

**SQAS 2022 Tank Cleaning**

**Questionnaire & Guidelines**

**Revised version 2**

 

Version 25/11/22

**SQAS 2022 Tank Cleaning – Questionnaire & Guidelines**

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| **SQAS 2022 Tank Cleaning Revised version 2 - Questionnaire & Guidelines - English version**  **New text with regard to the 2019 version is in blue. New revised text is in green.**  **New text of version 2 is in red.**  **(\*) The letter “M” in this column identifies a question corresponding to the OCS Mandatory requirements** | | | | **OCS**  **(\*)** |
| **Item N°** | **Question** |  | **Guideline** |  |
| **6.** | **Equipment and installations** |  | **Equipment and installations** |  |
| **6.1.** | **Equipment and installation Specification** |  | **Equipment and installation Specification** |  |
| **6.1.1.** | **Design and Specification** |  | **Design and Specification** |  |
| 6.1.1.1. | Is there a written specification for the purchase of critical equipment and installations in conformity with all relevant legislation? |  | Look for a written purchase procedure regarding a standardized technical specification per type of equipment, including relevant regulatory compliance reference and/or check contract for recently purchased cleaning equipment, including associated equipment e.g. hoses, pressure pumps, steam boilers and other critical equipment. Definition of critical equipment is necessary. Machinery directive Dir 2006/42/EC |  |
| 6.1.1.2. | Is the critical equipment and installations equipment checked against specification before use? |  | Ask how, and by whom. Look for records. |  |
| 6.1.1.3. | Does the cleaning station follow up technical developments in the sector with the purpose to increase the reliability of installations and reduce the consumption of cleaning agents, water, use of solvents and energy? |  | For that purpose, the suppliers, the national cleaning associations and/or EFTCO could be potential sources of information. The assessor should look for evidence that the company has gathered on these subjects |  |
| 6.1.1.4. | Is there a process for proposing, approving, implementing and evaluating the effectiveness of design changes? |  | Such a process should be documented but can be covered by another process in the quality system (e.g. proposals for improvements, management of change, follow up of KPIs). Verify the process and the implementation. |  |
| **6.2.** | **Maintenance & inspection** |  | **Maintenance & inspection** |  |
|  |  |  | A quality cleaning service should only use reliable equipment. This section seeks to ensure that effective routine inspection and maintenance programmes are in place which requires that equipment (owned, leased or subcontracted) is adequately serviced, lubricated and adjusted and otherwise maintained to prevent abnormal wear and tear, and to detect defects before they cause accidents or breakdowns. In quality cleaning companies abnormal wear, accidental damage and abuse detected through preventive inspections will be investigated. |  |
|  |  |  | Repair and replacement costs, associated with this, will be recorded and analysed as loss data and will require similar remedial and follow up actions as for other accidental losses. |  |
|  |  |  | Results from preventive inspections should be adopted in the regular maintenance program. |  |
|  |  |  | This also applies to those instances whereby preventive inspection and/or maintenance are being outsourced. It is expected that in this case the cleaning company has a follow up system in place. |  |
| **6.2.1.** | **Preventive maintenance** |  | **Preventive maintenance** |  |
|  |  |  | Preventive maintenance is a maintenance that is regularly performed to lessen the likelihood of failure. It is planned and executed before the failure occurs. It is usually based on recommendations from the equipment manufacturers. Preventive maintenance should be carried out on all critical equipment. This must be seen apart from the regulatory inspection of the equipment but can include some inspections carried out by technicians. There should be a program developed, installed and documented. Findings from the regular maintenance should be included in the inspection program and vice versa. |  |
| 6.2.1.1. | Is there an up-to-date written procedure/programme for preventive maintenance? |  | Check the documentation. |  |
| 6.2.1.2. | Does this preventive maintenance programme include? |  | Score a "Yes" for each item that is included in the programme, is serviced in accordance with that programme and is confirmed from records. If the equipment is not used the question can be answered with N/A but always with clear comments on the subject. |  |
| 6.2.1.2.a. | steam boilers? |  |  |  |
| 6.2.1.2.b. | heating equipment? |  |  |  |
| 6.2.1.2.c. | pressure vessels? |  | Pressure Equipment Directive (PED) 2014/68. |  |
| 6.2.1.2.d. | compressors? |  |  |  |
| 6.2.1.2.e. | process tanks? |  | These are intermediate tanks used in the cleaning process and the water treatment plant. |  |
| 6.2.1.2.f. | waste basins or tanks? |  |  |  |
| 6.2.1.2.g. | IBCs used as process vessels? |  |  |  |
| 6.2.1.2.h. | pumps? |  |  |  |
| 6.2.1.2.i. | pipe work? |  |  |  |
| 6.2.1.2.j. | hoses? |  |  |  |
| 6.2.1.2.k. | cleaning heads? |  |  |  |
| 6.2.1.2.l. | cleaning gantries and ancillary equipment? |  | The following is considered ancillary equipment: stairs and steps, platform (drain covers, platform railing, toe boards), folding chairs (steps, hinges, railing), floor drain covers, control panels, stairs, walkways, portable lamps or flashlights, portable sprayers (hand gun), ladders for tank entry, etc. and any other equipment not included in the other sub questions of 6.2.1.2. |  |
| 6.2.1.2.m. | effluent treatment system? |  | The assessor shall ask what kind of effluent treatment is installed. Different arrangements are possible. All equipment not mentioned in the other maintenance questions and essential to the good operation of the installation such as:  1) General: flow meters, pH probe (calibration and maintenance), dosage pumps, storage & process tanks  2) Physic-chemical installation: oil separator, Dissolved Air Flotation (DAF unit), skimmers, Polyelectrolyte unit  3) Biological treatment installation: blowers, recirculation pump, oxygen probe, settling tanks  4) Dewatering installation: sludge tank, sludge pump, centrifuge, chamber filter press  5) Tertiary purification: sand filter, activated carbon filter, shall be part of a preventive maintenance programme. |  |
| 6.2.1.2.n. | waste vapour treatment system? |  | Systems can include active carbon units, scrubber units, incinerator, etc. |  |
| 6.2.1.2.o. | earthing points? |  | This question refers to the earthing system to be used for grounding the tank before and during cleaning. The assessor shall check that the clamps are not corroded. |  |
| 6.2.1.2.p. | electrical installation, including all earthing points? |  | Check inspection reports. The electrical resistance of all earthing points shall be lower than 10 ohms or what is required by law. Periodicity of revision shall be annual.  The electrician has to be qualified. The assessor will check that this is covered by the contract with a company specialized in electrical installation or by staff holding a certificate issued by companies authorised in accordance with regulations. |  |
| 6.2.1.2.q. | emergency equipment? |  | Safety and emergency equipment includes firefighting equipment, emergency showers, eye showers, equipment for rescuing people from vessels (compressed air breathing apparatus, harness system, etc.). |  |
| 6.2.1.2.r. | Earthing of lightning strike installation? |  | Check inspection reports. |  |
| 6.2.1.2.s. | relief valves? |  | Only for relief valves not part of the steam boiler or the compressors. Examples of these valves can be found in storage tanks and IBCs used for cleaning agents and solvents. |  |
| 6.2.1.2.t. | couplings? |  |  |  |
| 6.2.1.2.u. | gaskets/seals? |  |  |  |
| 6.2.1.2.v. | gauges? |  | For gauges for indicative purposes (non-critical). Changing of manometers and temperature measurement devices can be considered preventive maintenance measures. |  |
| 6.2.1.2.w. | breathing apparatus? |  |  |  |
| 6.2.1.2.x. | reliability and adequacy of the fire water supply? |  |  |  |
| 6.2.1.2.y. | fall protection equipment? |  |  |  |
| 6.2.1.2.z. | Sewer/drain systems |  | Regular inspection on the condition of the sewer system is good practice, for example, this will avoid hidden soil contamination. |  |
| 6.2.1.2.z.1. | Liquid tight floors |  | Check that there is no surface deterioration or cracks. |  |
| 6.2.1.2.z.2. | Handling equipment (truck used for handling of tank, FLT, hoisting equipment)? |  |  |  |
| 6.2.1.3. | Is there a system in place to regularly check the condition of the premises, waste and product containers such as cleaning agents and cleaning chemicals, in case of prolonged storage? |  | Check that a documented policy is present requiring a regular check of package conditions and stipulating that damaged drums should be replaced immediately. Prolonged storage does not include the storage of drums awaiting transport to the waste destruction facility. However also these pails and drums should be in a perfect condition because they need to be transported and are subject to packaging regulation. |  |
| 6.2.1.4. | Are defects or hazardous conditions relating to plant and equipment reported in writing? |  | Verify from records. |  |
| 6.2.1.5. | Are hazardous conditions (and defects) acted upon immediately? |  | Examine records. Compare times/dates of reporting and remedial action. |  |
| 6.2.1.6. | Are all preventive maintenance reports with follow-up actions documented? |  | Look for evidence from memos, reports, etc. to the responsible manager and check that corrective actions are taken immediately. |  |
| 6.2.1.7. | Is there a system to monitor overdue preventive maintenance? |  | Check for evidence. Establish the basis of reporting to a responsible person within the company. The decision to authorize continued use must be at the appropriate management level. Authorization needs to be in writing to score a "Yes". |  |
| **6.2.2.** | **Regulatory inspections** |  | **Regulatory inspections** |  |
| 6.2.2.1. | Is there documentary evidence that regulatory inspections have taken place for: |  | The assessor should take a random sample of the records from each item asked below and examine these in detail. Frequencies of inspection differ per country. Company has to be aware of this frequency. Machinery Directive 2006/42/EC, Lifts Directive 2014/33, Pressure Equipment Directive (PED) 2014/68, Low Voltage Directive 2014/35. |  |
| 6.2.2.1.a. | - steam boilers? |  | pH/oxygen corrosion issue is to be considered for boilers. Test of pressure relieve valves should be certified, steam book should be present. The assessor will check the inspection recorded in the "steam boiler log book" and any follow up action required by the inspector. |  |
| 6.2.2.1.b. | - pressure vessels? |  | The assessor will check the "inspection log book" and any follow up action required by the inspector. |  |
| 6.2.2.1.c. | - electrical installation? |  |  |  |
| 6.2.2.1.d. | - fall protection equipment? |  | Annual inspection of fall arrestors, harnesses and lanyards are required. |  |
| 6.2.2.1.e. | - other equipment subject to regulatory requirements? |  | Examples: elevators, firefighting equipment, forklift trucks, hoisting equipment, furnaces, emergency equipment and installations, … |  |
| **6.2.3.** | **Identification and Calibration of Measuring Equipment** |  | **Identification and Calibration of Measuring Equipment** |  |
| 6.2.3.1. | Is measuring equipment clearly identified and calibrated, including: |  | Calibration, if performed in-house, should be undertaken by responsible persons who have been properly trained and are working to verified procedures. Alternatively, calibration may be undertaken by a qualified contractor certificated to national standards. In this case, a formal agreement specifying the requirement for, and the frequency of, calibration should exist between the cleaning station and the contractor. Score a "yes" for each item covered. |  |
| 6.2.3.1.a. | - oxygen meters? |  | This device should always be present and calibrated. Auto calibration devices are possible. |  |
| 6.2.3.1.b. | - flammable gas detectors? |  | Can be integrated together with the oxygen meter in one device. |  |
| 6.2.3.1.c. | - instruments for measuring concentrations of toxic gases and vapours? |  | In case measuring tubes (colorimetric method) are necessary used, check if the expiry date of the tubes is still valid. If a digital meter is in use (e.g. PID) the last calibration should be checked. |  |
| 6.2.3.1.d. | - temperature gauges for critical operations? |  | For operations where temperature can be critical such as container heating, a calibrated temperature gauge should be present. Indicative devices are not necessarily calibrated. |  |
| 6.2.3.1.e. | - effluent monitoring apparatus (flow meter, analyser, sampler, pH, temp)? |  | Where such effluent monitoring apparatus are installed/necessary, these have to be calibrated. The calibration intervals have to be adjusted to the analysing methods. The pH electrodes need to be calibrated more often than the other components mentioned in this question. |  |
| 6.2.3.1.f. | pressure gauge used for pressure test? |  | When this type of operation is carried in a tank repair workshop. |  |
| 6.2.3.2. | Are calibration procedures documented and records maintained? |  | Ask to see a copy of the procedures. |  |
| **6.3.** | **Electrical Installations** |  | **Electrical Installations** |  |
| 6.3.1. | Is the electrical system suitably rated? |  | The electrical installation should correspond with the local legislation requirements depending on the type of products that are handled / cleaned and the accessibility of the electrical installations for operators. |  |
| 6.3.2. | Has the cleaning installation been ATEX assessed and are the resultant zones clearly identified on a site plan, implemented and communicated to all relevant personnel? |  | ATEX is the process used to classify the flammability hazard within an area or ‘Zone’. This requirement is mandatory when handling flammable liquids or solid products of which its dust can form explosive atmospheres, which is usually the case in a cleaning station. The ATEX area may be calculated by different methods. Verify the presence of ATEX spinners for products that can form explosive atmospheres . In compliance with the explosion document, some zones cannot be identified because the place of the zone can vary (e.g. the zones around the outlets of a tank container during a cross pumping or unloading action). Check the explosion document on the presence of such zones. ATEX Directives 2014/34 and 99/92/EC. |  |
| **7.** | **BBS Results, Analysis and Monitoring** |  | **BBS Results, Analysis and Monitoring** |  |
| 7.1. | Are individual results from the BBS training communicated to the cleaning operators, preventive actions agreed, recorded and implemented? |  | Check the training and individual records of the cleaning staff. |  |
| 7.2. | Are the following individual or group key performance indicators (including KPIs to be informed) identified and measured: |  | Check the training programme and the individual staff records, and tick the items (a - c) which are monitored. The ASSESSED company should ensure that the annual data collection of the KPI’s and reporting is incorporated into their management system. (The ECTA R C programme and KPI reporting could be a reference point for companies to use). |  |
| 7.2.1. | Incident/accidents statistics? |  |  |  |
| 7.2.1.a. | Number of days lost due to personal injuries? |  | Own employees and sub contracted tank cleaning employees injuries which happened on the site should be included. Injuries and time during travel to and from work should be excluded. |  |
| 7.2.1.b. | Lost Time Injury Rate? |  | Lost Time Injury refers to the occurrence of workplace incidents that resulted in an employee's inability to work the next full working shift. Lost Time Injury rate refers to the number of such injuries that occur per year and per million hours worked. For calculation purposes it is assumed that every employee works 2000 hours per year. Example: A company had 2 lost time injury incidents (LTI) in one year and has 3 employees (6000 hours worked in the year).  The Lost Time injury Rate will be: (2 lost time injury incidents / 6000 hours worked) x 1 million hours worked = 333 LTI / million hours worked. |  |
| 7.2.1.c. | Severity Rate? |  | Severity Rate = [(Number of days Lost by Injuries) / (Number of hours worked)] x (1.000). Note that this index measures number of days lost, whereas the index of question 7.2.1.b. measures number of incidents. |  |
| 7.2.2. | Training? |  |  |  |
| 7.2.2.a. | Average days of training per year? |  | This KPI measures the number of training days of own employees, (tank cleaning and office staff) any sub contracted employees per year divided by the number of employees. |  |
| 7.2.3. | Operational KPI's: |  |  |  |
| 7.2.3.a. | Average water consumption cleaning? |  | This parameter is important because it has a big influence, not only on the consumption of water, but also on the energy consumption and the carbon footprint of a cleaning. |  |
| 7.2.3.b. | Average pass through time of a cleaning? |  | This is the time between the arrival at the cleaning site and the departure after cleaning. This time includes the waiting hours of the driver which is an important factor for the carrier. This time can be influenced by the nature of the products to be cleaned, the organisation of the activities and the capacity of the installation. For all these reasons a follow up of this KPI is necessary. |  |
| 7.2.3.c. | Percentage of rejected cleanings after internal inspection? |  | The percentage of cleaning which needs to be redone after internal cleanliness inspection. |  |
| 7.2.3.d. | Percentage of cleanings rejected by customers? |  |  |  |
| 7.2.3.e. | Cost of damage to cleaning equipment? |  | e.g. damage to platforms, spinners, stairs to go on top of tanks, etc. The cost should be annually gathered. |  |
| 7.2.3.f. | Cost of damage to customer equipment? |  | e.g. damage to trailers by spinners, operators walking on the cladding of tanks, improper lowering of stairs, platforms, collective fall protection systems, inappropriate cleaning procedure, etc. The cost should be annually gathered. Insurance claims information can be taken into account. |  |
| 7.3. | Are the overall results and trends on above indicators analysed and are causes identified? |  | Look for analyses of the recorded observations. |  |
| 7.4. | Are these results, the structural trends and issues reported and discussed with the cleaning operators at regular intervals? |  | Look for documented evidence.The assessor has to interview cleaning operators to verify if the discussions and training sessions took place. The number of the operators interviewed have to be recorded by the assessor in comments. |  |
| 7.5. | Are the results and learning from BBS reflected in the refresher programmes ? |  | Check that the overall results and trends as identified in 7.3. are documented as learning experience and included in the refresher training. |  |
| **8.** | **Security** |  | **Security** |  |
| 8.1. | Is the site properly secured with fences and gates or supervised barriers, well lit and not accessible to the general public? |  | Check fences, gates and 24h lighting during your site visit. The first personal security impression is on arrival the first day, like identification and check on person(s) to visit. When the assessed site is part of a public harbour, a comment should be provided when this requirement cannot be met. In this case it is expected that the site will have a security plan according to the IMO's ISPS Code. |  |
| 8.2. | Is there a system to monitor entry of vehicles on site? |  | Check the internal system that vehicle entries are controlled within the site. |  |
| 8.3. | Does the company implement measures to ensure the security of the stored products? |  | Check security measures (e.g. prevention of unauthorized access) on stored products such as cleaning agents. |  |
| **9.** | **Site Operating Procedures and Customer Interface** |  | **Site Operating Procedures and Customer Interface** |  |
| **9.1.** | **Site Operating Procedures** |  | **Site Operating Procedures** |  |
| **9.1.1.** | **Operating instructions** |  | **Operating instructions** |  |
|  |  |  | Procedures and instructions should be written in detail and describe who has particular responsibilities and the standard of performance expected. During the site inspection it should be checked if the responsible personnel understand all the requirements of the procedures and if they are fully implemented. A positive score should only be given if the procedures are in place, understood and fully implemented. |  |
| 9.1.1.1. | Does the site have all the required operating permits in line with the activities carried out at the site? |  | The site should have all the necessary operating and environmental licenses for all the activities carried out at the site: cleaning, waste handling, water treatment as per scope and information document, but also including e.g. parking of trucks, storage of bulk and packed chemicals, temporary parking of vehicles for heating, etc. The assessor will check the available licenses against the site’s activities.  The assessor has to record the operating and environmental licenses reviewed. |  |
| 9.1.1.2. | Are there up-to-date written procedures/instructions at the facility for following operations: |  | Check if procedures are in place, understood and implemented for all operations (a-k). |  |
| 9.1.1.2.a. | initial product inquiry? |  | Product inquiry is the initial investigation to determine if the product can be cleaned in the cleaning station from a technical, environmental and safety point of view considering also the allowance from the legal permit. It should address subjects such as: exposure of employees, impact on waste water treatment/discharges, impact on air (VOS, Odour) etc. The product inquiry should result in a cleaning program, HSE instructions regarding PPE, waste water treatment and air treatment. |  |
| 9.1.1.2.b. | order acceptance? |  | Order acceptance is the process of evaluating the order in case of known and accepted products. |  |
| 9.1.1.2.c. | exposing personnel to the risk of hazardous substances? |  | Procedure should include provisions such as collective and personal protective measures. The company must have a policy to replace the personal protection elements. |  |
| 9.1.1.2.d. | exposing personnel to the risk of nitrogen? |  | Procedure should include provisions such as adequate identification, use of oxygen meters, ventilation. |  |
| 9.1.1.2.e. | exposing personnel to risk of depressurizing tanks? |  | Proper depressurization takes place via vent valves only with proper PPE. It is never an allowed method to depressurize via the bottom outlet, by opening the manhole or by top outlet that are connected to dip tubes. |  |
| 9.1.1.2.f. | exposing personnel to risk of high pressure equipment used for cleaning? |  |  |  |
| 9.1.1.2.g. | fall protection for operations on top of tankers and on the installation (without use of the truck's own features)? |  | “Work on high places” is separated out as special risk at cleaning stations, as it is often practiced, and should be specifically addressed in the Operating Procedures. Check that adequate measures/tools for fall protection are prescribed, used and documented in the work permits (if needed), corresponding to the specific circumstances and infrastructure present at the site, (e.g. handrails, harnesses , platform) and without use of the truck's own features. This should also focus on working on height done by the visiting drivers on the premises of the cleaning station. DIRECTIVE 2009/104 |  |
| 9.1.1.2.h. | clean-up and disposal of chemical spillages and absorbent materials used for the spillage? |  | Both at the cleaning bay and outside the cleaning bay. |  |
| 9.1.1.2.i. | precautions to avoid contamination? |  | In tank cleaning it is important to make use of clean equipment. Pay specific attention to cleaning hoses and couplings on the cleaning bay floor, use of towels, entering tanks without protective shoe covers, wooden tools, dirty brooms and brushes. This is not only important in food cleaning but also at cleaning bays that are involved only in chemical products or silo bulk products cleaning. |  |
| 9.1.1.2.j. | use, content and completion of the Cleaning Document according to the guidelines? |  | See section 10.2.2. |  |
| 9.1.1.2.k. | definition of cleanliness criteria and determination of the appropriate cleaning process, when applicable (for example for railcars or when cleaning is done in preparation for the next load)? |  | Check if procedures are in compliance with the request of the customer. Check a sample of recent cleanings. |  |
| 9.1.1.2.l. | segregation of cleaning bays for food & feed related cleaning? |  | Dedicated bay is a bay where only food & feed cleaning is done using dedicated cleaning equipment, PPE & procedures. Depending on the food/feed/food contact customers’ requests, even the food bays should be segregated from the feed bays.  In this questionnaire: Food is any substance consumed to provide nutritional support for the human body, food contact materials are intended or have the potential to come in contact with food (like PET and PE beads) and feed is any substance to provide nutritional support for animals. |  |
| 9.1.1.2.m. | segregation of cleaning equipment (e.g.. hoses, cleaning mole, etc.) for food & feed related cleaning? |  | See guideline 9.1.1.1.2.l. |  |
| 9.1.1.3. | Are there comprehensive procedures at the facility including the training of employees, covering work permit requirements, to ensure safety and to avoid exposure to hazardous materials for following operations: |  | Check for each work permit procedure if the requirements are clearly identified. Check if the work permit procedures are implemented by:  - checking the file of work permits of the last 12 months;  - checking in detail a few recent work permits (are all the signatures and dates in place, is the necessary PPE listed,…);  - checking if the requirements of the work permit procedures are understood by the responsible personnel;  - checking the prime/back-up approval authority.  The work permit procedures should apply to both work carried out by own personnel and work carried out by sub-contractors and should apply to work which is not part of the normal/principal activity in that area. |  |
| 9.1.1.3.a. | - entry into confined spaces? |  | Entry into confined spaces refers to entry into spaces where there is a risk of suffocation or poisoning by lack of ventilation (e.g. entry into tanks). Measurement of oxygen and LEL are minimum requirements before and during the work in a confined space. This question is always applicable, even if the company does not allow operators enter into tanks. In this case the procedure should explicitly mention the prohibition and the measures to be taken in case of accidental falls of objects into the tanks. It is required that a work permit is issued for the entry into confined spaces which includes the safety measures. |  |
| 9.1.1.3.b. | - breaking of containment? |  | Breaking containment refers to dismantling pieces of equipment like pumps, valves, which may contain product. |  |
| 9.1.1.3.c. | - hot work? |  | Hot work refers to work involving the use of hot energy sources (e.g. welding and cutting). It is required that a hot work permit is issued which includes the safety measures. |  |
| 9.1.1.3.d. | - cold work? |  | Cold work refers to all other non-routine activities, which do not involve the use of hot energy sources (e.g. the erection of temporary structures for working at height, work on pressurized systems).DIRECTIVE 2009/104 |  |
| 9.1.1.3.e. | - work on electrical equipment? |  | Applicable in electrical equipment working above the following voltages: 50 Volts for AC and 120 Volts for DC, or limits required by local legislation (whichever is more strict). A tag out-lock out procedure should be in place so that the equipment under maintenance cannot be switched on. Only qualified persons are allowed to do this work. These persons shall be named in the work permits. |  |
| **9.1.2.** | **Personnel recruitment and Training** |  | **Personnel recruitment and Training** |  |
| 9.1.2.1. | Are the following subjects covered in the training programme for operational staff: |  | Check the training programme and records of the attendance. |  |
| 9.1.2.1.a. | - use of oxygen and LEL (Lower Explosion Limit) measurement equipment? |  | Temporary operators shall be included in the programme unless the instructions prohibit these operators to enter into tanks. |  |
| 9.1.2.1.b. | - use of pressurized cleaning equipment? |  | The training programme should include the use of all pressurized cleaning equipment regardless the maximum pressure produced. Temporary operators shall be included in the programme. |  |
| 9.1.2.2. | Is there a documented emergency procedure for "Man in Tank" and is it tested regularly? |  | Check if procedures are in place, trained, understood and implemented. In this procedure should be included that no entrance in tanks is permitted without proper precautions such as independent air supply. Check for documents where/when training was done every year. |  |
| **9.1.3.** | **Soil protection** |  | **Soil protection** |  |
| 9.1.3.1. | Is a soil contamination monitoring system in place? |  | Look for documentary evidence. In most countries periodical soil monitoring is necessary: check the last report. |  |
| **9.1.4.** | **Water Discharges** |  | **Water Discharges** |  |
| 9.1.4.1. | Does the company have a procedure to operate the waste water treatment? |  | Check if a procedure exists on how the waste water treatment is operated and what checks are done to optimize the operation: Jar test ( this is a simulation of the physic-chemical treatment), respiration test, visual inspections, check on the condition of electrodes (e.g. pH probe, Oxygen meter in the aeration, etc...). Records should be kept on how this follow up was done and what measures were taken when the checks indicated that the risk discharge values were reached. |  |
| 9.1.4.2. | Are water discharges monitored according to the permit requirements? |  | Check the monitoring system. | M |
| 9.1.4.3. | Is there a continuous effluent monitoring or does the cleaning station collect and retain samples of the cleaning water? |  | Check the procedure and the storing facility. |  |
| 9.1.4.4. | Are the data about water discharges and pollution measurements stored for a least one year (or the start-up in case of a new installation)? |  | Verify the documentation against applicable legislation in the country. In case that there are no legal obligations, the company must have defined a list with the parameters they will check to follow up the proper operation of their installation. Also check that effluent measurements done in the own laboratory (if applicable) are periodically double-checked at external laboratories for verification. |  |
| 9.1.4.5. | Do these records show that the regulatory obliged discharge parameters are respected? |  | Most permits put limits on the maximum value of certain parameters allowed to discharge (e.g. COD, BOD, pH, N, P, AOX, heavy metals, suspended solids, etc.). Check if such parameters exist in the permit and if they are followed up and respected during the operation of the locally obliged waste water treatment. |  |
| 9.1.4.6. | In case the (pre-wash) waste water is treated by an external party: |  | Pre-wash water is sent to external treatment to avoid the local water treatment be overcharged. |  |
| 9.1.4.6.a. | Is there an official authorisation of this external plant? |  | This plant should be officially permitted for the treatment of external waste water. Check if the acceptance conditions of this plant are not restricted. |  |
| 9.1.4.6.b. | Are all legally requirements met for these transports? |  | These transports are "waste" transports and should meet the local regulations for waste. |  |
| 9.1.4.7. | Is there a procedure in place to avoid the mixing of blending of incompatible chemical waste flows in the effluent system? |  | Uncontrolled mixing of chemicals in the effluent can cause hazardous reactions like explosions or the generation of toxic fumes. |  |
|  |  |  |  |  |
| **9.1.5.** | **Air emissions** |  | **Air emissions** |  |
| 9.1.5.1. | Is a venting or vapour treatment system installed for vapours in the work area? |  | A vapour treatment system should be available to remove vapours. (Suction, ventilation, carbon filters, absorption system, scrubber, incinerator). The system should be adapted to the products allowed to be cleaned. |  |
| 9.1.5.2. | Is the venting or vapour treatment system working, regularly checked and well maintained? |  | If vapour treatment is a part of the permit, then the system must be operational at all times. This requires that it is regularly checked and properly maintained. |  |
| 9.1.5.3. | Are pre-wash waters discharged via a closed system to the water treatment? |  | Required in case of VOC and odour causing products, closed system means: hoses connected from the outlet of the tank connected to a pipe discharge. This could be a legal requirement in certain countries. |  |
| **9.1.6.** | **Measurement and Management of greenhouse gas (GHG) emissions** |  | **Measurement and Management of greenhouse gas (GHG) emissions** |  |
| **9.1.6.1.** | **Scope 1: Emission measurement of boilers, steam generators and incinerators/flares (when present)** |  | Scope 1 emissions include the direct emissions from assets that are owned or controlled by the assessed company and is paid by the company. This includes the combustion of solid or liquid fuels purchased to produce energy, heat or steam for use in stationary or mobile equipment (e.g. boiler and forklifts) and/or buildings associated. |  |
| 9.1.6.1.1. | Does the company know the fuel consumed on an annual basis? |  | Typically, gas oil or gas are used in the boiler or any equipment consuming fuel (forklifts, reach stacker, etc.). |  |
| 9.1.6.1.2. | Did the company calculate the emissions **TTW** from the fuel consumed during the last year using the formula: kg CO2e = Σ (fuel (liters) × TTW fuel emission factor (kg CO2e/ liters fuel))? |  | The company will use fuel emission factors from **GLEC framework guideline: "Global Logistics Emissions Council Framework for Logistics Emissions Accounting and Reporting" last version, Module 1**. The document can be downloaded from this link:[*https://www.flexmail.eu/f-844a1f54174eb51e*](https://www.flexmail.eu/f-844a1f54174eb51e) In case the company consumes gas, the emission factor will have to be obtained from the gas supplier. For every type of fuel three factors can be used: **WTT, TTW and WTW.**  - **Well-to-Tank (WTT):** WTT emissions consist of all processes between the source of the energy (the well) through the energy extraction, processing, storage and delivery phases up until the point of use (the tank)  - **Tank-to-Wheel (TTW):** These are the emissions from fuels combusted to power activities (the wheel).  - **Well-to-Wheel (WTW):** These are emissions from the full fuel life cycle and should be equivalent to the sum of WTT and TTW emissions.  It is advised to measure the fuel or gas used for heating of offices of the company separately from the tank cleaning activities. This will be taken as a recommendation and will not be used for scoring.  **For this question TTW should be used.** |  |
| **9.1.6.2.** | **Scope 2: Emissions from electricity** |  | **Scope 2 emissions** are indirect emissions from the production and distribution of electricity, heat and steam purchased by the assessed company for use in its own logistics sites, electric vehicles or other owned asset requiring electricity. |  |
| 9.1.6.2.1. | Did the company measure the electricity purchased for use in the cleaning station, electric vehicles or other owned asset requiring electricity? |  | Typically, electricity is used for pumps and lighting.  It is advised to measure the electricity used for heating or cooling of offices of the company separately from the tank cleaning activities. This will be taken as a recommendation and will not be used for scoring.  In case solar panels or solar boilers or any other electricity source (e.g. wind generators) are connected to the electric grid, the electricity bill or electricity measurement equipment can also be used to determine the electricity consumed.  It is recommended to record the amount of electricity generated by these devices. |  |
| 9.1.6.2.2. | Did the company calculate the **Scope 2 emissions from the purchased electricity WTT** mentioned in 9.1.6.2.1. during last year with the formula: kg CO2e = Σ (electricity (kWh)× electricity emission factor (kg CO2e/ kWh electricity))? |  | **TTW** is considered to be zero for electricity, all emissions are in the **WTT** stages at the point of use.  The emission factors to be used depend on the electricity origin. Companies must gather electricity emission factors for the countries or regions where the logistics sites are located.  Electricity factors by country can also be obtained from the International Energy Agency (IEA): <https://www.iea.org/data-and-statistics/data-product/emissions-factors-2020#emissions-factors> (fee to be paid)  In absence of other data, an EU average electricity factor of 420 g CO2e/kWh can be assumed (source: GLEC framework guideline). Use of individual country mixes may give significantly different values, especially in countries with a highly decarbonized electricity supply. |  |
| **9.1.6.3.** | **Disaggregation of energy consumptions** |  |  |  |
| 9.1.6.3.1. | Does the company disaggregate the emissions of Scope 1 and 2considering the following cleaning methods? |  | If the tank cleaning station is not offering these activities the corresponding questions are not applicable. |  |
| 9.1.6.3.1.a. | Emissions from cleaning |  | This can be estimated based on the proportion of cleanings of products made annually. |  |
| 9.1.6.3.1.b. | Energy spent to heat loaded tanks |  | For the estimation of the energy spent in heating containers see example of calculations in the [EFTCO](https://www.eftco.org/safe-cleaning/emission-guideline) website <https://www.eftco.org/safe-cleaning/emission-guideline> |  |
| **9.1.6.4.** | **Scope 3** |  | **Scope 3 emissions** are indirect emissions from the assessed company’s supply chain.  Scope 3 covers the production and distribution of fuels burned in Scope 1 (WTT), transport emissions embedded within purchased goods and services, product use and end-of-life. |  |
| 9.1.6.4.1. | Did the company calculate the absolute emissions WTT from the fuel consumed during the last year using the formula  kg CO2e = Σ (fuel (liters) × WTT fuel emission factor (kg CO2e/ liters fuel))? |  | The factor should be obtained from the "Global Logistics Emissions Council Framework for Logistics Emissions Accounting and Reporting" version 2.0. Module 1. |  |
| **9.1.6.5.** | **Calculation of Total emissions (Scope 1, 2 and 3)** |  | Measurement of total emissions is necessary because it has direct impact in global warming. |  |
| 9.1.6.5.1. | Did the company calculate the **Total emissions** during last year with the formula: X (kg CO2e) = Addition of calculation of questions 9.1.6.1.2. + 9.1.6.2.2. + 9.1.6.4.1.? |  |  |  |
| **9.1.6.6.** | **Calculation of emission intensity** |  |  |  |
| 9.1.6.6.1. | Did the company calculate the emission intensity for **cleaning** during the last year using the formula  **Emission intensity for cleaning** (g CO2e/cleaning) = [(Total emissions from question  9.1.6.5.1. - Emissions from question 9.1.6.3.1.b)] X 1000 / Total number of cleanings by year? |  | The company can also calculate emission intensities by different type of cleanings mentioned in 9.1.6.3. |  |
| 9.1.6.6.2. | Did the company calculate the emission intensity for **heating** during the last year using the formula  **Emission intensity for heating** (g CO2e/heating) = (Emissions from question 9.1.6.3.1.b.) X 1000 / Total number of hours heating containers by year? |  | Heating hours are usually recorded in the invoices issued by tank cleaning stations to transport companies |  |
| **9.1.6.7.** | **Consolidating and reporting emissions** |  |  |  |
| 9.1.6.7.1. | Does the company consolidate in a report the total annual emissions in the following form?  - Scope 1 (question 9.1.6.1.2.)  - Scope 2 (question 9.1.6.2.2.)  - Scope 3 (question 9.1.6.4.1.)  - Total emissions (question 9.1.6.5.1.)  - Emission intensity (question 9.1.6.6.1. and 9.1.6.6.2.) |  |  |  |
| 9.1.6.7.2. | Does the company report their emissions to customers/public? |  | The company will show evidence of communication with customers or public. As example: https://www.climateneutralgroup.com/en/contact/,  EFTCO |  |
| 9.1.6.8. | **Reducing emissions**  **Defining strategy, objectives and programme**  The questions of this section follow a hierarchy: every question has a level of requirement higher than the precedent one. |  |  |  |
| 9.1.6.8.1. | Has the company defined a **strategy** to reduce its GHG emissions, based on the measurements made in 9.1.6.6.? |  |  |  |
| 9.1.6.8.2. | Has the company defined the **objectives** to reduce its emission intensity, based on the measurements made in 9.1.6.6. in a multiannual programme? |  | The assessor will check that the objectives are in line with the target of 90% reduction by 2050 required by the Sustainable and Smart Mobility Strategy published by the European Commission in Dec 2020. |  |
| 9.1.6.8.3. | Do the objectives include a reduction of the **total emissions** as calculated in 9.1.6.5.1., in the multiannual programme? |  | The assessor will check that the objectives are in line with the target of 90% reduction by 2050 required by the Sustainable and Smart Mobility Strategy published by the European Commission in Dec 2020. |  |
| 9.1.6.8.4. | Does the assessed company have a **multiannual programme** to reach the objectives mentioned in 9.1.6.8.1. or 9.1.6.8.2.? |  | To score one, the assessor will check that there is a detailed programme with responsible people and due dates. The programme will include intermediate steps and following up at least on a yearly basis. |  |
| **9.2.** | **Customer Interface** |  | **Customer Interface** |  |
| **9.2.1.** | **Supply chain integrity** |  | **Supply chain integrity** |  |
| 9.2.1.1. | Has the company a documented process to control its services from the arrival of the tank up to the exit gate of the tank cleaning station? |  | The guided transports (truck and driver) usually are an "in and out" operation at the company's premises. The non-guided transports - tank containers, swap bodies, railcars - need a formal movement recording and a check list of the services as required by the client. Check the availability of a ‘to do’ list. |  |
| 9.2.1.2. | Does the company have a formal process in place enabling performance monitoring through time recording (from entry to exit) and control of the services against the customer order? |  | The requested services of the guided transports are signed off by the driver. Recording of the "time-out" on the ECD is a minimum requirement. The non-guided transports - tank containers, swap bodies, railcars - require a movement recording and a ‘to do’ list. Check how the performance is controlled and reported against the services required and how non compliances are reported. |  |
| **9.2.2.** | **Site safety instructions to drivers** |  | **Site safety instructions to drivers** |  |
| 9.2.2.1. | Are there written procedures/instructions for handling parked vehicles/tanks? |  | Check the procedures/instructions relevant to parked vehicles for other services like heating. Check whether drivers receive a ground plan upon entering the site. |  |
| 9.2.2.2. | Do drivers receive site safety instructions? |  | Check whether the cleaning station has written safety instructions, and whether these are handed out to drivers upon presentation at the reception. The instructions should include pictograms. |  |
| 9.2.2.3.a. | For toxic, smelly and VOC products, do these safety instructions include that drivers shall not open manholes/valves, before entering the cleaning bay to prevent emissions and smell? |  | Check the instructions concerning opening manholes and valves. |  |
| 9.2.2.3.b. | Do these safety instructions include instructions for working at height? |  | Check the instructions concerning mounting on tanks. DIRECTIVE 2009/104 |  |
| **9.2.3.** | **Responsibilities of drivers and cleaning staff** |  | **Responsibilities of drivers and cleaning staff** |  |
| 9.2.3.1. | Is there a formal order from the owner of the tank or his mandated (driver) including: |  | This is a shared responsibility. Without sufficient information the order execution may suffer. Check a few orders at random and give a “yes” score for each item of information that is included. General conditions and responsibilities printed on the backside of the working bulletin are not sufficient and they must be formally agreed between partners. |  |
| 9.2.3.1.a. | identification of the previous load supported by a valid CMR, an equivalent transport document or a written declaration from the transport company directly from the office in writing (email, fax, edit) including a unique reference number? |  | Proper shipping name. |  |
| 9.2.3.1.b. | unique reference number (CMR number or the order number of the previous load)? |  | Check records or take samples in the process to verify that previous loads are securely checked. |  |
| 9.2.3.1.c. | instructions on cleaning method/quality required (if applicable with regard to next load)? |  |  |  |
| 9.2.3.1.d. | cleaning process of auxiliary equipment (hoses, filters, valves, gaskets, etc.)? |  |  |  |
| 9.2.3.1.e. | safety warnings (like tank under pressure, under nitrogen, etc.)? |  | You may follow the order form of the following EFTCO link or equivalent system/form: <http://www.eftco.org/downloads> |  |
| 9.2.3.1.f. | driver participation in assistance to the cleaning process? |  | Drivers do not participate in any part of the cleaning process, other than open the manlids (preferable). |  |
| **10** | **Order Process and Operations** |  | **Order Process and Operations** |  |
| **10.1.** | **Planning and Operations** |  | **Planning and Operations** |  |
| **10.1.1.** | **Planning and communication** |  | **Planning and communication** |  |
| 10.1.1.1. | Does the information on the previous load identify: |  | Verify whether the sampled orders include the following required information. |  |
| 10.1.1.1.a. | for non-dangerous goods: the full chemical name or the CAS number in case the product is a substance or the same for the relevant components and/or the trade name in case the product is a mixture? |  |  |  |
| 10.1.1.1.b. | for dangerous goods : UN-number and the proper shipping name or the trade name? |  | Give a N/A if dangerous goods are not being cleaned. Refer to ADR 3.1.2. for the definition of proper shipping name in case of dangerous goods. |  |
| 10.1.1.2. | Do you have the product information (SHE aspects) for every product that is cleaned? |  |  |  |
| 10.1.1.3. | Do you have records in place with all products (or product groups) the station is not allowed to clean and are these records available to the customer (e.g. on the company's website)? |  | Check the records and verify if available for and published to the clients. |  |
| 10.1.1.4. | Does a planning/communication exist between cleaning station and clients for unaccompanied tanks? |  | This issue relates to non-guided transport (for example non-accompanied tank-containers). Look for documentary evidence in writing/electronic. The score is “No” if not present. |  |
| **10.2.** | **Operations** |  | **Operations** |  |
| **10.2.1.** | **Operating instructions** |  | **Operating instructions** |  |
| 10.2.1.1. | Are all operating jobs broken down into their individual tasks and documented? |  | Examine a selection of operator instructions to judge whether they are unambiguous and in sufficient detail to cover critical SH & E and Quality aspects. |  |
| 10.2.1.2. | Are operating instructions reviewed regularly? |  | Examine selected instructions to check that details are up-to-date. Score "no" if significant details are clearly out of date. |  |
| 10.2.1.3. | Do these instructions cover: |  | Score a "Yes" for each listed instruction that exists and is documented. |  |
| 10.2.1.3.a. | - safety instructions to the operator (e.g.. protective equipment)? |  | Minimum PPEs required: watertight safety boots, overall appropriate to the products cleaned (e.g. fire resistant when cleaning flammables), gloves suitable to the product to be cleaned (e.g. Nitrile-, Butyl rubber, etc.) and safety glasses. The assessor should also verify the additional PPE required for the products to be cleaned and the cleaning agents used. Refer to the risk assessment carried out. |  |
| 10.2.1.3.b. | - the need to crosscheck the vehicle identification and the product label with the order instructions? |  |  |  |
| 10.2.1.3.c. | - the correct transfer of product information to the internal cleaning order? |  |  |  |
| 10.2.1.3.d. | - cleaning methods for tanks, valves and hoses per product/product group? |  |  |  |
| 10.2.1.3.e. | - drying? |  | Drying can be done through natural ventilation, forced ventilation, drying with heated air, etc. |  |
| 10.2.1.3.f. | - inspection of tanks, valves and hoses prior to cleaning? |  |  |  |
| 10.2.1.3.g. | - inspection after cleaning? |  |  |  |
| 10.2.1.3.h. | - appropriate treatment of residue and waste water per product/product group? |  |  |  |
| 10.2.1.4. | In case of transportation of pellets in bulk tanks, is the bottom manhole/cone of the silo tank not opened before entering the cleaning bay? |  | This is to avoid that pellets are spilled on the floor out of the sieve or water treatment system. | M |
| 10.2.1.5. | Does the effluent treatment of the tank cleaning station avoid plastic pellets coming from the cleaning station facilities and tank silos from getting into waterways? |  | A mechanical system should be in place (i.e. filter, recirculation of the water) to separate the pellets from the water. This could be part of the standard gravity separator of the station.  A sieve like a sock filter can also be used at the bottom outlet of the tank to filter the rinse water before entering the cleaning bay drain. | M |
| 10.2.1.6. | Are the labels removed from tanks properly treated? |  | Labels are removed from tanks using water at high pressure. They could be broken into small pieces that could have the same negative environmental impact as plastic pellets. | M |
| 10.2.1.7. | Is there a procedure in place to ensure, when required, that correct sealing was done before the vehicle leaves the site? |  | Shortly after drying, tanks are too hot to be closed hermetically because of the risk for vacuum damage. When the cleaning order mentions that the tank must be sealed after drying, verify that the seals recorded on the ECD are the ones used on the tank. |  |
| **10.2.2.** | **Cleaning document** |  | **Cleaning document** |  |
|  |  |  | Several cleaning documents can be accepted by the assessor, provided that there is a quality management system to issue them. An example of a cleaning document is the EFTCO cleaning document (ECD) that can be found in www.EFTCO.org. Other tank cleaning documents can be used by the tank cleaning company. An electronic version of the EFTCO cleaning document (eECD) was under development when this questionnaire was issued. These electronic documents will also be accepted by the assessor. For cleaning of a Rail Tanker the UIC/UIP cleaning documents can be accepted. |  |
| 10.2.2.1. | **EFTCO Cleaning document** |  | **EFTCO Cleaning document** |  |
| 10.2.2.1.a. | Is the EFTCO Cleaning Document (authorized by EFTCO) being used? Note: questions 10.2.2.1.a. to 10.2.2.1.d. will be triggered if the EFTCO tank cleaning document is used. |  | Check a set of cleaning documents against the ECD format and guidelines. |  |
| 10.2.2.1.b. | Is the CMR number or the unique customer reference number of the previous load entered into the ECD? |  | Verify in a sample of ECDs (minimum 10 is recommended) of the previous year whether the requested information is included. |  |
| 10.2.2.1.c. | Are the deviations on the cleaning method versus the prescribed cleaning instructions documented on the cleaning document? |  | Compare the cleaning operating procedure with the information on the sampled ECD's. Are methods of cleaning operation procedures in line with the information given on the ECD? Are deviations of the cleaning procedure correctly mentioned in the appropriate box on the ECD? |  |
| 10.2.2.1.d. | Are following elements included in the cleaning document: |  | To be checked for paper and electronic cleaning documents. |  |
| 10.2.2.1.d.1. | the cleaning company name and relevant coordinates, unique reference number, date of cleaning and name of client? |  |  |  |
| 10.2.2.1.d.2. | date and time of registration upon arrival? |  |  |  |
| 10.2.2.1.d.3. | - correct and clear information about the previous load (name of product per compartment)? |  |  |  |
| 10.2.2.1.d.4. | - vehicle/tank number with indication of the cleaned compartments? |  |  |  |
| 10.2.2.1.d.5. | - cleaning operator's name? |  |  |  |
| 10.2.2.1.d.6. | - driver's name? |  |  |  |
| 10.2.2.1.d.7. | - cleaning method per compartment? |  | The cleaning codes of EFTCO must be used and mentioned in the order of the cleaning process |  |
| 10.2.2.1.d.8. | - items cleaned? |  |  |  |
| 10.2.2.1.d.9. | - time of departure? |  |  |  |
| 10.2.2.2. | **Other Tank Cleaning Document** |  | **Other Tank Cleaning Document** |  |
| 10.2.2.2.a. | Is a cleaning documents used? Note: Questions 10.2.2.2.a. to 10.2.2.2.d. will be triggered if any other tank cleaning document different than the ECD is used. |  | Check against the format and guidelines of the specific document. |  |
| 10.2.2.2.b. | Is the CMR number or the unique customer reference number of the previous load entered into the cleaning document? |  | Verify in a sample of cleaning documents (minimum 10 is recommended) of the previous year whether the requested information is included. |  |
| 10.2.2.2.c. | Are the deviations on the cleaning method versus the prescribed cleaning instructions documented on the cleaning document? |  | Compare the cleaning operating procedure with the information on the sampled cleaning documents. Are methods of cleaning operation procedures in line with the information given on the cleaning document? Are deviations of the cleaning procedure correctly mentioned in the appropriate box on the cleaning document? |  |
| 10.2.2.2.d. | Are following elements included in the cleaning document: |  | To be checked for paper and electronic cleaning documents. |  |
| 10.2.2.2.d.1. | - the cleaning company name and relevant coordinates, unique reference number, date of cleaning and name of client? |  |  |  |
| 10.2.2.2.d.2. | - date and time of registration upon arrival? |  |  |  |
| 10.2.2.2.d.3. | - correct and clear information about the previous load (name of product per compartment)? |  |  |  |
| 10.2.2.2.d.4. | - vehicle/tank number with indication of the cleaned compartments? |  |  |  |
| 10.2.2.2.d.5. | - cleaning operator's name? |  |  |  |
| 10.2.2.2.d.6. | - driver's name? |  |  |  |
| 10.2.2.2.d.7. | - cleaning method per compartment? |  | The assessor will check the cleaning codes that are used. |  |
| 10.2.2.2.d.8. | - items cleaned? |  |  |  |
| 10.2.2.2.d.9. | - time of departure? |  |  |  |
| 10.2.2.3. | When tanks/vehicles are accompanied by a driver, is the driver required to sign the cleaning document upon completion? |  | Check the procedure as well as a sample of documents for signature of the driver. |  |
| 10.2.2.4. | Is the cleaning inspector required to sign the cleaning document upon completion? |  | Check who in the organisation is designated as cleaning inspector, and verify a sample of documents for signature by this person or by an authorized administrator. In this case the assessor should check that the cleaning inspector has verified the cleanliness of the tank and that any remark has been incorporated into the cleaning document.  When the cleanliness is verified by the operator, there should be random checks by another authorized person. |  |
| 10.2.2.5. | Are clear instructions given to the cleaning inspector to complete the cleaning document correctly and are all site staff informed about the consequences of forgery/abuse of documents? |  | Check written procedures and guidelines and verify implementation on the sampled cleaning documents. Check training records and verify by asking the cleaning staff if they are aware of the legal consequences of forgery/abusing of documents. |  |
| 10.2.2.6. | Is an accurate stock of cleaning documents maintained at all times, allowing full reconciliation of the cleaning document numbers that are already used and those still available in stock, and are those that are destroyed/void documented with reason of non-utilization and management approval? |  | An accurate inventory must consist of a list with all cleaning document numbers documented, differentiated in 3 categories: blank on stock, issued and destroyed/void. Score a "no" if just one number is missing or no reasons are given and management approval is not existing for destroyed/void cleaning documents. The assessor should check that all copies are kept (white, yellow and blue colours are compulsory, the green one is optional and should only be kept when the blank cleaning document include this colour) of the destroyed/void cleaning documents. |  |
| **10.3.** | **Administration** |  | **Administration** |  |
| **10.3.1.** | **Records** |  | **Records** |  |
| 10.3.1.1. | Are records kept on all cleanings and all products that have been cleaned during the last 3 years, documenting the cleaning process that has been used? |  | Check the archives. |  |
| 10.3.1.2. | Are all documents kept relating to the cleaning order processing (including the number of the CMR or the e-mail/fax of the customer with the information about the previous shipment)? |  | Check the attachment of the archived cleaning documents for correctness. |  |
| 10.3.1.3. | Are originals/copies of all Cleaning Documents properly archived for a minimum of three years? |  | Check for complete series of Cleaning Documents. Check also the archiving procedure and storage (protection against fire and flood). |  |
| **10.4.** | **Handling of packaged goods (cleaning agents, purification products)** |  | **Handling of packaged goods (cleaning agents, purification products)** |  |
| 10.4.1. | Does the company have a specific written procedure for the handling and storage of packaged goods? |  | Check if a written procedure is available for storage and handling of packaged goods. These are the substances (hazardous/non-hazardous) used in the cleaning and waste (water) treatment processes. |  |
| 10.4.2. | Are all packaged goods on site stored, labelled and segregated in accordance with the local legislation and with SDS requirements? |  | Check compliance with permit, local regulations and SDS. |  |
| 10.4.3. | Is there a separate storage area for packaged flammable cleaning solvents? |  | To avoid reaction between chemicals and to minimize risk of flammable products, it is important to have a good segregation (based upon hazard classification) in storage, handling, treatment and collection systems. |  |
| 10.4.4. | Are the correct product details available for handling and storage? |  | In case hazardous goods are involved, the Safety Data Sheet (S.D.S.) must be at hand. |  |
| 10.4.5. | Have the employees involved in the handling of goods received appropriate training? |  | As a minimum, there should be training in the use of handling equipment (e.g. forklift trucks). If hazardous goods are involved they should also have received hazardous goods training as required by ADR. The assessor should verify participation lists, training contents and in case of dangerous goods also training certificates. |  |
| 10.4.6. | Do the employees involved in the handling of goods have adequate personal protection? |  | For standard handling operations, safety shoes and working gloves are adequate. If hazardous goods are involved the Personal Protective Equipment should be in accordance with the requirements of the S.D.S. |  |
| 10.4.7. | Is the handling and storage of packaged liquid materials carried out in an area with impervious surface? |  | The question is only applicable if packed liquids (hazardous or non-hazardous) are handled. |  |
| 10.4.8. | Does the company have equipment available to handle a release of product? |  | For liquids in drums, these should be absorption material, a waste container and salvage drums. For dry solid material this can be basic tools, e.g. brooms, etc. For hazardous goods the assessor must look at the specifications on the S.D.S. and check if the required equipment is available. |  |
| 10.4.9. | Is the handling of goods carried out by using adequate and safe equipment? |  | This question scores positively if the equipment used for transfers will not pose a risk to the safety of people involved and the product handled. Well maintained and inspected forklift trucks, inspected hoisting equipment, well connected and maintained (air-driven) pumps, well fixed hoses, etc. |  |
| **11** | **Other Services /Activities** |  | **Other Services /Activities** |  |
| **11.1.** | **Tank heating of loaded tanks/vehicles** |  | **Tank heating of loaded tanks/vehicles** |  |
| 11.1.1. | Are there up-to-date written procedures/instructions for heating of loaded tanks, including: |  | A tank heating procedure with instructions should be written in detail and describe who has particular responsibilities, and the standard of performance expected. During the site inspection it should be checked if the responsible personnel received the instructions, understand all the requirements of the procedure and if they are fully implemented. A positive score should only be given on each of the elements if the procedure is in place, understood and fully implemented. |  |
| 11.1.1.a. | initial product inquiry ? |  | Included assessment of potential hazards. |  |
| 11.1.1.b. | product acceptance ? |  |  |  |
| 11.1.1.c. | required competence to establish a new heating instruction? |  |  |  |
| 11.1.1.d. | controls on temperature devices? |  | Check if these temperature devices are included in the identification and calibration programme as defined in 6.2.3.1. |  |
| 11.1.1.e. | a check list used to assure that the procedure is followed? |  | This could be on paper or electronic system. |  |
| 11.1.2. | Does the operator receive the required instructions before connecting the tank to the heating system, including: |  | Check a sample of documents on tank-heating operations. |  |
| 11.1.2.a. | mode of heating? |  | The coil can be heated by direct steam or hot water. Electricity can also be used. The mode of heating is defined by the risk assessment: some products can start to react or polymerize when are in contact with high temperatures. A monomer like acrylic acid is a known example where incorrect heating led to explosions in the past. With acrylic acid , only warm water may be used. Steam heating is strictly forbidden. Other products can be “*burned”* or their quality can be damaged when they come in contact with too high temperature. A procedure must be in place where a competent person decides for each product to be heated which mode of heating can be used and which maximum medium temperature is allowed (for acrylic acid not more than 35 degrees of warm water). This information should always be available before a tank is connected to the heating system and clearly printed on the heating instruction. |  |
| 11.1.2.b. | maximum contact temperature? |  | The maximum contact temperature should be defined for safety and/or quality reasons. This is the temperature that the coils can reach and is defined by the medium used for heating. The acrylic acid, mentioned as example in 11.1.2a, has to be heated at a maximum temperature of 35 degrees. |  |
| 11.1.2.c. | maximum working pressure of steam coils? |  | I has to be checked that the pressure capacity of the steam coils of the tank container is not less than the steam pressure of the fixed installation. |  |
| 11.1.2.d. | regular checking of product temperatures? |  |  |  |
| 11.1.2.e. | personal protective equipment? |  |  |  |
| 11.1.2.f. | the use of the dip thermometer for every heating of products, if allowed by the product properties. |  | A cleaning procedure must be in place for dip stick temperature meters after use. In case food dip thermometers are applied, these should be marked, kept segregated and cleaned. |  |
| 11.1.3. | A proper provisions in place to work at height at the heating station in case of the use of dip stick thermometers? |  | In case tanks have to be mounted, proper fall restraint systems must be in place (safety cages etc.). |  |
| 11.1.4. | Does the temperature device is interlocked with the heating source? |  | This device and the interlocking have to be tested. |  |
| 11.1.5. | Is supervision assured when heating overnight or during weekends? |  | Regular checks should be done and documented. Risk of possible run-away reactions if temperature is not controlled and overheating occurs. GSM alarms, if allowed by local regulations, are acceptable. |  |
| 11.1.6. | Are records kept on each operation, including the temperature progress? |  | Check a sample of documents on tank-heating operations. |  |
| 11.1.7. | Is there a designated area for heating containers with water/glycol mixture (separated from the area for steam heating) or is there a system to prevent the mixture of heating commodities? |  | This requirement is addressing the risk of incorrect heating mentioned in 11.1.2.a. |  |
| 11.1.8. | Is the operation done on a liquid-tight floor? |  | The area should have a liquid tight floor to prevent soil and ground water contamination in case of leakage/spill. |  |
| 11.1.9. | Is there a procedure to inspect the tank after heating and before departure? |  | The company will check the temperature, tightness, removal of equipment to measure temperature, disconnection of hoses/electrical cables, etc. These checks have to be recorded (could be part of the check list of question 11.1.1.e.). |  |
| 11.1.10. | In case of change in the equipment of the heating unit, has a management of change risk assessment (MOC) being carried out? Refer to the question 2.1.1.b. of the SQAS Core. |  | The assessor will ask for records of the MOC. |  |
| 11.1.11. | Has the company communicated the outcome of the MOC risk assessment to relevant users, in case that the risk is changing? |  | Relevant users are those users for whom the change represent a risk for the quality or the safety of the heating operation. |  |
| **11.2.** | **Tank repair workshop** |  | **Tank repair workshop** |  |
| 11.2.1. | Does the company have a written tank repair procedure, covering the following items: |  | Check if procedures are in place, understood and implemented for all items (a-h). |  |
| 11.2.1.a. | use of coded or trained (certificated) welders for welding works at the tank body? |  |  |  |
| 11.2.1.b. | use of the ITCO guidance for inspection? |  |  |  |
| 11.2.1.c. | "gas free" check before welding? |  |  |  |
| 11.2.1.d. | leak test after valve/appendage replacement? |  |  |  |
| 11.2.1.e. | maximum pressure to be used for air tests? |  | Pressure Equipment Directive (PED) 2014/68. |  |
| 11.2.1.f. | working at height/fall protection? |  | Working at height Directive 2009/104. |  |
| 11.2.1.g. | maintenance of equipment (e.g. welding tools) according to local legislation? |  |  |  |
| 11.2.1.h. | identification and traceability of safety valves (e.g. segregation and labelling of approved and declined safety valves)? |  |  |  |
| 11.2.2. | Is there a written policy ensuring that uncleaned tanks with dangerous (flammable) products are not entering the repair shop? |  | Check if procedure is in place, understood and implemented. |  |
| 11.2.3. | Is an extraction system in place to remove welding vapours? |  | Verify on the site. |  |
| **11.3.** | **Transfer terminal for Containers/Vehicle operations** |  | **Transfer terminal for Containers/Vehicle operations** |  |
|  |  |  | This section is only applicable when the Cleaning Station operates also a Transfer Terminal. It is applicable to sites that transfer containers/vehicles between all modes of transport, i.e. road, rail, inland waterways, deep&short sea, air. The assessor is encourage to refer to the Cefic/ECTA guidelines "Safe storage and handling of containers carrying dangerous goods and hazardous substances". See <https://cefic.org/library-item/safe-storage-handling-containers-carrying-dangerous-goods-hazardous-substance> |  |
| 11.3.1. | Does the assessed company have the correct licenses to store and handle any hazardous contents of the transport units intended to be sent there? |  | Check that there is a system in place to verify that the hazardous products to be received are allowed by the site licenses. |  |
| 11.3.2. | Does the terminal meet the customer's and/or the industry specific security requirements? |  | Site access control should include as a minimum the physical check of the delivery documents against the order. The site entrance(s) should preferably be fitted with a gate normally kept in the closed position. |  |
| 11.3.3. | Does the terminal's rolling and lifting equipment meet the national legal requirements? |  | Check that the equipment is protected against malfunction and lifting excessive weights, and is fitted with warning lights/acoustic alarms during movement. Check that alarm signals are also used to warn for movement of trains. Machinery Directive 2006/42/EC.  To identify the equipment covered by this question you may refer to the Cefic/ECTA guidelines "Safe storage and handling of containers carrying dangerous goods and hazardous substances" , section 4. |  |
| 11.3.4. | Is there a documented programme for preventive inspection and maintenance for cranes, rolling and lifting equipment? |  | Look for an inspection and maintenance programme requiring that equipment (owned or leased) is adequately serviced, adjusted and otherwise maintained to prevent abnormal wear and tear, and to detect defects before they cause accidents or breakdowns. Also check in practice. |  |
| 11.3.5. | Is there a documented programme for the training of drivers/operators of cranes, rolling and lifting equipment? |  | Check the training records of selected drivers/operators. Check against the record of incidents where the root cause was identified as drivers' behaviour and there was a consequential action to reinforce the training programme. |  |
| 11.3.6. | Is there a segregation plan applied when storing shipping containers? This must include loaded containers, empty uncleaned containers and empty clean containers. |  | Refer to section 3.1. of the guidelines "Safe Storage and handling of containers carrying dangerous goods and hazardous substances". Check for a written plan and verify at site. |  |
| 11.3.7. | Is traffic adequately managed (signs, road marks, flow directions, speed limits) and enforced? |  | Look for indications, signs, instructions to drivers and also observe the practical implementation of this. |  |
| 11.3.8. | Are effective systems in place to ensure that no unauthorized persons are present in container handling areas? |  | Look for effective systems; e.g. can the crane driver oversee everything (e.g. if his cabin is above the crane), are drivers asked to wait in a special waiting area/room? |  |
| 11.3.9. | Is a maximum stack height of tank containers/containers defined in a written procedure and enforced? |  | The assessor should seek the company written procedure which describes the process to be followed regarding Container Storage/Stacking and check that the procedure is followed. It should be noted that stacking heights (maximum allowable stacking weight/height) for containers/tank containers vary due to the equipment build configuration. A further point is that the stacking of both loaded and empty equipment creates different dynamics when confronted with weather changes e.g. wind. The information included in the CSC safety approval of the containers should be taken into account. There is a practice in most terminals of "block" stacking which allows a greater stack height. All of the above points are relevant for stacking various pieces of equipment and should be detailed in a procedure.  You may refer to section 3.2. of the Cefic/ECTA guidelines "Safe storage and handling of containers carrying dangerous goods and hazardous substances". If other guidelines are used, the assessor must record in comments the guidelines used. |  |
| 11.3.10. | Are unaccompanied transferred units visually inspected for leaks and damage, both on arrival/departure through the EIR (Equipment interchange Receipt) and at regular intervals when temporarily stored? |  | Look for evidence in the form of written procedures, checklists, EIR. |  |
| 11.3.11. | Is there a containment system for leaks and spillages, which also allows for isolation from site drainage? |  | The loading/unloading area should ideally be graded to slope away, but spilled product should not be allowed to run to other parts of the premises (where ignition sources may be present). Check for uncontrolled drains. |  |
| 11.3.12. | Is a system in place to follow-up the periodical test dates of tanks approved for the transport of dangerous goods? |  | This is the responsibility of the tank container operator. |  |
| 11.3.13. | Is there a system to monitor the entry and movement of vehicles on the terminal? |  | Check the internal system that controls vehicle movements within the terminal. Double check the movement of people on the terminal as asked by core question 2.4.1. |  |
| 11.3.14. | Is there proper fall protection available to work safely on top of tank containers to install portable handrails? |  | A handrail is important as a balancing aid. |  |
| 11.3.15. | Is the floor where the containers are stored impervious to prevent the possible spills draining through the ground/groundwater? |  | The assessor will check the permit to see if specific requirements for the pavement are included. As containers are usually stored on the ground it is important, that there is adequate flooring.  Where a product spill takes place, the ground water could be contaminated with negative effects for the environment and people. |  |
| 11.3.16. | Is there a procedure requiring regular documented inspection rounds in order to detect deficient flooring? |  | The inspection frequency shall be three months as a minimum.  - Potholes or uneven flooring can lead to accidents caused by lifting and driving equipment, e.g. reach stackers or trucks colliding with stored containers, or if individuals slip or trip.  - Stacking containers on uneven ground may cause the containers to topple and fall from height. |  |
| 11.3.17. | Does the site have a skid, mobile unit or bunded segregated area to manage the small spillages which cannot be stopped or contained by absorbent materials etc.? |  | Examples of containment facilities could be a container drip tray, or kerbed/ bunded impervious floored area. Refer to section 6.1.1. of the guideline "Safe Storage and handling of containers carrying dangerous goods and hazardous substances" and to SQAS Core, section 4. "On/Off Site Emergency Preparedness and Response". |  |
| 11.3.18. | For large spillages and significant loss, does the site have a location or equipment that could hold the "total lost" volume of a container? |  | Refer to section 6.1.2. of the guidelines "Safe Storage and handling of containers carrying dangerous goods and hazardous substances". This must be an equipment or location such as a large bund, large volume basin, skid unit or a location that contains the total volume. The reception site must have a liquid tight floor, low surface area and a controlled drainage mechanism. Refer to SQAS Core, Section 4., Emergency Response. |  |
| **11.4.** | **Container depot** |  | **Container depot:** This section is applicable when container depot is part of a tank cleaning site. The containers may be awaiting purchase, onward delivery or drawing off as dictated by business need. The site does not unpack/repack. The assessor shall refer to the Cefic/ECTA guidelines "Safe storage and handling of containers carrying dangerous goods and hazardous substances". See <https://cefic.org/library-item/safe-storage-handling-containers-carrying-dangerous-goods-hazardous-substance>  In case that it is a SEVESO site additional requirement could be applicable. |  |
| **11.4.1.** | **General Site Operations** |  | **General Site Operations** |  |
| 11.4.1.1. | Licenses and storage capacity |  |  |  |
| 11.4.1.1.1. | Does the assessed company have the correct licenses to store transport units containing any (hazardous) cargo? |  | All other licenses requirements should be checked as well. e.g. allowed hazardous cargo classes. |  |
| 11.4.1.1.2. | Does the assessed company have a procedure to check that the storage capacity is in line with the license? |  |  |  |
| 11.4.1.2. | Registration of a Product on Site and Entrance Check |  | Registration of a Product on Site and Entrance Check. |  |
| 11.4.1.2.1. | Is there a procedure for assessing a product not previously stored on site upon arrival that evaluates the safe handling of the unit, including the correct licenses to store and handle it? |  | The site should have a structured process in place to handle this assessment and predefined roles of whom are authorized to approve such storage and handling requests (e.g., Director, Site Manager) and who should be consulted in the process (e.g. HSE Manager, Dangerous Goods Safety Advisor DGSA).  The assessor should check if there is a valid permission for storing a product not previously stored. |  |
| 11.4.1.2.2. | For storage of containers carrying products not registered before, does the company know the following information?  - SDS (preferably local language(s) of storage(s) and/or English)  - Gross Weight  - Type of shipping unit |  | The assessor will sample the last records of containers received carrying new products and will check the information requested. |  |
| 11.4.1.2.3. | When any container arrives to the terminal, is there a system to check and register: |  |  |  |
| 11.4.1.2.3.a. | Visual technical check of the ITU conditions on/of:  - leakage (leaking unit)  - visual deformations of the transport unit  - container type |  |  |  |
| 11.4.1.2.3.b. | Visual formal check of the container conditions on/of:  - container state (loaded/ unloaded/ cleaned)  - properly labelled and marked according to legislation/ regulations (ADR/IMDG) (see guideline of this question)  - seals and seal numbers  - container number  - data plate |  | Special attention should be paid to Marking and Labelling during the entrance check, in order to prevent typical errors, which are placards, marks or labels that are:  - not visible  - wrongly placed  - damaged  - missing  - incomplete  - incorrect  The validity of the equipment tests is recorded on the data plate. The stamps from the inspection bodies should be visible  The data plate includes information about CSC (Container Safety Convention). This is covering mainly the condition of the frame. The testing data of the tank is also included in case of transportation of dangerous goods.  Containers are usually built on the request of the container owners by the manufacturer. All containers need to be built based on the ISO and CSC standards at their base level to be eligible for international transport. Any customization on the container is built over these basic standards. Once the container is in its final form, it is classified according to the ISO and given a container ID number. This number needs to be displayed on the CSC plate of the container. |  |
| 11.4.1.2.3.c. | Special storage conditions from customers? |  | Pressure and temperature checks can be required by specific customers, e.g., when transporting gases. |  |
| 11.4.1.3. | Security |  |  |  |
| 11.4.1.3.1. | Does the terminal meet the customer's and/or the industry specific security requirements? |  | The access control should include as a minimum the physical check of the delivery documents against the order.  The site entrance(s) should preferably be fitted with a gate normally kept in the closed position.  Other security requirements are in section 8.Security. Site Inspection and Site operations. |  |
| 11.4.1.4. | Housekeeping |  |  |  |
| 11.4.1.4.1. | Is the housekeeping acceptable? |  | Good housekeeping practices are an important part of general operations because they can reduce workplace hazards resulting in a safer and better job. Poor housekeeping practices on the other hand, can have severe consequences resulting in accidents, equipment damage and contamination.  The assessor will carry out the following checks to score this question positively:  - there is an unobstructed view on safety equipment and signs  - damaged equipment is not present  - broken pallets are to be properly disposed  - pallets (if present) should be present in designated locations away from ignition sources. Additionally, it has to be regarded that the storage of pallets does not increase the fire load of buildings, e.g. by stacking them up against walls  - vegetation (grass, bushes etc.) is under control and regularly trimmed  - road/terminal surface in general (potholes, obstacles, cracks etc.). |  |
| 11.4.1.5. | Competencies and Training |  |  |  |
| 11.4.1.5.1. | Is there a documented programme for the training of drivers/operators of cranes, rolling and lifting equipment? |  | Check that the drivers of cranes, forklifting and other rolling equipment have a specific certificate. This could be a legal requirement.  Check the training records of selected drivers/operators. Check against the record of incidents where the root cause was identified as drivers' behaviour and there was a consequential action to reinforce the training programme. |  |
| 11.4.1.6. | Human Behaviour and Behavioural Based Safety (BBS) |  |  |  |
| 11.4.1.6.1. | Are drivers/operators of cranes, rolling and lifting equipment included in the BBS programme required by section 8. of this questionnaire? |  |  |  |
| **11.4.2.** | **Storing of Containers** |  | **Storing of Containers** |  |
| 11.4.2.1. | Segregation |  |  |  |
| 11.4.2.1.1. | Is there a segregation plan applied when storing shipping containers? This must include loaded containers, empty uncleaned containers and empty clean containers? |  | Product segregation is indispensable to reduce the risk of hazardous interaction between different products in the case of a spill (e.g. due to a leak or a fire). But in the case of tank container or box container depots there is a reduced risk of interaction between the goods in comparison to packaged good in warehouses. Consequently, the requirements for segregation in container storage are less severe than for warehouses.  Nevertheless, interaction between the stored goods, creating a hazardous situation, should be taken into account.  The final segregation plan should always meet at least the (local) regulations and requirements put down in the permit.  For the recommended measures refer to section 3.1. of the guidelines "Safe Storage and handling of containers carrying dangerous goods and hazardous substances". Check for a written plan and verify at site. |  |
| 11.4.2.1.2. | Are the segregation rules included in the training programme? |  |  |  |
| 11.4.2.1.3. | Are the segregation rules visible for external viewers? |  |  |  |
| 11.4.2.2. | Container Stacking |  |  |  |
| 11.4.2.2.1. | Is a maximum stack height of tank containers/containers defined in a written procedure and enforced? |  | Usually, the stacking height of containers is regulated by the operating permit.  Assessor should check how this information is shared with involved staff and if there are records kept.  The assessor should also seek the company written procedure which describes the process to be followed regarding Container Storage/Stacking and check that the procedure is followed. It should be noted that stacking heights (maximum allowable stacking weight/height) for containers/tank containers vary due to the equipment build configuration. The information included in the CSC safety approval of the containers should be taken into account. There is a practice in most terminals of "block" stacking which allows a greater stack height. All of the above points are relevant for stacking various pieces of equipment and should be detailed in a procedure.  Refer to section 3.2. of the Cefic/ECTA guidelines "Safe storage and handling of containers carrying dangerous goods and hazardous substances". |  |
| 11.4.2.2.2. | Is there a procedure defining the stacking taking into account the weather conditions and the fact that the containers are loaded/unloaded? |  | Stacking of both loaded and empty equipment creates different dynamics when confronted with weather changes e.g. wind. |  |
| 11.4.2.3. | Flooring |  |  |  |
| 11.4.2.3.1. | Does the floor where the containers are stored include at least one impervious layer to prevent the possible spills draining through the ground/ groundwater? |  | The assessor will check the permit to see if specific requirements for the pavement are included. As containers are usually stored on the ground it is important, that there is adequate flooring.  Where a product spill takes place, the ground water could be contaminated with negative effects for the environment and people.  Most container depot have a surface made of bricks (ca. 12cm), then a layer of grit (10-30cm) and then one or more layers of concrete as base foundation (20-60cm).  At least one of the layers (usually the concrete layer) should be impervious. The assessor will require documentary evidence of this condition. |  |
| 11.4.2.3.2. | Is there a procedure requiring regular documented inspection rounds in order to detect deficient flooring? |  | The inspection frequency shall be three months as a minimum.  - Potholes or uneven flooring can lead to accidents caused by lifting and driving equipment, e.g. reach stackers or trucks colliding with stored containers, or if individuals slip or trip.  - Stacking containers on uneven ground may cause the containers to topple and fall from height. |  |
| **11.4.3.** | **Equipment** |  | **Equipment** |  |
| 11.4.3.1. | Equipment Selection and Specification |  |  |  |
| 11.4.3.1.1. | Does the terminal's rolling and lifting equipment meet the national legal requirements? |  | Typically, terminal trucks, empty handlers, reach stackers and cranes are deployed. Check that the equipment is protected against malfunction and lifting excessive weights, and is fitted with warning lights/acoustic alarms during movement. Machinery Directive 2006/42/EC and amending Directive 2014/33/EU.  To identify the equipment covered by this question refer to the Cefic/ECTA guidelines "Safe storage and handling of containers carrying dangerous goods and hazardous substances", section 4. |  |
| 11.4.3.2. | Inspection and Maintenance of Equipment |  |  |  |
| 11.4.3.2.1. | Is there a statutory inspection programme for the cranes, rolling and lifting equipment? |  | All equipment deployed must undergo a periodic inspection by a certified or competent inspector. If legal requirements or the manufacturer’s specifications do not state otherwise, the recommended test cycle is once per year. Date, name and signature of the inspector as well as the findings of the periodic maintenance are to be documented. |  |
| 11.4.3.2.2. | Is there a documented programme for preventive maintenance for cranes, rolling and lifting equipment? |  | Look for an maintenance programme requiring that equipment (owned or leased) is adequately serviced, adjusted and otherwise maintained to prevent abnormal wear and tear, and to detect defects before they cause accidents or breakdowns. Also check in practice. |  |
| 11.4.3.2.3. | Is there a daily check list filled in covering the status of the equipment? |  | This is usually fulfilled in by the drivers |  |
| **11.4.4.** | **Container Operations** |  | **Container Operations** |  |
| 11.4.4.1. | Internal transport and On-Site traffic |  |  |  |
| 11.4.4.1.1. | Is traffic adequately managed (signs, road marks, flow directions, speed limits) and enforced? |  | Look for indications, signs, instructions to drivers and also observe the practical implementation of this. |  |
| 11.4.4.1.2. | Is there a system to monitor the entry and movement of vehicles on the terminal? |  | Check the internal system that controls vehicle movements within the terminal. Double check the movement of people on the terminal as asked by core question 2.4.1. |  |
| 11.4.4.1.3. | Are there written instructions for: |  |  |  |
| 11.4.4.1.3.a. | the terminal staff and third-party people defining where third-party people are allowed and where not? |  |  |  |
| 11.4.4.1.3.b. | Zones where PPE must be used |  | These zones must be clearly marked (signs, marking). |  |
| 11.4.4.2. | Safe handling |  |  |  |
| 11.4.4.2.1. | Is there a procedure describing the safe handling practices that must be complied with? |  | The procedure shall cover at least all practices mentioned in the list below. On top of the procedure the assessor will check during the plant visit that the following measures are complied with:  - No person should be allowed to stand or pass under suspended loads.  - Operators must immediately stop working and report to supervisors if a major malfunction is found or a warning device is not operational.  - Containers should generally be lifted with suitable equipment which applies a vertical force to the four top corner fittings. Though this is dispensable for empty containers, the hoisting of a container at four corners is especially important for handling loaded containers of 20 feet or more.  - Under no circumstances should containers be lifted by forks in a way that the tank container shell has to bear the container load.  - A container should be lifted off the chassis only when it is ensured that the twist locks are disengaged.  - In case the operator does not have a clear and unrestricted view, operation is to be stopped and only summoned with a suitable signaler.  - When operating a gantry crane, the container should be raised to a height were collision with already stored containers is prevented before starting to travel. |  |
| 11.4.4.2.2. | Is a written procedure present to evaluate all specific customers' requirements regarding the transfer and temporary storage of goods? |  | Elements could be: temperature control of cargo (also dangerous goods), de-icing, etc. |  |
| 11.4.4.3. | Inspection and Maintenance of Containers |  |  |  |
| 11.4.4.3.1. | Is a system in place to follow-up the periodical test dates of tanks approved for the transport of dangerous goods? |  | This is the responsibility of the tank container operator. |  |
| 11.4.4.3.2. | Is there proper fall protection available to work safely on top of tank containers? |  | Refer to the “Cefic/ECTA Best Practice Guidelines for the Safe Working at Height in the Chemical Logistics Supply Chain”. |  |
| 11.4.4.4. | Service of heating and/or cooling of containers load |  |  |  |
| 11.4.4.4.1. | Are there written procedures/instructions for heating or cooling of tanks, including: |  | A tank heating or cooling procedure with instructions should be written in detail and describe who has responsibilities, and the standard of performance expected. During the site inspection it should be checked if the responsible personnel received the instructions, understand all the requirements of the procedure and if they are fully implemented. A positive score should only be given on each of the elements if the procedure is in place, understood and fully implemented. |  |
| 11.4.4.4.1.a. | initial product inquiry? |  | Included assessment of potential hazards. |  |
| 11.4.4.4.1.b. | product acceptance? |  |  |  |
| 11.4.4.4.1.c. | required competence to establish a new heating or cooling instruction? |  |  |  |
| 11.4.4.4.1.d. | controls on temperature devices? |  | Check if these temperature devices are included in a calibration programme as defined in 6.2.3. |  |
| 11.4.4.4.1.e. | a check list used to assure that the procedure is followed? |  | This could be on paper or electronic system. |  |
| 11.4.4.4.2. | Does the operator receive the required instructions before connecting the tank to the heating or cooling system, including: |  | Check a sample of documents on tank-heating or cooling operations. |  |
| 11.4.4.4.2.a. | mode of heating? |  | The coil can be heated by direct steam or hot water. Electricity can also be used. The mode of heating is defined by the risk assessment: some products can start to react or polymerize when are in contact with high temperatures. A monomer like acrylic acid is a known example where incorrect heating led to explosions in the past. With acrylic acid, only warm water may be used. Steam heating is strictly forbidden. Other products can be “*burned”* or their quality can be damaged when they come in contact with too high temperature. A procedure must be in place where a competent person decides for each product to be heated which mode of heating can be used and which maximum medium temperature is allowed (for acrylic acid not more than 35 degrees of warm water). This information should always be available before a tank is connected to the heating system and clearly printed on the heating instruction. |  |
| 11.4.4.4.2.b. | maximum contact temperature? |  | The maximum contact temperature should be defined for safety and/or quality reasons. This is the temperature that the coils can reach and is defined by the medium used for heating. The **acrylic acid**, mentioned as example in 11.4.4.4.2.a., has to be heated at a maximum temperature of 35 degrees. |  |
| 11.4.4.4.2.c. | maximum working pressure of steam coils? |  | It has to be checked that the pressure capacity of the steam coils of the tank container is not less than the steam pressure of the fixed installation. |  |
| 11.4.4.4.2.d. | regular checking of product temperatures? |  |  |  |
| 11.4.4.4.2.e. | personal protective equipment? |  |  |  |
| 11.4.4.4.2.f. | the use of the dip thermometer for checking the product temperature , if allowed by the product properties and the shipper? |  | A cleaning procedure must be in place for dip stick temperature meters after use. In case food dip thermometers are applied, these should be marked, kept segregated and cleaned. |  |
| 11.4.4.4.3. | A proper provision in place to work at height at the facility in case of the use of dip stick thermometers? |  | If working at height is required, proper fall restraint systems must be in place (safety cages etc.). |  |
| 11.4.4.4.4. | Is the temperature monitoring device interlock with the heating source? |  | This device and the interlocking must be tested by the assessed company. |  |
| 11.4.4.4.5. | If containers are cooled or heated, is an emergency procedure triggered in case of malfunction of the cooling/heating system? |  | Warming up can cause runaway reactions in case of products with low SAPT (Self Acceleration Polymerization temperature) and/or could negatively affect product quality.  Automatic control systems are preferred, but manual surveillance systems are accepted. |  |
| 11.4.4.4.6. | Is supervision assured when heating/cooling overnight or during weekends? |  | Regular checks should be done and documented. Mobile system alarms, if allowed by local regulations, are acceptable. |  |
| 11.4.4.4.7. | Are records kept on each operation, including the temperature progress? |  | Check a sample of documents on tank-heating/cooling operations. |  |
| 11.4.4.4.8. | Is there a system to prevent the mixture of heating commodities? |  | This requirement is addressing the risk of incorrect heating mentioned in 11.4.4.4.2.a.  An example of a system is to have designated areas for heating containers with water/glycol mixture separated from the area supplying steam heating. |  |
| 11.4.4.4.9. | Is the operation done according to the requirements of question 11.4.2.3.1.? |  | The assessor will check the permit to see if specific requirements for the pavement are included. As containers are usually stored on the ground it is important, that there is adequate flooring.  Where a product spill takes place, the ground water could be contaminated with negative effects for the environment and people.  Most container depot have a surface made out of bricks (ca. 12cm), then a layer of grit (10-30cm) and then one or more layers of concrete as base foundation (20-60cm).  At least one of the layers (usually the concrete layer) should be impervious. The assessor will require documentary evidence of this condition. |  |
| 11.4.4.4.10. | Is there a procedure to inspect the tank after heating/cooling and before departure? |  | The company will check the temperature, tightness, removal of equipment to measure temperature, disconnection of hoses/electrical cables, etc. These checks have to be recorded (could be part of the check list of question 11.4.4.4.1.e.) |  |
| 11.4.4.4.11. | In case of change in the equipment of the heating/cooling unit, has a management of change risk assessment (MOC) being carried out? |  | From conversation with auditees identify any work practice changes. Refer to the guidelines about management of change (MOC): "Managing Change in a Chemicals Supply Chain": <https://cefic.org/library-item/guidelines-for-managing-change-in-a-chemicals-supply-chain/> or equivalent. Look for records of the risk assessment as indicated in section 5. of the guideline or equivalent. |  |
| 11.4.4.4.12. | Has the company communicated the outcome of the MOC risk assessment to people involved in the operation, in case that the risk is changing? |  |  |  |
| 11.4.4.5. | Sample taking |  |  |  |
| 11.4.4.5.1. | If sampling is performed, is there a procedure to carry out the operation? |  | First, the site should have the policy that sampling of containers should be prevented. However, when there is still a strong need for sampling, the site should have a procedure in place.  Hazards that can occur are:  - contamination of staff or third parties  - environmental pollution (air, water, soil)  - safety and/or quality issues of the product (impurities, reaction with moisture/ atmospheric oxygen)  - working on heights (transport of sampling equipment and risk of falling).  If the permit allows, the sampling should be performed by authorized experts, using proper equipment, for taking and transporting samples. For choosing the correct personal protective equipment, the latest version of the SDS should be available.  If sampling does not happen, the question is not applicable. |  |
| **11.4.5.** | **Emergency response & Spill Preparedness** |  | **Emergency response & Spill Preparedness** |  |
| 11.4.5.1. | Containment of spills |  |  |  |
| 11.4.5.1.1. | Is there a containment system for leaks and spillages, which also allows for isolation from site drainage? |  | The loading/unloading area should ideally be graded to slope away, but spilled product should not be allowed to run to other parts of the premises (where ignition sources may be present). Check for uncontrolled drains. |  |
| 11.4.5.1.2. | Does the site have a skid, mobile unit or bunded segregated area to manage the small spillages which cannot be stopped or contained by absorbent materials etc.? |  | Examples of containment facilities could be a container drip tray, or kerbed/ bunded impervious floored area. Refer to section 6.1.1. of the guideline "Safe Storage and handling of containers carrying dangerous goods and hazardous substances" and to SQAS Core, section 4. "On/Off Site Emergency Preparedness and Response". |  |
| 11.4.5.1.3. | For large spillages and significant loss, does the site have a location or equipment that could hold the "total lost" volume of a container? |  | Refer to section 6.1.2. of the guidelines "Safe Storage and handling of containers carrying dangerous goods and hazardous substances". This must be an equipment or location such as a large bund, large volume basin, skid unit or a location that contains the total volume. The reception site must have a liquid tight floor, low surface area and a controlled drainage mechanism. Refer to SQAS Core, Section 4., Emergency Response. |  |
| 11.4.5.2. | Natural Disasters/ Climatological and Geographical Risk |  |  |  |
| 11.4.5.2.1. | Is there a risk assessment covering natural Disasters and or Climatological and Geographical Risks? |  | During heavy rain, the storm drains can become overwhelmed, and the site can be flooded. Especially after a long dry period. Contributing is the reduced absorbing ground at the storage area.  Floods can have a destructive power and have impact on the flooring, infrastructure of the site and leading to floating of containers, loss of containment and contamination of water. For storage of box containers with water-reactive substances, the contact with water might lead to the emission of flammable gases. This can subsequently lead to explosive mixtures with air, with all its consequences, and may endanger the human health and the environment.  High speed winds could a serious risk. Refer to question 11.4.2.2. about stacking.  The assessed company must have a procedure how to receive warnings prior to expected high risk weather conditions (e.g. gale force winds, extreme rainfall, risk of flooding, etc., and the company must have defined - as part of its emergency response plan - detailed steps to mitigate the risks and limit consequences. |  |
| **11.4.6.** | **Equipment release Controls** |  |  |  |
| 11.4.6.1. | Is there a process to validate the condition of equipment as released by the facility, to be taken by the collecting party? |  | There should be a formal process to check the condition of the equipment on the release from the facility. This is called an "Equipment Interchange Receipt". This must be completed when there are damages to report and record. These would be found during the transfer of equipment control between the facility and the collecting party.  Equipment that is not fit for transport should not be released.  This may be *not applicable* where the facility and the collecting party are of the same organisation / company. |  |
| 11.4.6.2. | As part of 11.4.6.1, does the facility take pictures of the container in the release process? |  | Whilst the release process physically may be between driver and operator; photographic evidence provides a visual record of this activity, should issues arise afterwards. These provide evidence of "good condition" of containers when released by depot. |  |
| 11.4.6.3. | With the "In bound" inspections, 11.4.1.2.3.b., this included the CSC data plate for validity. Is the CSC date plate checked to ensure 'in date & valid' before release? |  | Container / transport units which have "CSC plate dates" which have expired at the point of collection; should not be allowed to be released from the facility. The facility should notify the contracted party of expired CSC on the container. |  |
| 11.4.6.4. | Does the facility have a process to manage e.g., special exit inspections, temperature checks, pressure checks or such like in the release of the container? |  | There can be the requirement to confirm e.g., temperature or pressure of container at exit of the facility. Or there could be a requirement from customers or from veterinary or customs authorities. The facility should record the evidence. |  |
| 11.4.6.5. | Regulatory Compliance. |  | When handling or storing ADR Listed products/dangerous goods, the facility has a defined role within ADR in the release of the transport container to any collecting party. The facility should have a process or procedure to manage the following aspects of ADR. |  |
| 11.4.6.5.1. | Does the facility have a process to check the statutory test date of the container at the point of release from the facility? |  | Container/transport units which have "test dates" which have expired during storage should be notified to the collecting party before release of the unit. The ADR regulations allow for movement of containers with expired test dates under specific controls. This is for the transport company/ container operator to manage. However, the facility has obligations within ADR related to this requirement. |  |
| 11.4.6.5.2. | Does the facility have a system to check hazardous cargo transport documents, placards and labelling in compliance with regulations? |  | There should be a system to ensure the container/transport unit has the correct placards, labels - including type, number of and condition - and corresponds to the transport documents, when the equipment is released. |  |
| 11.4.6.5.3. | Does the facility have a process to check the driving license of the collecting driver in relation to ADR? |  | See section 11.4.6. for general security checks. The facility must only release a transport unit whereby the driver holds the correct license for ADR class and ADR Type. |  |
| 11.4.6.5.4. | Does the facility have a process to check that the transport equipment is incompliance with ADR? |  |  |  |
| 11.4.6.6. | Release checks and procedures. |  |  |  |
| 11.4.6.6.1. | Does the facility have a process to verify if the collecting party is *authorized* to collect and remove the container from the facility? |  | The collecting party is the company who is going to pick up the container from the depot.  The facility should have a process that requires the notifying party, those contracted with the facility for the holding of the container; to provide a collection reference (booking/release number) or similar. This then must be matched by the collecting driver, who must present it as part of the release process.  Note: Where the collecting transport party notify in advance of the "release number" there must be in place a process to verify that the driver/ transport unit collecting the container is authorized to do so. |  |
| 11.4.6.6.2. | Is there a process to check visually or physically that all closures are secure to prevent release of product from the transport unit? Including check that there are no residues of material on the outside of the container. |  | The facility may undertake the physical checks by own employee, engage a 3rd party or to be carried out by the collecting party. A safe means and methods of working must be in place to carry this out.  This is applicable to uncleaned and loaded containers  Note:  Any checks of the unit must take into consideration limitations of customs seals, security seals or other, such sealing on the container.  Use of CCTV or similar is an acceptable method of examination. |  |
| 11.4.6.6.3. | Where there are "seals or security tags" on the container, is there a process to verify that these are documented, intact and match with the original check, or has been agreed by any customer should these have been removed or changed? |  | The facility may undertake the physical checks by own employee, engage a 3rd party or to be carried out by the collecting party. A safe means and methods of working must be in place to carry this out.  Note: Any checks of the container seals must take into consideration limitations of any sealing on the unit.  When the seal(s) was/were changed the new seal number(s) must be documented. |  |
| 11.4.6.6.4. | Does the facility have a system or process to record the release of containers from their facility? |  | The facility should have a system to record the release of the container from their facility; this can include the date, time and to whom the container was released. Note: This could be part of a "stock management system". |  |
| **11.4.6.7.** | Cargo Documentation |  |  |  |
| 11.4.6.7.1. | Is there a process to ensure any documentation presented with the container on arrival is returned as required or instructed at the moment of collection? |  | For example, this can include certificates of analysis, original weighbridge tickets, heating or cooling records or any other documentation.  The documents could be different from the original documentation. This is called “neutral delivery”, for example, the origin of the container is not disclosed. |  |
| **11.4.7**. | **Measurement and Management of greenhouse gas (GHG) emissions** |  | **Measurement and Management of greenhouse gas (GHG) emissions.**  The **“Guide for Greenhouse Gas Emissions Accounting for Logistic Sites”** issued by the Fraunhofer Institute for Material Flow and Logistics IML (Jan 2019) was used as basis to create this questionnaire.  [**http://publica.fraunhofer.de/eprints/urn\_nbn\_de\_0011-n-532019-18.pdf**](http://publica.fraunhofer.de/eprints/urn_nbn_de_0011-n-532019-18.pdf) |  |
| **11.4.7.1.** | Scope 1: Emission measurement of fuel consumed |  | Scope 1 emissions include the direct emissions from assets that are owned or controlled by the assessed company and is paid by the company. This includes the combustion of liquid fuels or gases purchased to produce energy, heat, or steam for use in stationary or mobile equipment (e.g. forklifts, lifting and shunting equipment and heating and cooling equipment) and/or buildings associated. |  |
| 11.4.7.1.1. | Does the company know the fuel consumed on an annual basis? |  | Refer to the guideline mentioned in 11.4.7. |  |
| 11.4.7.1.2. | Did the company calculate the emissions **TTW** from the fuel consumed during the last year using the formula: kg CO2e = Σ (fuel (litters) × TTW fuel emission factor (kg CO2e/ litters fuel))? |  | The company will use fuel emission factors from **GLEC framework guideline: "Global Logistics Emissions Council Framework for Logistics Emissions Accounting and Reporting" last version, Module 1**. The document can be downloaded from this link:<https://www.flexmail.eu/f-844a1f54174eb51e> For every type of fuel three factors can be used: **WTT, TTW and WTW.**  - **WTT (Well-to-Tank):** WTT emissions consist of all processes between the source of the energy (the well) through the energy extraction, processing, storage and delivery phases up until the point of use (the tank)  - **TTW ( Tank-to-Wheel):** These are the emissions from fuels combusted to power activities (the wheel).  - **WTW (Well-to-Wheel):** These are emissions from the full fuel life cycle and should be equivalent to the sum of WTT and TTW emissions.  **For this question TTW should be used** |  |
| **11.4.7.2.** | Scope 2: Emissions from electricity |  | **Scope 2 emissions** are indirect emissions from the production and distribution of electricity, heat and steam purchased by the assessed company for use in its own logistics sites, electric vehicles or other owned asset requiring electricity |  |
| 11.4.7.2.1. | Did the company measure the electricity purchased for use in the, electric vehicles, or other owned asset (including offices on site) requiring electricity? |  | Typically, electricity is used for moving cranes, and lighting. |  |
| 11.4.7.2.2. | Did the company calculate the **emissions from the purchased electricity WTT** required in 11.4.7.2.1. during last year with the formula: kg CO2e = Σ (electricity (kWh)× electricity emission factor (kg CO2e/ kWh electricity))? |  | **TTW** is considered to be zero for electricity, all emissions are in the **WTT** stages at the point of use.  The emission factors to be used depend on the electricity origin. **Companies must gather electricity emission factors for the countries or regions where the logistics sites are located.**  Electricity factors by country can also be obtained from the International Energy Agency (IEA): <https://www.iea.org/data-and-statistics/data-product/emissions-factors-2020#emissions-factors> (fee to be paid)  In absence of other data, an EU average electricity factor of 420 g CO2e/kWh can be assumed (source: GLEC framework guideline). Use of individual country mixes may give significantly different values, especially in countries with a highly decarbonized electricity supply. |  |
| **11.4.7.3.** | Scope 3 |  | **Scope 3 emissions** are indirect emissions from the assessed company’s supply chain.  Scope 3 covers the production and distribution of fuels burned in Scope 1 (WTT), transport emissions embedded within purchased goods and services, product use and end-of-life. Scope 3 also includes, for example, subcontracting of forklifts or reach-stackers to move containers in the depot |  |
| 11.4.7.3.1. | Did the company calculate the absolute emissions WTT from the fuel consumed during the last year using the formula  kg CO2e = Σ (fuel (litters) × WTT fuel emission factor (kg CO2e/ litters fuel))? |  | The factor should be obtained from the "Global Logistics Emissions Council Framework for Logistics Emissions Accounting and Reporting" version 2.0. Module 1: [*https://www.flexmail.eu/f-844a1f54174eb51e*](https://www.flexmail.eu/f-844a1f54174eb51e) |  |
| 11.4.7.3.2. | Did the company calculate the absolute emissions WTT from subcontractors during the last year using the formula  kg CO2e = Σ (fuel (litters) × WTT fuel emission factor (kg CO2e/ litters fuel))? |  | The assessed company must know the fuel consumed by the subcontractors working on site. |  |
| **11.4.7.4.** | Calculation of Total emissions (Scope 1, 2 and 3) |  | Measurement of total emissions is necessary because it has direct impact in global warming. |  |
| 11.4.7.4.1. | Did the company calculate the **Total emissions** during last year by adding the emissions from Scope 1, 2 and 3? |  | The following questions should be added: 11.4.7.1.2. + 11.4.7.2.2. + 11.4.7.3.1. |  |
| **11.4.7.5.** | Consolidating and reporting emissions |  |  |  |
|  | Does the company consolidate in a report the total annual emissions in the following form?  - Scope 1 (question 11.4.7.1.2.)  - Scope 2 (question 11.4.7.2.2.)  - Scope 3 (question 11.4.7.3.1.)  Total emissions (question 11.4.7.4.1.) |  |  |  |
| **11.4.7.6.** | **Reducing emissions** |  | In case the assessment covers only a depot, this subsection is applicable. But the depot could be part of other facility (e.g., tank cleaning or warehouse).  It is up to the assessed company to decide if this subsection is going to be assessed separately or integrated in the reducing emission sections of other modules. In the second case the assessor will score this section as not applicable and will record a comment clarifying where the section is assessed. |  |
| 11.4.7.6.1. | Defining strategy, objectives and programme  **The first three questions of this section follow a hierarchy: every question has a level of requirement higher than the precedent one** |  |  |  |
| 11.4.7.6.1.1. | Has the company defined a **strategy** to reduce its GHG emissions, based on the measurements made in 11.4.7.4.1. (total emissions)? |  |  |  |
| 11.4.7.6.1.2. | Has the company defined the **objectives** to reduce **total** **emissions**, based on the measurements made in 11.4.7.4.1. in a multiannual programme? |  | The assessor will check if the reduction is in line with the objective defined by the Smart Mobility Strategy: 90% reduction in greenhouse gas emissions **in transport** by 2050, compared to 1990. |  |
| 11.4.7.6.1.3. | Does the assessed company have a multiannual **programme** to reach the objectives mentioned in 11.4.7.6.1.2.? |  | The programme could be in partnership with FIS or with customers.  To score one, the assessor will check that there is a detailed programme with responsible people and due dates. The programme will include intermediate steps and following up at least on a yearly basis. |  |
| **12.** | **Site Inspection** |  | **Site Inspection** |  |
|  |  |  | An effective management system will be reflected in the site e.g. its content, layout, condition and modus operandi. The scope of the site inspection should cover, if present on the site, the office buildings, the tank cleaning installation, the tank storage, the waste storage area, the tank-heating activity, the handling and storage of packaged goods and the waste treatment system. |  |
| **12.1.** | **Building, Grounds and Fixed Equipment** |  | **Building, Grounds and Fixed Equipment** |  |
| 12.1.1. | Is the building of a good standard? |  | The condition of the buildings gives an indication on how seriously the site management is interested in quality and safe operation, and not only in commercial affairs. This is also important for the image of the company. Look for example if there are damages to the buildings like broken windows. |  |
| 12.1.2. | Is the lighting sufficient? |  | The site lighting system should be such that all movements and operations can be controlled without restrictions and safety hazards. |  |
| 12.1.3. | Is housekeeping at a good standard (clean, tidy, paintwork, etc.)? |  | Housekeeping is a good indication for the organizational efficiency of the site operation. Good housekeeping will help to prevent accidents. Check that emergency exits are not obstructed and that floors and ladders are free of grease. |  |
| 12.1.4. | Are signs for site identification and public safety in place? |  | The site boundary should be clearly defined and marked. Public warning/information signs should be in place to prevent unauthorized or accidental access. |  |
| 12.1.5. | Is a site communication system/evacuation alarm installed (with back-up)? |  | Site communication is important to warn all the employees in case of emergencies. Instructions and evacuation may be vital for the site safety. |  |
| 12.1.6. | Are fences and gates of acceptable standard? |  | The condition of fences and gates is important for security. Holes in fences or gates, or too low fences and gates, are not acceptable. When fences are so low that people can jump over easily the answer should be "No". |  |
| 12.1.7. | Is the site paved according to the requirements and the activities that are taking place? |  | Check the pavement of the various work areas. Storage of containers on unpaved ground, especially stacked containers is not acceptable. |  |
| 12.1.8. | Is the condition of roadways and parking area of an acceptable and safe standard? |  | Look for example if there are potholes or flakes of water on the parking areas. |  |
| 12.1.9. | Is the site location suitable for vehicle access and is there easy movement of trucks around the site? |  | The access to the site should be such that no safety hazard is caused to other traffic (good visibility/no narrow streets). The traffic flow on the site should be logical, transparent and free flowing. |  |
| 12.1.10. | Are there designated walkways away from truck traffic? |  | Walkways prevent uncontrolled traffic flow on the site and protect walking people by organized routes on the site. They should be marked out as a permanent feature. |  |
| 12.1.11. | Is a firefighting system installed? |  | Automatic fire protection may be required if quantities of flammable chemicals handled or stored on the site, exceed defined limits, set by local legislation (Check operating permit and fire brigade instructions). Additionally, flammable cleaning solvents need a separate storage area to prevent impact on the site in case of fire. Check also the presence and validity of adapted fire extinguishers. |  |
| 12.1.12. | Is there sufficient firefighting capability if storing/parking flammable chemicals on site? |  | If flammable chemicals are stored/parked on the site, foam may be needed for firefighting, in accordance with local regulations. This requires a stock of foam producing chemical and foam generating equipment. |  |
| 12.1.13. | Are the inspections of all site safety systems (e.g. fire extinguishers) marked on the equipment? |  | To ensure that the safety devices/equipment will work in the case of an emergency it is vital to perform tests on a regular basis, document the results and mark the equipment. This may be a combination of tests carried out by internal and external parties. Check records and the markings. |  |
| 12.1.14. | Does the fire water pump have emergency power? |  | There should be a second electrical tie-in or electrical pumps should have backup by diesel-pumps. |  |
| 12.1.15. | Is the accessibility of the site and the buildings adequate for fire control? |  | How well can a fire be controlled to minimize damage? Is the access for the fire brigade (with equipment) clear and easy? Buildings should be separated to provide a fire break and to avoid total loss. |  |
| 12.1.16. | Does the cleaning site have emergency exits (for closed buildings and on each cleaning platform)? |  | Can people escape safely out of buildings and from working platforms in case of an emergency? Two exits are vital to avoid that people get trapped-in. |  |
| 12.1.17. | Are emergency exits marked on buildings and kept clear at all times? |  | Check for clear emergency exit markings. |  |
| 12.1.18. | In case of emergency, is there an assured method for safe evacuation of all personnel and is this visibly placarded? |  | Emergency exits should be marked at the site perimeter. There should be an off-site assembly point, head counting and reconciliation system. The emergency plan (summary) should be published in appropriate manner that all employees as well as customers and visitors become aware of the emergency plan immediately when entering e.g. the offices, cleaning areas or workshops. |  |
| 12.1.19. | Is frost protection in place for utility systems? |  | All relevant utility systems should be protected from freezing to ensure safe operation without interruption. This is also applicable for fixed safety showers/eye wash systems on site. |  |
| 12.1.20. | Are facilities available to de-ice the site in winter-conditions? |  | Check that the site has equipment/materials for de-icing. |  |
| 12.1.21. | Are eyewash systems - bottles and safety shower systems available in designated areas within the work area? |  | Safety and eyewash showers should always be installed in the immediate vicinity of working areas where there is potential for a spill. Injured people would not be able to find a remote installation. Check that showers are operational, that they are regularly checked and that the surface underneath is not slippery. Eyewash bottles shall be marked with a "use-by date". The assessor will check that the expire date is valid. |  |
| 12.1.22. | Are caution signs installed (no smoking, eye protection, helmet, etc.)? |  | Caution signs serve to remind people of good practices. Pictograms are more useful than long text. It is important to show people that using safety equipment is in their own interest. |  |
| 12.1.23. | Is the surface drainage and water containment of the site adequate to ensure operations continuity? |  | In case of heavy rains, floods and fire-fighting, the water drainage system and/or the water containment system should be large enough to prevent a long period of business interruption. |  |
| 12.1.24. | Are the first aid posts accessible and appropriately stocked to ensure prompt treatment? |  | The assessor should check compliance with local legislation. The assessor should also spot check if the contents of the first aid kit are complete and are within expiry date. |  |
| **12.2.** | **Tank Cleaning and Decontamination** |  | **Tank Cleaning and Decontamination** |  |
| 12.2.1. | Are hot (steaming) systems and pipe work properly insulated? |  | Check that hot systems (boilers) and pipe work are insulated to protect operational staff from burn wounds. |  |
| 12.2.2. | Is all cleaning equipment (including the platform and hot (steaming) systems and pipe work) protected from collision from trucks/trailers? |  | Check that hot systems (boilers) and pipe work are protected from movement of vehicles. |  |
| 12.2.3. | Are cleaning platforms and stairs free of tripping hazards and drums with chemicals that could leak to lower working areas? |  | These risks should be identified in the risk analysis and adequate measures should be taken such as designated storing on cleaning platforms, closed drums, no loose material/bottles, etc. |  |
| 12.2.4. | Is adapted lighting for vessel entry and inspection available in compliance with the ATEX zoning? |  | After cleaning the tank should be inspected visually. This can be done from the top or by entering the tank. Proper lighting is necessary in both cases and must be intrinsically safe, if flammable vapour concentrations are possible. ATEX Directives 2014/34 and 99/92/EC. |  |
| 12.2.5. | Is equipment available and used to get safely on top and to work safely on top of trailers for cleaning? |  | Falling off of trailers/tanks is a very frequent cause of injury. People should wear safety belts with harness fixed overhead, to prevent injury from fall. Good, safe ladders must be available. E.g.. for inspection, opening hatches,DIRECTIVE 2009/104. |  |
| 12.2.6. | Is equipment available and used by the tank cleaning operators and the drivers to get safely on top and to work safely on top of trailers outside the cleaning bay? |  | Falling off of trailers/tanks is a very frequent cause of injury. People should wear safety belts with harness fixed overhead, to prevent injury from fall when appropriate collective protection is not available. Refer to "Best practice guidelines for safe working at height in the logistics supply chain" <https://cefic.org/library-item/best-practice-guidelines-for-safe-working-at-height-in-the-logistics-supply-chain>  Good, safe ladders or stairs must be available, e.g. for inspection, opening hatches, DIRECTIVE 2009/104. |  |
| 12.2.7. | Are all precaution measures for tank entry available and used as defined in the applicable tank entry permit? |  | This could include oxygen measuring devices, flammable gas detector, independent breathing apparatus, toxic, ….. This question is always applicable, even if the company does not allow operators enter into tanks. In this case the procedure should explicitly mention the prohibition and the measures to be taken in case of accidental falls of objects into the tanks. |  |
| 12.2.8. | Is the rinse water quality assured before use? |  | The physic-chemical properties of the rinse water have to be defined and periodical lab analysis must be carried out. |  |
| 12.2.9. | Are critical air systems filtered and oil-free? |  | To ensure that cleaned tanks are kept clean it is essential to use clean and oil-free air. Mostly, ventilators or air movers are used for drying. Compressed air may also be used for driving spinning heads and here it must be assured that the air is oil-free. If breathing apparatus are used specific air requirements should apply. |  |
| 12.2.10. | Are utility pipelines and valves labelled or colour coded and contents identified? |  | To prevent mistakes in using the different utilities it is important to have proper identification of the pipelines and valves (Colour codes, numbers, product names). |  |
| 12.2.11. | Is the tank cleaning structure sufficiently protected against and free from corrosion to ensure its safety-in-use? |  | Structures might show corrosion from inside. Failure of these structures, whilst in use, could produce dire consequences. |  |
| 12.2.12. | Is the electrical equipment in good condition? |  | This is essential especially if flammables are handled. |  |
| 12.2.13. | Are pumps, pipings and valves in good condition? |  | Check for uncontrolled leaks and emissions. |  |
| 12.2.14. | Is the cleaning instruction available for the operator for each chemical to be cleaned? |  | It is important to have a cleaning procedure with checklist for each chemical. |  |
| 12.2.15. | Are all containers of chemicals properly labelled? |  | To avoid mistakes it is important to properly label all containers containing chemicals (irrespective of size). |  |
| 12.2.16. | Is residue in tank checked by the operator before cleaning starts? |  | Check of quantity and obvious deviation from the product information available. |  |
| 12.2.17. | Are tests and procedures in place to assure that cleaning solutions are removed from tanks? |  | The presence of cleaning solutions can jeopardise the quality of the next load and therefore it is essential to have a checking procedure in place. The procedure to assure that cleaning solutions are removed should be validated by using instruments (like pH meters, conductivity meters) or visual inspections. In case that instruments are used a frequency has to be defined. A tank shall be described as clean when there are no visible traces or odour of the last product or cleaning agent following an inspection from the man-lids. |  |
| 12.2.18. | Does the explosion proof class of the electrical equipment (including mobile telephones) correspond with the products cleaned? |  | Check for ATEX regulation. This includes flammable and solid products that could form explosive atmospheres. |  |
| 12.2.19. | Is an earthing system available and used? |  | Earthing is important to avoid ignition points for explosions/fires in case the "right" chemical mixtures would be present. Look for an earth proving system that provides a positive indication of satisfactory connection to earth (red/green light). |  |
| 12.2.20. | Are adequate systems in place to prevent the truck from driving away without clear agreement from the cleaner? |  | For safety and environmental reasons wheel-chocks (or equivalent) should be used for blocking the wheels in order to prevent uncontrolled movements of the vehicle. Nobody should stay in the cabin during the cleaning operation. |  |
| 12.2.21. | Does the cleaning area have a system guiding the waste waters to the treatment plant? |  | The run-off of the cleaning area has to be controlled by using containment and connection to the water treatmentplant to prevent direct flow into open waters or city sewer systems. | M |
| 12.2.22. | Are floor drain covers in place and in good condition? |  | Undamaged floor drain-covers are important to prevent trip hazards. |  |
| 12.2.23. | Is all possibly contaminated water collected and drained to the public sewer system via the local treatment unit ? |  | The run-off of the cleaning area has to be controlled by using containment and connection to the water treatment plant, to prevent direct flow into open waters, the soil or city sewer systems. The drainage of the storage area for packed goods and residues and all possible polluted rainwater should be handled in the same way as the cleaning waste water before being discharged in the public sewer system or surface water. | M |
| 12.2.24. | Are liquid tight floors and drains in a good condition? |  | No physical ruptures and cracks, no chemical deterioration. |  |
| **12.3.** | **Fixed Storage Tanks** |  | **Fixed Storage Tanks** |  |
|  |  |  | This section applies to storage tanks of fuels and chemicals, required for the operation of the site but excludes intermediate bulk storage of chemicals on behalf of customers or for further distribution. The assessor should complete this section by means of a physical inspection and a check of the documented evidence (e.g. drawings, purchase specifications, license, inspection reports, certificates, etc.). |  |
| 12.3.1. | Are pipelines and valves labelled or colour coded and contents identified? |  | Marking of pipelines and valves is essential to avoid mistakes. |  |
| 12.3.2. | Are permanent hose connections, flexible joints, sight glasses avoided as much as possible? |  | To minimise possibilities for leaks and spills, it is important to eliminate weak points such as hose connections, flex-joints, sight glasses, etc. |  |
| 12.3.3. | Are tank valves closed when operations are down? |  | Valves might leak and therefore it is good practice to close valves in series. By doing so, tank contents will not be lost at once if one valve should fail. |  |
| 12.3.4. | Is spill containment in place for all tanks? |  | The area should have containment to prevent soil and ground water contamination. |  |
| 12.3.5. | Are high level alarms installed on storage tanks? |  | The assessor should look for an overfill protection device. |  |
| 12.3.6. | Is explosion-proof equipment installed if handling flammables? |  | Self-explanatory. |  |
| 12.3.7. | Are hazardous materials segregated (storage/collection system)? |  | To avoid reaction between chemicals it is important to have a good segregation (based upon hazard classification) in storage, handling, treatment and collection systems. |  |
| 12.3.8. | Is there no visible evidence of leaks/ spills (fittings, pumps, tanks, etc.)? |  | Visible leaks and spills are indicative of bad operation and maintenance and therefore also of poor site management. They create long term environmental problems, which are costly to clean up afterwards. |  |
| 12.3.9. | Is the spill containment (e.g. bunding) based on local regulatory requirements and in good condition? |  | Spill containment must be in accordance with local legislation. A possible standard, for example, could be that the containment is designed to hold 100% of the largest tank plus 10% for foam or fire water. Spill containment must be free from cracks. Valves must normally be in closed position to avoid uncontrolled flow-off. |  |
| 12.3.10. | Is each tank properly labelled? |  | Self-explanatory. Refer to product information and GHS labelling requirements. |  |
| 12.3.11. | Are storage tanks properly earthed? |  | Refer to 6.2.1.2.p. |  |
| **12.4.** | **Waste** |  | **Waste** |  |
| **12.4.1.** | **Waste management** |  | **Waste management** |  |
| 12.4.1.1. | Is all waste disposed of according to locally applicable legislation? |  | Check details of the waste disposal arrangements which are in place and if these are in compliance with the relevant regulations applicable for the country of operation. Examples of waste may be waste oil, paper, scrap metal, chemicals, lamps, aerosols, contaminated clothing, used PPE's, etc. | M |
| 12.4.1.2. | Are waste disposal records retained as per legal requirements? |  | The auditor should check and verify from files that all waste is disposed of according to applicable legislation. The filing of waste transfer notes should also be verified. |  |
| **12.4.2.** | **Waste storage area** |  | **Waste storage area** |  |
| 12.4.2.1. | Is the location suitable for the storage of the waste containers? |  | The storage location should be adequately secured to avoid environmental problems. |  |
| 12.4.2.2. | Are the containers/packages suitable for the products stored and in good condition? |  | Are the containers that are used compatible with the waste to be stored? Check conformity with packaging/transportation regulation. Look for evidence. Check if the containers are in good working condition. |  |
| 12.4.2.3. | Is each waste container properly labelled? |  | To avoid uncontrolled reactions, each waste container should be properly labelled with the name of the chemical(s) to be deposited. |  |
| 12.4.2.4. | Is the fire protection of this storage area adapted to the products stored? |  | Give a fair judgment about the system in place. |  |
| 12.4.2.5. | Does the segregation between different hazard classes conform with the local legislation? |  | To avoid reaction between waste streams it is important to have a good segregation (based upon hazard classification) in storage, handling, treatment and collection systems. |  |
| 12.4.2.6. | Is the spill containment in good condition? |  | The spill containment area should be in good condition and must be resistant to the waste stored in this containment. |  |
| **12.4.3.** | **REACH** |  | **REACH** |  |
| 12.4.3.1. | If you recover residues for placing onto the market place, have you considered REACH? |  | If a product is recovered and put on the market the obligations as stipulated within REACH apply. Refer to REGULATION (EC) No 1907/2006. |  |
| **12.5.** | **Emergency equipment** |  | **Emergency equipment** |  |
| 12.5.1. | Is the emergency equipment defined in the emergency plan (based on the risk assessment) present, ready for use and regularly checked? |  | Regulatory inspection and maintenance already covered in chapter 6. |  |
| 12.5.2. | Does emergency equipment include: |  |  |  |
| 12.5.2.a. | eyewash station and/or bottles? |  | Are eye wash bottles available to take to the incident. Check expiry date. |  |
| 12.5.2.b. | absorbents/clean up materials ? |  | Check that a sufficient supply of absorbent/clean up materials are available to proceed to the scene of the incident. |  |
| 12.5.2.c. | drain covers and systems to block drain channels/chutes? |  | In case of unprevented release of residual products or cleaning chemical etc. covers or blocking devices must be used to prevent unauthorised discharges. |  |
| 12.5.2.d. | equipment to rescue a 'man in tank' |  | Such as life lines, harnesses, pulley/tackle, vent systems. If the procedure to rescue a man from the tank mentioned in 9.1.2.2. requires another operator to enter the tank, an additional oxygen detector and an independent respiratory equipment have to be available. |  |
| 12.5.2.e. | personal protective equipment for ALL products to be responded to? |  | The auditor should satisfy himself that suitable PPE is available to cater for all Classes of products when attending an emergency, this can be determined from the Safety Data sheet. |  |
| 12.6. | Contractors working on site |  | Contractors working on site |  |
| 12.6.1. | Are contractors, working on site, provided with relevant health, safety, security, environmental and CSR information to ensure that on site services are performed safely? |  | The assessed company shall take appropriate measures so that employers of workers from any contractor engaged in work in the company receive, in accordance with national laws and/or practices, adequate information concerning the risks and prevention measures as required by the company or to specific tasks.  The contractor employer has to inform his employees.  EU Directive : 89/391/EEG Art. 10 § 2 |  |
| **13.** | **Handling practices of Food contact materials and Feed Products** |  | **Handling practices of Food contact materials and Feed Products** |  |
| **13.1.** | **Is the company applying GMP, GMP+ and/or HACCP principles to the operations?** |  | **Is the company applying GMP, GMP+ and/or HACCP principles to the operations ?** |  |
| 13.1.1. | Are there GMP/GMP+/HACCP (or equivalent) principles part of the quality system? |  | Check if the quality manual, standard operation procedures and other documents contain chapters or parts with references to GMP/HACCP standards (or equivalent standards such as FEMAS (Flavour and Extract Manufacturers Association of the United States), FAMI/QS (European Feed Additives and Premixtures Quality System)). A comment from the assessor is necessary. Which standard has been taken into account when the GMP/HACCP principles have been implemented by the assessed company? E.g. assessed company transports Feed products. Comment: The company has implemented the HACCP principles according to regulation EU183/2005 and 852/2004. |  |
| 13.1.2. | Is there an adequate contamination prevention procedure implemented and maintained based upon a risk assessment? |  | Check if a risk assessment towards potential contamination is in place in combination with adequate contamination prevention procedures. Check if these procedures and the implementation of them can guarantee an acceptable risk level. |  |
| 13.1.3. | Does the management of change procedure consider the impact of changes on the final product quality, performance, composition and regulatory compliance status? |  | Check if the MOC procedure is taking into account those issues including potential influence on the quality towards food products. Refer to SQAS Core 2.1.1.b. |  |
| **13.2.** | **Does the company's personnel policy comply with the special requirements for the handling of Food Contact Materials/Animal Feed Products?** |  | **Does the company's personnel policy comply with the special requirements for the handling of Food Contact Materials/Animal Feed Products ?** |  |
| 13.2.1. | Has the company a sufficient number of qualified employees for these operations? |  | Operational personnel engaged in product sampling, testing, handling, storage, packaging and transportation operations which may affect the quality of Food Contact materials and Feed products should:  - be qualified for the tasks to be performed in accordance with the company policy,  - have received the proper information and / or training for working on sensitive product applications and for using job-specific procedures (SOP’s),  - practice good sanitary and health practices,  - wear clean clothing adequate for the work performed. |  |
| 13.2.2. | Have all (including administrative) personnel, involved in handling and distributing Food Contact materials/ Animal Feed products been made aware of the health risks. |  | All operational, technical and administrative personnel involved in handling and distribution of Food Contact materials and Feed products should be fully aware of the requirements of these guidelines, and be trained accordingly. Check training records. |  |
| 13.2.3. | Have all (including administrative) personnel, involved in handling and distributing Food Contact materials/ Animal Feed products been formally qualified according to written criteria? |  | Check qualification records. Also non-operational personnel (e.g. logistics, marketing, etc.) involved in the administration of Food Contact materials supply chain should have received a proper training focused on the sensitivity of the product applications. |  |
| 13.2.4. | Is there a person with the specific responsibility, appropriate education and the appropriate authority to deal with Food contact materials - Feed issues in your company? |  | Check organisational charts. Verify that this person has enough time and resources to assure compliance with these Guidelines. |  |
| **13.3.** | **Are there appropriate precautions taken to avoid cross-contaminations during operations?** |  | **Are there appropriate precautions taken to avoid cross-contaminations during operations?** |  |
| 13.3.1. | Is the water and the disinfection products that comes into contact with the food contact materials/animal feed materials of a proven suitable quality? |  | Written records of equipment cleaning, maintenance and operations should be maintained. When cleaning of equipment is necessary, for instance in case of product change or maintenance activity, a documented cleaning procedure, validated for effectiveness, should be applied. The water and the disinfection products that is used for such cleaning activities should be of a proven suitable quality. |  |
| 13.3.2. | Is each piece of equipment designed and used in a manner that minimizes the potential for contamination of the product with lubricants, coolants, metal fragments, or other extraneous materials e.g. from pressurised air? |  | Any substance required during the operation, e.g. lubricants or coolants, should not come into contact with Food Contact products. Therefore each piece of equipment used during the process should be designed and used in a manner that minimizes the potential contamination. Design records, practical evidence and maintenance performance/records should be investigated. The substances used as lubricants and coolants should be non-toxic and/or authorised for food grade applications. When pressurised air is used in direct contact with the product special precautions should be taken to avoid any contamination with extraneous materials like hydraulic oil and particles. |  |
| **13.4.** | **Are there adequate and appropriate hygiene measures maintained?** |  | **Are there adequate and appropriate hygiene measures maintained?** |  |
| 13.4.1. | Are sufficient hygiene measures documented, implemented, validated and maintained for personnel, cleaning, warehouses and transportation? |  | Hygiene measures are to be written in procedures, documents, billboards and validated. These are to be communicated and followed by the personnel. Different types of measures could be present depending from the level of hygiene needed/prescribed. |  |
| 13.4.2. | Is a suitable pest control program implemented and maintained ? |  | A pest control program should be based upon a risk analysis. Records of product used, number and place of pest control application, records of "maintenance", inspection of efficiency, etc. |  |
| **13.5.** | **Are procedures in place for complaint handling, product recall and incident management?** |  | **Are procedures in place for complaint handling, product recall and incident management?** |  |
| 13.5.1. | Is there a contamination response procedure in place? |  | Is a procedure present and known on how a contamination should be handled? This procedure has to specify what to do with both small and major contamination including communication requirements. |  |
| 13.5.2. | Are there measures in place to ensure that non-conforming or recalled products are not released without proper authorisation? |  | Procedures have to be present and known. Also the non-conforming or recalled products have to be clearly identified. |  |
| **13.6.** | **Are procedures in place for internal audits?** |  | **Are procedures in place for internal audits?** |  |
| 13.6.1. | Is there a documented plan for internal auditing of all areas referred by the GMP/GMP+ and HACCP questionnaire? |  | On-top of the regular internal audits all areas of this Food contact questionnaire are to be audited within a regular timeframe. |  |
| **13.7.** | **Are appropriate loading and unloading procedures in place?** |  | **Are appropriate loading and unloading procedures in place?** |  |
| 13.7.1. | Does the assessed company seal all valves and openings after cleaning? |  |  |  |