review

As a basis for determining whether a TRA is needed, one uses the TRA decision model (F002-002). This contains the following steps to be answered with yes or no, where **yes** means that a TRA must be drawn up:


1. For the intended activity(ies), there are **no** standard procedures that provide adequate control measures for these risks;
2. There are working conditions involving unknown risks (new work) for which no standard procedures and or instructions are provided for adequate control measures;
3. The complexity of the planned work creates additional risks that require further coordination;
4. There are known events that may lead to a new assessment of risks in the planned activity(ies) (lessons learned);
5. The burdened group of internal or external employees is not familiar with the planned work.
6. The initial risk assessment shows that the potential Risk Priority Number (RPN, risk score) has a score of ≥ 12 (yellow risk)
7. There should be deviation from the applicable procedures and/or work instruction(s)

To record the risks, the TRA form (see related documents) can be used.

Working method

A Task Risk Analysis should be carried out in steps. It is strongly preferable to prepare the TRA together with a delegate from the executing party.

1. Divide the work into logical subtasks or activities and write them in chronological order in the "Task or Activity" column.
2. For each activity, identify conceivable and real hazards with their associated risks and write them down in the "Hazard-Risk-Exposure" column and set the level using the RWE Risk Matrix, DI_001_A16. Enter the score in the column "Initial score". If the RPN (risk score) is higher than 12 (yellow) then we are talking about increased risk and additional management measures will have to be taken to reduce the risk.
3. Then check whether any control measures have already been described from the RI&E, a previous TRA, or a safety instruction. Then indicate this in the column "Control measures" with reference to relevant measure.
4. For risks with an RPN (risk score) higher than ≥ 12 and for which no control measures have yet been described, the control measure should be determined and recorded in the relevant column. Here, follow the occupational hygiene strategy (source approach), by first determining whether the hazard can be removed (eliminated) and lastly applying the use of PPE. Determine the residual risk again using the RWE Risk Matrix, and enter this in the final score column.

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- Only activities with an RPN (risk score) of ≥ 12 should be listed on the TRA form and should be linked to the work order and work permit so that it can be discussed with the performers

When analysing the risk of an activity, we should not only think about the standard work, but also, and especially, work in fault elimination, cleaning, maintenance, repair, adjusting, and so on.

Splitting the task into task steps

Risk analysis cannot be started until the task has been broken down into a number of elementary steps. Each step is a chronological part of the task. Each step should be defined or described with a 'do-sentence'. This involves describing 'what' is being performed and not 'how' the step is performed.

The breakdown into elementary steps should not be too small (too detailed) or too large (too general). This usually poses the biggest problem in disaggregation. A good breakdown of a task may contain as many as about 10 to 15 distinctive steps. Too detailed a split is often not necessary, while too general a split loses certain aspects of a task that could give rise to undetected unwanted risks. If the number of task steps becomes too large, the task should be split into subtasks.

Recognise and identify key occupational risks

Identifying risks

Recognising and identifying the risks can begin after the task split. The idea is to describe the risks step by step. The description of risks is preferably done by indicating the nature of the harm (the effect, what can happen...).

It is mainly about the risks from/to:


- The nature of the work;
- The workplace;
- The working environment;
- Working conditions;
- The complexity;
- New elements during work.

1. The nature of the work

Here we are concerned with the nature of the work that will have to be carried out. This could include industrial cleaning or moving a hoisting load, digging, working with electricity or in the vicinity of radioactive sources. Are we dealing with short repetitive work or is the work physically demanding?

2. The workplace

We can think, for instance, of working in confined spaces or working at height. What dangers, forms of energy do we have to deal with? Is the workplace accessible and what freedom of movement do we have when carrying out the work, and finally, where can we find escape routes, and how can help be provided in an emergency, and whether the right tools are available.

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3. The workplace environment

What does the workplace environment look like? What kind of company/ factory/ plant are we dealing with? Is other work being carried out above/below/before/behind or next to it at the same time? Are we dealing with traffic, and what kind of traffic occurs near the workplace environment? Is there material storage?

4. Working conditions.

What is the weather like during the work? What products and process materials are we dealing with? What is the state of the immediate environment, e.g. lighting, noise, temperature, air?

5. The complexity

With what numbers of people will the work be carried out, and are they employees of one or more contractors? In how much time is the work to be carried out? Is it an existing or a new project to be carried out? What are the task factors and what personal factors are involved?

6. New elements during work

Do new elements emerge during the execution of the work? Does simultaneous work have to be carried out that was not planned? Are tools, auxiliary equipment to be used that were not taken into account? Should the work be carried out with more, fewer or different workers?

In this phase of the task analysis, attention should be paid to these different risks that:

- be current in the implementation of the step itself;
- arise when performing the relevant step and which may occur then or thereafter;
- occur if the sequence of steps is not observed;
- may arise in unfavourable/unexpected circumstances.

TRA process


Drafting TRA:

The **Planner** (or **Provider** at prio 1) selects the relevant SIM form (the TRA form) in SAP at the relevant work order.

From the subactivities described in SAP, the risks for each task or activity are determined as described above, also looking at the situation at the workplace itself, and those tasks or activities that have an RPN (risk score) of ≥ 12 are taken over on the TRA form.

TRA preparation:

On the form, the **Planner** proposes additional control measures for the risks that have not yet been controlled, with which the risk can be reduced in the most efficient and effective way so that an acceptably low residual risk remains. In doing so, he consults with Operations' **preparer** (process-technical). The **planner** invites the contractor or operations department to the TRA Consultation well before execution.

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Conduct TRA consultation and determine management measures:

For example, Discipline Engineer, Operations Team Leader, Maintenance Coordinator, Contractor's representative and, if applicable, other subject matter experts, classify the increased risk tasks or activities and determine the associated control measures that are not yet controlled via a SIM form or standard work instruction.

These management measures are recorded on the TRA form.

Compiling TRA file:

The **planner** compiles the TRA file according to the agreements from the TRA Consultation. The Operations **preparer** checks the TRA proposal for quality and coverage of all risks of the tasks/activities to be performed. The digitally completed TRA form is then uploaded into SAP

Not acceptable residual risk:

In case of a not acceptably high residual risk, despite all described control measures, the Planner should engage all necessary expertise, to still be able to implement the additional control measures to reduce the risk to an acceptable residual risk.

RPN score of red should only be tolerated under exceptional circumstances where the probability or consequences need to be reduced. The Head of Technology must give approval.

RPN Score of yellow can be tolerated only if all realistic measures have been implanted where the probability or consequences are to be reduced and where the Cluster manager signs off.

In accordance with DI_001_A16 and GEN_INF_0301_01

Issue TRA and work permit:

The work permit **issuer** (in function as duty Team Leader Operations) and **holder** verbally review the work permit, SIM forms (specific partial permits) and TRA and both sign the TRA during the work permit issuance moment.

This communication moment is a crucial moment to share the right information between work permit **issuer** and work permit **holder**. The **issuer** seeks confirmation from the **holder** whether everything is well understood and whether he can carry out the work so safely.


Both should ensure that all management measures are in place prior to performing the task/work.

Starter work review:

RWE and the holder of the work permit are responsible for jointly carrying out the LMRA with the team at the workplace. A work permit with TRA therefore always requires a representative of RWE to be present (see further also LMRA instruction).

Documents and topics to be discussed are:

- Work permit and any SIM permits with listed risks and control measures;
- TRA;
- Carrying out the LMRA. Using the LMRA chart, any remaining risks and hazards in the workplace are determined, and corresponding measures implemented.

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All involved sign on the LMRA card for having read and understood and to work according to the work permit, TRA and LMRA agreements. All documentation is available at the workplace at the start.


If circumstances change: Stop and go back to the licensing authority. Then the management measures are adjusted and you can again have the start-up work meeting as described.

The TRA is an integral part of the 'increased risk' work permit + maintenance order. The TRA should be stored/added in SAP.

Archiving TRA file and time period

The work permit **issuer** is responsible for ensuring that the work permit, TRA and LMRA form are archived and available for at least three months after completion of the work.

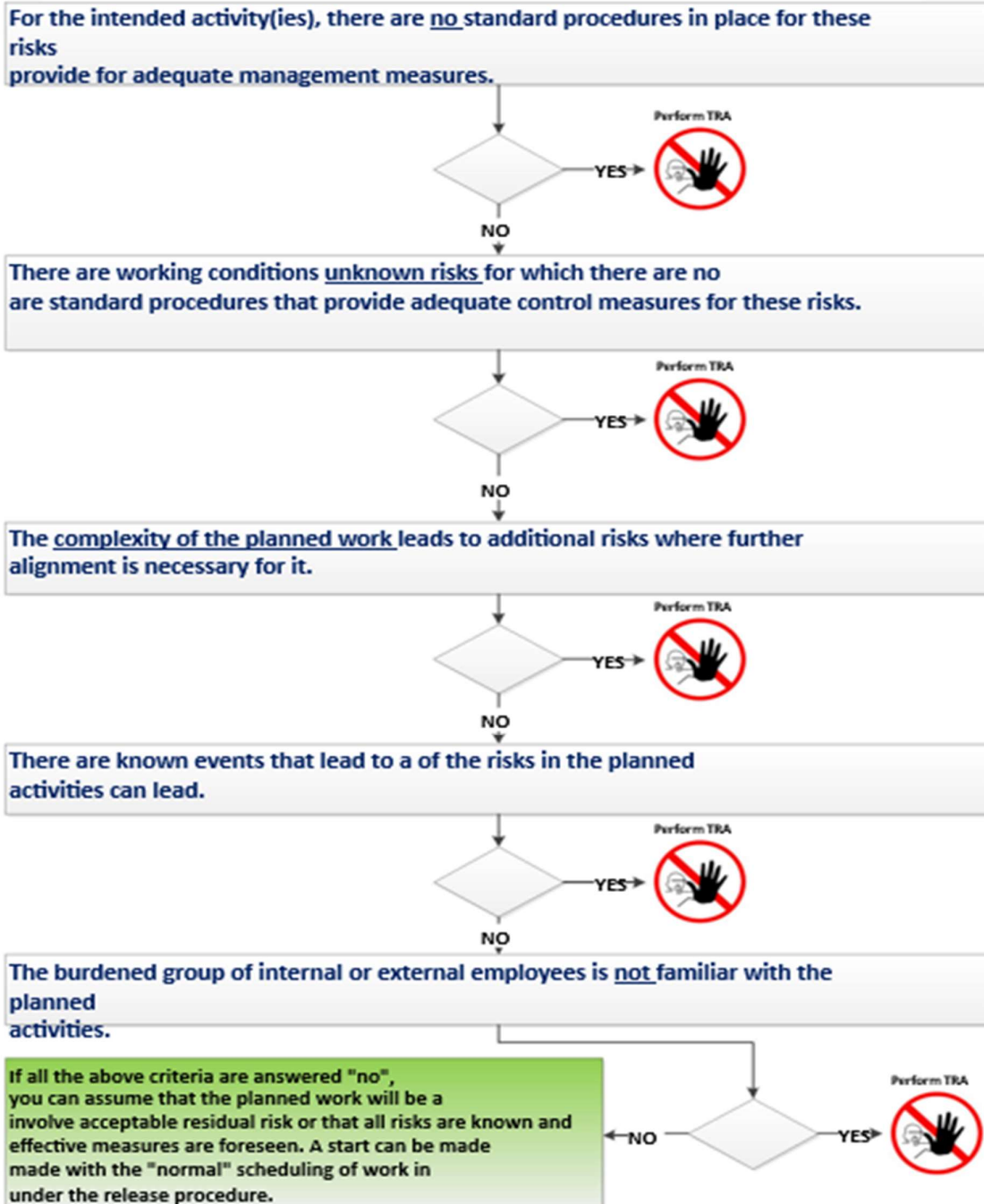
These three months also apply to any other documents that are part of the TRA file.



It is strongly recommended to keep made TRAs so that they can be taken as input for consideration for a new TRA application.

Annex(es)

Decision model Task Risk Analysis



Decision model Task Risk Analysis

For the proposed activity(ies), there are no standard procedures in place for these risks

provide for adequate management measures.

Examples of work that may need extra monitoring

held: lack of pressure cannot be unequivocally established; beating of Moving parts/objects; trapping, falling, tripping as extreme effects occur may occur; falling into something;

Working in explosive zones, possible release of hazardous and biological substances;

working with (very) high-pressure cleaning equipment; potential environmental impact; installation with fault(s); radiation exposure; working under electrical voltage; working on open water, boiler cleaning by explosive means; special lift processes

There are working conditions involving unknown risks for which there are no are standard procedures that provide adequate control measures for these risks.

Examples of work where working conditions pose risks

may occur that need to be closely monitored: high physical load; climatic conditions; poor visibility; limited freedom of movement; unsuitable weather conditions; extremely high volume; working with breathing apparatus; Risks in the work situation

The complexity of the planned work leads to additional risks where further alignment is necessary for it.

Examples of work where complexity can lead to particular risks

lead: number of people working in the same area at the same time; various contract partners are working on the same plant(s) in the same area; during the work circumstances may change; limited (working) period; simultaneous work taking place with mutual risks; the rescue of persons is complicates

There are known events or circumstances that lead to a new assessment of the could lead to risks in the planned activities.

Examples of circumstances or events that lead to a new assessment

may result are: site conditions have (temporarily) changed or deviate of the situation described in the standard procedures. There are events known, for example through incidents of leak repairs under pressure, leading to new insights and procedures have led and necessitate a new assessment