

Case Study Tanker Cleaning

CASE STUDY INFORMATION

This case study aims to offer a practical example on how to use the recently published Guidance Document Tanker Cleaning published by FSSC.

SCENARIO

Company ABC holds certification to FSSC 22000 with the following scope: Production of glucose syrup for use in the food industry. As part of delivering the bulk glucose syrup to customers, the company makes use of subcontracted tanker services. One of these tanker companies is Company X. The logistics department of company ABC arranges the loading schedule with Company X. Company X is an approved service provider.

During the audit, the auditor observes an empty tanker arriving for loading. The auditor witnesses the loading of this tanker during the audit and evaluates the process, including loading requirements. The auditor uses the FSSC22000 Transport Tank Cleaning Guidance as a supporting document.

1. SERVICE PROVIDER APPROVAL

When looking at the cleaning certificate and the corresponding loading documentation, the auditor notices that the tanker company is company A. Company A is not on the approved service provider list. Upon further investigation it is determined that Company A was subcontracted by company X. The auditor asks to see the transport contract with Company X to determine whether subcontracting is allowed and what the conditions of the contract are, including cleaning and loading requirements.

Question	Answer
Should the cleaning requirements be included in the contract with the approved supplier ?	<p>Answer: YES => ISO 22000:2018, 7.1.6</p> <ul style="list-style-type: none"> a) Verify that food tank cleaning requirements has been specified in the contract, service conditions or related document (with transport company or cleaning station). b) In this case it is also important to verify whether or not subcontracting is allowed in the contract and what the conditions are, also relating to cleaning and previous load requirements. c) As part of monitoring of services – what type of monitoring is in place with the transport company – it should not only be related to on-time delivery, but also include adherence to the cleanliness of the tanker and other contract specifications.

2. TRAINING OF THE EMPLOYEES

When the tanker arrives on-site, the cleaning certificate for the tanker is verified by the security officer at the gate. The gate-officer remains at post in his cabin. He does not go outside for visual inspection of the tanker.

After acceptance, the tanker drives towards the loading station. The tanker is loaded from the top man-lids. The load master does a visual check if the tanker is clean and free of excessive odor. After this check the tanker is loaded by the load master.

The auditor wants to validate the level of training of the relevant employees.

Question	Answer
Should there be knowledge within the organization with regards to tank cleaning ?	Answer: YES => ISO 22000:2018, 7.1.2: a) Ensure competence with regard to food tanker cleaning within the organization; e.g. in the HACCP team.
The load master does a visual check from the manlids prior to loading. Is this sufficient ?	Answer: => Guidance Document chapter 2: a) Visual inspection from a distance (inspection from the man-lids) is likely to be inadequate for the food industry. b) What additional measures are in place to verify cleanliness of the tanker e.g. rinse tests? Is this defined in the receiving/loading procedures and in line with the cleaning program validation and associate risk to food safety?
What to audit regarding the knowledge of the employees ?	Answer: => ISO 22000:2018, 7.1.2 ; a) Ensure employees are trained, for example loading personnel on the risks related to food tanker cleaning, including measure to be taken (PRPs, OPRPs or CCPs). Interview the loading personnel on procedure and what is required around tanker acceptance. b) The HACCP team shall have knowledge relating to the hazards of transport tankers to be able to address it properly in the hazard analysis. => ISO 22000:2019, 9.2: the internal auditor shall be suitably trained on aspects of tank transport cleaning.

3. Cleaning and validation

The auditor wants to validate the effectiveness of this particular cleaning. The company provides the cleaning certificate issued by the cleaning station.

The auditor asks on what basis the cleaning certificate is deemed sufficient, if the cleaning programs were validated and an agreed cleaning program defined. Specific attention is given to the auxiliaries such as hoses, pumps and airlines on the tanker.

Question	Answer
<p>How to determine if the externally provided process or service was sufficient to mitigate the potential food safety hazard?</p>	<p>Answer: => ISO 22000:2018, 8.5.1</p> <ul style="list-style-type: none"> a) The operations mapping is key for the implementation of the hazard risk management system. The mapping should at least identify the following steps : determination of the cleaning program - cleaning - cleaning verification - release of the tank. b) Hazards to be included : physical, chemical, microbiological and allergens through a methodological approach such as 5M. (Man - Method - Machine - Material - Management) <p>=> ISO 22000:2018, 8.5.2</p> <ul style="list-style-type: none"> a) Take (improper) food tank cleaning into consideration when carrying out the hazard analysis of all processes. b) Define measures on how to ensure compliance with the set requirements (e. g. internal auditing, necessary trainings, required documentation, checks before loading, and actions in case of detected non-compliance). c) Verify that tank cleaning has been addressed in the hazard analysis, including actions of mitigation and defining the different levels of control points. <p>=> ISO 22000:2018, 8.5.3.:</p> <ul style="list-style-type: none"> a) Validation shall include confirmation that the cleaning protocols established are suitable and effective to ensure food safety hazards are controlled. b) Are there records of the validation of the effectiveness of the particular cleaning program?
<p>Should the auditor check if the hoses were registered as cleaned on the documents, and check if they have end-caps on both sides when stored into the hose tubes ?</p>	<p>Answer: YES => It shall be ensured that the particular hose and its storage compartment was cleaned and that those hoses are suitable for the transported product.</p>
<p>The transport provides a cleaning certificate. Is this sufficient proof of good cleaning by an external specialist provider?</p>	<p>Answer: PARTLY => ISO 22000:2018, 8.8:</p> <ul style="list-style-type: none"> a) A cleaning certificate alone is not sufficient. The cleaning program of the tankers need to be validated as part of the cleaning validation and proven to be suitable for the product in question. b) The organization shall define the verification requirements. c) Prior loads shall be registered and the food company needs to define what the acceptable prior loads are. Full traceability to the transport vehicle, prior loads and relevant cleaning records shall be available.

Also pay special attention that the tanker is marked/ identified as "for foodstuffs only". Pay special attention to removable stickers or stickers on hose-tubes, which can be easily turned out of vision.

4. FOOD DEFENSE

After loading the tanker is closed by the driver after which the tanker moves to a parking location. The driver receives seals to close the tanker tamperproof during transport. Special attention is given by the auditor that the sealing is done under supervision or by the staff of the company ABC. The seal code is recorded on the loading documents to ensure traceability.

ISO 22000: 2018, 8.3: If seals are used – the location and number of security seals, their traceability detail, and the design of seals are to be recorded. If electronic/digital locks are used, also include the accessibility, traceability, and records.

5. INTERNAL AUDITS

After observing the loading process, the auditor reviews the internal audits as part of process control and continuous improvement.

Question	Answer
What information regarding tank cleaning should be available?	<p>Answer:</p> <p>=> ISO 22000:2018, 9.2:</p> <p>a) Internal audits shall include the aspects of food tank supplier approval, transport contracts, cleaning validation and the implementation measures including documentation thereof.</p>
The auditor should ask for nonconformities recorded and their follow-up actions?	<p>Answer: YES.</p> <p>ISO 22000:2018, 10.1:</p> <p>a) Ensure documentation of non-conformities of improper truck cleaning are maintained and followed up with relevant stakeholders and within the defined timelines.</p>

CONCLUSION

Where the organization owns transport tankers or delivers transport services, the traceability and validation of cleaning protocols will go back to cleaning station level. This is one example of a manufacturer making use of transport tankers through their service providers. The situation and level of applicability of the guidance document will depend on the type of organization being audited (manufacturer or transporter) and the product.