**Major risks and incidents related to site/subsidiary activity and products**

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| Objectives:  Following a reminder of Total's major risks, at the end of the module participants:   * Should know the major risks and scenarios associated with their site and/or subsidiary, * Should understand the consequences of these risks on their daily activity, * Will have identified the barriers to reducing risk within their scope of work to protect against risk. |

**This sequence is to be built locally. To this end, 2 options are available to you:**

* **either a local (or Branch) training exists and meets these objectives. In this case, it can be used instead of this module.**
* **if this is not the case, you must build your own training session by following the suggestions below.**

**This document contains content suggestions and educational activities to achieve the goals of this module.**

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| Key elements | Support/activities |
| Summary of Total's major risks | Taken from TCG 2.2 |
| The site/subsidiary scenarios are: XXXXXX | Site**/**subsidiary HSE roadmap.  List of site scenarios |
| From the subsidiary/site's major risk scenarios, what measures are in place to guard against or respond to these scenarios (including the barriers in place)? | Local content (major risks register or equivalent). |
| Accidents to illustrate the scenarios | Use existing videos as well as HIPOs or near-accidents. |
| The safety barriers are the elements that enable an accident to be avoided, or to reduce its consequences. | Film: “Integrity Barriers” |

**Estimated duration:**

Approximately 1 hour 50 minutes in the classroom.

**Teaching method recommendations:**

Presentation of the scenarios and barriers in the classroom and organization of workshops on the scenarios. Preparation for the site visit is included in order to check the set-up of the site barriers. This visit will be carried out later (to be determined).

1. Pre-requisite modules for the sequence

* Full TCG
* TCAS 1.0

The participants will have already learned about the Total Group's major risks during the first week of integration (TCG). The aim of this module is to establish the link with these risks but, above all, to present the site's major risks, the scenarios and the barriers put in place.

Those with a more technical profile in course 3 will follow a module in which the concept of "Barriers" will be explored more thoroughly (TCT 5.2).

This module is thus limited to preliminary awareness-raising on the concept of barrier and scenario.

1. Preparing the sequence

Before beginning the module, we recommend you:

* check that the slides of module TCG 2.2 have not changed.
* ensure that the film is available (“Integrity Barriers”)

1. About the site visit

During this module, the participant will be asked to prepare the site visit (to be determined). They will be accompanied by a line manager during this visit.

The aim of this site visit is to check that the barriers which they identified during the workshop on major scenarios are correctly in place. The barriers to be viewed on-site will be easily visible barriers (deluge system, gas detection, fire detection, self-closing valves, with identification of the SCEs (Safety Critical Elements), etc.)

1. Suggestion for sequence roll-out

Instructions legend for the trainer:

* Comments for the trainer
* Key content elements
* **Type of activity**
* *“Question to ask”/statement of instructions*

| **Phase/Timing** | **Trainer** | **Module content suggestion** |
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| 1. Introduction and objectives  5 minutes | **Welcome participants and present the module's objectives.**  To achieve them, we will start by reminding ourselves of Total's major risks, then we will look at those that apply to our activities. | Example of an objectives overview slide:  Following a reminder of Total's major risks:   * know the major risks of the site and/or subsidiary. * understand the consequences of these risks on your daily activities * identify the barriers which guard against risks. |
| 2. Reminder of both Total's and the site's major risks  10 minutes -> 15 minutes | The aim of this sequence is to remind participants of Total's major risks and those of the site. To do this:  **- Question/answer then show the slides to sum up**  *“Who can remind us of the main risks related to the Total Group's activities?”*  **- Question/answer then show the slides to sum up**  *“What are the potential consequences of a serious incident on you, the Group and the stakeholders?”*  *“What provisions are you already aware of to manage these risks?”*  **- The site/subsidiary's major risks**  *“Who can remind us of the risks at our site?”*  Establish the link with the HSE roadmap. | Show and explain the slides taken from TCG 2.2 on the risks  Show and explain the X slides taken from TCG 2.2 on the consequences of major risks and the provisions already reviewed  Slides showing the site/subsidiary's major risks. |
| 3. How are the major risks identified?  20 minutes -> 35 minutes | The aim of this sequence is to understand the concepts and the link between major risks and barriers. To do this:  **- Present the Total reference documents: the charter and DIR GR SEC 008.**  *“The second reference document is DIR GR SEC 08. It describes Total's requirements in terms of technological risk analysis (major risks)"*  **- Presentation: starting with the identified risks, an analysis is carried out in 4 steps. It identifies the barriers to contain them.**  *“The technological risk analysis is carried out in 4 steps. It is applicable on all of the Group's sites"*  Step 3:The purpose of the scenarios is to position the risks in the matrix, and to identify the barriers so that there are none in the red zone  In conclusion, emphasize the importance of these 4 steps. | Example of content: article 6 of the Group's HSEQ charter: “For all of its activities, Total introduces…”  Example of content: DIR GR SEC 008 with its title block, objectives of the document and the following paragraphs  “Many industrial sites operated by the Group present technological risks related to the toxic, explosive or flammable nature of the products used and to the processes implemented.  Continuous safety improvement requires knowledge and management of these risks, taking into account the technological developments and in keeping with the Group's principles of risk management.  This management must aim to reduce the risks, both within and outside of our industrial sites, to the lowest level that can be reasonably attained."  Example of content:  “It is a methodology that is applicable to all Total sites, and which aims to:   1. Identify the risk (and its scenario)    * Formalized methods (HAZOP etc.)    * Analysis of accidentology, feedback 2. Evaluate the risk    * Potential severity, probability (DIR GR SEC 002 to classify) 3. Judge if it is “acceptable”    * Group criteria (DIR GR SEC 008 matrix), present the matrix and its operation.    * Local regulation criteria 4. Reduce the risk if necessary    * Removal of hazard    * Introduction of barriers:  * for prevention: before the accident * for protection: after the accident (Control, Mitigation and Evacuation)" |
| 4. The scenarios  15 minutes -> 50 minutes | The aim of this sequence is to learn the site/subsidiary's scenarios, to look at one in detail and to study the barriers in a scenario. To do this:  **- Present a scenario**  Distribute one of the “major risk” scenarios for your subsidiary/site (preferably a risk where the physical presence of a barrier can be checked: gas detection, fire detection, etc.)  Present its operation and its contents briefly using the slide.  **- Present the site scenarios**  Then present the list of site scenarios and summarize the content.  Establish the link between these scenarios and the possible actions of the HSE roadmap. | The major risk (technological) scenario + a slide to present its contents.  Slides with:   * an overview of the key points of existing scenarios as well as the measures in place classified by barrier type (means of prevention and protection: human, organizational and technical). * To illustrate the scenarios presented, study the examples of accidents or near-accidents having taken place in the Group that correspond to scenario hypotheses (feedback, video, HIPO, etc.) |
| 5. The barriers  15 minutes - > 1 hour 05 minutes | The aim of this sequence is to understand the concept of a barrier. To do this:  **- Present the safety barriers and their place within the accident scenarios**  *“Let us start by clarifying this concept of barrier”.*  At the end, to sum up, ask a participant to describe what a barrier is in their own words.  Continue with the contents of a slide such as:  In **conclusion**, ensure that the barrier/scenario link is well understood. To do this, for example, ask a participant to summarize it. | Show the film “Integrity Barriers”.  “In order to anticipate the consequences of the failure of one of these barriers, accident scenarios are created for each site. The purpose of these scenarios is to identify, for each trigger event/potential incident:   * the corresponding barriers which enable the risk to be controlled under normal operation. * the escalation potential in the event of a barrier failure * the barriers in place to contain the consequences of this escalation"   "Compensatory measures (plan B) must be determined for each case of failure in one of these barriers. In the event of failure, it is essential:   * To alert management (of the failure) * To apply the pre-established compensatory measures (emergency response cards or record of the major risks)" |
| 6. Exercise Barriers and scenario.  30 minutes - > 1 hour 35 minutes | **- Identify the barriers in a scenario: Workshop to identify the barriers in a scenario.**  Organize a workshop into pairs, during which each pair, in 20 minutes, describes the barriers linked to the distributed scenario and associated measures.(Use an example that identifies “simple” fire barriers)  After 20 minutes, organize a quick debriefing during which each group discusses some of the barriers that they have identified. |  |
| 7. Visit preparation  15 minutes - > 1 hour 50 minutes | This sequence only concerns those in courses 2 and 3. The aim of this sequence is to prepare the visit, which will consist of checking the correct set up, on the ground, of the barriers identified during the workshop. To do this:  **- Present the roll-out of the visit and the work to be carried out during this module.**  Present the visit organized during TCAS 3.3 with a line manager. This visit will allow certain points, to be prepared during other modules, to be checked.  *“To prepare you on the concept of scenario and barrier, I suggest that you take the time to write down the answer to the following question:*  *During your future site visit, what will you look at to check the measures in place to ensure that the major risks identified are under control?"*  Specify that the debriefing on the elements found for these barriers will be carried out with N+1 during TCAS 3.3.  Specify that those on course 3 will go further in the "TCT 5.2 - Barriers" module. |  |