



The purpose of this document is to:

- Assist stakeholders from each of the sectors to seek the most efficient depot operational procedures.
- Ensure all parties are aware of others' constraints and organise procedures to alleviate inefficiencies with partner companies.
- Provide a benchmark and a structure to facilitate individual discussions.
- Improve efficiency by providing a platform to structure initiatives.
- Highlight issues that may not be apparent from a remote office location.
- Provide a training reference for new recruits.

Code of Practice: Guiding Principles of Tank Container Depot-Client Management

International Tank Container Organisation



CODE OF PRACTICE: GUIDING PRINCIPLES OF TANK CONTAINER DEPOT-CLIENT MANAGEMENT

Table of Contents

Introduction.....	4
Purpose	4
Corporate Responsibility for Business Ethics and Conduct	4
Anti-trust compliance.....	5
Safety, Health, Environmental and Quality (SHEQ)	5
Safety.....	5
Safety: Client Employees, Surveyors, and Contractors and Others	5
Environmental Policies	5
Training	5
Security, Anti-terrorism.....	6
CCTV	6
Responsible Care	6
Contract	6
Depot Tariff.....	7
Booking-In.....	7
Booking-in (delivery of the tank into depot).....	7
Reporting in	7
Truck Driver information.....	7
Last cargo	7
Cleaning requirement	8
Cleanliness Document.....	8
Client Requirements for the tank	8
Depot Reporting	9
Handling	9
Handling delays.....	9
Photographs.....	9
Independent surveys	9

Joint survey	10
Damage Estimates	10
Undetected damage	10
Damage estimate repair authorisation to repair	10
Repair Package-Deals	10
In Depot	11
Repair specification	11
Handrails fitted to the tank container for unloading/loading terminal operations	11
Quality Assurance	11
Replacement parts (Spare parts)	12
Spare parts (client owned)	12
Periodic and Intermediate Inspection/Test	12
CSC – Convention for Safe Container: Examination Programme	13
Storage	13
Booking-Out.....	14
Booking-Out.....	14
Allocation of units for booking-out.....	14
Booking out instructions	14
Trucking.....	14
Pre-Trip Inspection	15
Cleaning Document	15
Independent Surveys.....	15
Joint Survey.....	15
Stock Turnover.....	15
Quality Management Systems – Audits	16
Responsible Care	16
Invoice and payment.....	16
Insurance.....	16
Internal and external administrative process system (Depot Systems)	16
Telematics	17
Appendix.....	18
About ITCO and Contact	24

Table of Contents of the Appendix

Figure 1: Anti-Trust Compliance "do's and don'ts"	18
Figure 2: Cleaning Documents.....	19
Figure 3: Booking-in Format	20
Figure 4: Booking-out Format	20
Figure 5: Glossary of Terms	20
Figure 6: Example of a Typical Risk Assessment	21

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Code of Practice: Guiding Principles of Tankcontainer Depot – Client Management

Introduction

Purpose

The purpose of this document is to:

- Assist stakeholders from each of the industry sectors to develop standard depot operational procedures.
- Enable stakeholders to be aware of others' constraints and to organise their procedures within the standard to alleviate inefficiencies.
- Provide a benchmark to facilitate operational discussion.
- Highlight operational issues that may not be readily apparent from a remote office location.
- Provide an awareness training reference for new recruits.

The Code of Practice is not compulsory but aims to offer service providers (depots) and their clients, surveyors and visitors guiding principles of depot operations.

There are many depots worldwide that specialise in tank services, many of which follow similar standard processes. It is recognised that these processes may not be entirely standard for valid reasons, e.g. regional or client requirements.

Clients might require their own individual system and a depot with a number of clients might be required to operate several different systems. Clients might include operators, lessors, shippers and surveyors, each with their own objectives. However, there is usually an overlap and, where practical, this overlap should be extended with the goal to bring about standardisation within the industry.

This document itemises the scope of activities enabling depots and clients to review existing procedures and to bring into the scope of the code of practice wherever possible.

There are circumstances where depots or clients might require special procedures but it should be understood that the burden might reduce the others' efficiency.

The benchmark that this document hopes to achieve may prove helpful to enable an eventual transition to a unified standard system.

These procedures, as a first priority, include responsible safe working processes. All parties should act upon and support continuing improvements to safe working.

At all times when discussing and acting on this document, it is paramount that all parties comply with all the appropriate requirements of anti-trust legislation. A check list of anti-trust requirements is provided in the appendix to this document and is additionally displayed at www.itco.org.

The document came about from an initiative at the ITCO General Meeting in November 2012 where a multi discipline work group determined the need for a Code of Practice and prepared the summary from which this document has developed.

Consultation with stakeholders has been the key to progress of the document culminating in further work groups in Rotterdam, September 2013 and Houston, November 2013.

Corporate Responsibility for Business Ethics and Conduct

Companies should develop a comprehensive Code of Business Ethics and Conduct and continue to encourage and strengthen a culture of ethical behaviour and compliance among its worldwide personnel, clients and suppliers. The complexity of regulations in today's business environment requires that employees should be provided with guidance and clarity.

Anti-trust compliance

Attention is drawn to anti-trust legislation and ITCO “Do’s and Don’ts”. At all times when discussing or acting on this document all parties should comply with all the requirements of anti-trust legislation. A check list underlining points of anti-trust legislation is provided in the appendix to this document and is additionally displayed at www.itco.org.

Companies should also implement anti-trust compliance policies specific to their countries of origin and operation.

It is essential that persons are trained, understand and observe all the requirements of national and international anti-trust legislation relevant to their country and role of responsibility.

Safety, Health, Environmental and Quality (SHEQ)

SHEQ should be an important part of company corporate responsibility and governance. Education and awareness programs within the company are essential for a full appreciation and implementation of SHEQ. Periodic reviews for personnel should be held to ensure standards are achieved.

Safety

Safety is the prime requisite for all processes and all parties should commit to making continuous advances to ensure the safety of depot employees, contractors, clients, visitors and the public. Appropriate risk assessment should be undertaken. An example of a typical risk assessment is included in the Appendix.

All parties should ensure:

- Safety is a prime requisite for all processes
- Periodic review of safety performance to identify issues and to action improvement
- Support the requirement to improve safety including by capital investment and process change
- Accept potential loss of flexibility in the knowledge that safe working is the most efficient
- Readily provide the information that safe working practice requires

Safety: Client Employees, Surveyors, and Contractors and Others

When clients (or their appointed surveyors and contractors) visit the depot, they should comply with all the required safety procedures. Clients should ensure:

- All personnel are appropriately trained in safety requirements and hold documentary training evidence for all relevant functions of activity.
- Risk assessment completed.
- Adhere to company, depot and statutory safety requirements.
- Equipped with necessary protective clothing and equipment.
- Take note of SDS (safety data sheet) requirements and recommendations.
- Ensure tank entry permit is in place.
- Be aware of moving vehicles and containers and be conspicuous at all times.
- Liability and personal insurance in place.
- Understand and appreciate hidden depot costs e.g. depot handling and factor into the decision process whether to visit the depot.
- Provide notice of the visit to the depot to enable preparations to be arranged.

Environmental Policies

All industry sectors should ensure environmental policies are in place and acted upon.

Environmental policies meeting the requirements of ISO 14000 Environmental Management series of standards are recommended.

The requirements of statutory Regulation and Standards required by the country of business must also be met.

Depots and clients should assist each other to meet the requirements of their environmental policy.

Training

Trained and qualified personnel are an essential requirement for efficiency and a requirement of safe working legislation.

Regulations require training for health and safety in the work place.

Depots and clients should comply with legislation in the country of operation.

Regulations concerning the transport of dangerous goods require that personnel are trained at the awareness, function specific levels of safety training, as applicable. Security training concerning dangerous goods may also be applicable.

Training is also a requirement of corporate responsibility compliance and anti-trust.

Training should be provided and records maintained for all persons to cover the functions of their roles and their safety.

Security, Anti-terrorism

Depots should provide a secure process for safety, prevention of theft and to meet the requirements of applicable legislation.

Regulations concerning security and anti-terrorism apply to tanks stored under load (dangerous goods) requiring all parties to be in compliance.

- Depots should make provision for security.
- Personnel should be trained.
- Clients should comply with security arrangements.
- Clients should ensure that transport procedures and delivery/release references are secure and confidential.
- Periodically review security and anti-terrorism procedures to ensure fit for purpose.

CCTV

CCTV is an aid to monitoring:

- Security
- Safety
- Tanks in (condition, transporter, time)
- Tanks out (condition, transporter, time)

Responsible Care

Depots and clients are recommended to support and implement the aims of responsible care (an initiative by the European Chemical Transport Association) by incorporating the principles into the

company SHEQ management systems and daily operations.

- Continuously improve the environmental, health and safety performance of the transport operations of chemical goods so as to avoid harm to people and the environment;
- Ensure that proper care is taken to protect the safety and health of all people involved in chemical transport operations;
- Minimize the environmental impact of transport activities;
- Use resources and fuel efficiently and minimize waste;
- Take adequate measures to ensure the security of operations;
- Collect data and report openly on performance, achievements and shortcomings;
- Listen, engage and work with people to understand and address their concerns and expectations;
- Cooperate with governments, international institutions, organisations and authorities in the development and implementation of effective regulations and standards to improve transport safety;
- Encourage the responsible management of all those who are involved in providing a service to them, in particular transport sub-contractors and cleaning stations.

Contract

An agreement between depot and client should be in place and provide the terms and conditions of the services. A contract should include sections defining:

- Contract parties
- Term
- Depot responsibilities
- Client responsibilities
- Charges and invoices
- Insurance
- Remedies
- Miscellaneous
- Termination

Depot Tariff

The depot standard labour hours and materials tariff, including handling rates etc., should be agreed with the client as part of the depot contract.

Booking-In

Booking-in (delivery of the tank into depot)

The key to an efficient operation and a smooth transition of the container from one party to the other is to provide all required information in good time and in the agreed format. Lack of information delays the booking-in process and can quickly develop into a backlog.

- Efficient depot planning requires advance information.
- Efficient operation requires documentation and instructions in place.
- Peak depot activity times should be avoided where possible when arranging trucking in order to enable a smooth transition into depot.

Reporting in

Prior to delivery, clients should provide Information in a standard agreed format. Information required includes:

- Dates - planned delivery and pick-up date (the latter especially if imminent) and subsequent notification in the event of change.
- Purpose – e.g. cleaning, storage, repair, test, off-hire.
- Condition and status – e.g. Empty clean, empty dirty, reported damaged.
- Last Cargo - UN number and proper shipping name and SDS (safety data sheet) as is required.
- Cleaning - Cleaning requirements or status of cleanliness certificate.
- Tank type.
- Special requests.

A typical reporting in document is shown in the Appendix.

Truck Driver information

Drivers should be properly informed of the last cargo, be in possession of necessary documents and be aware of the purpose of the delivery to depot. When arranging trucking clients should ensure:

- Qualified drivers
- Proper information passed to the driver from the contracting office
- Documents available in the acceptable language(s) of the depot

Last cargo

Crucial to a safe and efficient process is the full and proper information of the last cargo. Without this information no actions should take place.

- The information must be in writing and in a language that the receiving depot can understand.
- Regional regulations might apply governing language requirements that concern safety.
- UN number and Proper Shipping Name must be reported.

Cargo name reporting	Required
UN number	YES
Proper shipping name	YES
Technical name (if PSN is N.O.S.)	YES
Abbreviation	NO
Common name (in addition to PSN)	YES
Brand name	NO
Proprietary name	NO
Under pressure or inert gas	YES

Note: UN numbers do not apply to non-regulated cargo commonly referred to as non-dangerous or non-hazardous (non-haz). Nevertheless such substances may be dangerous, albeit below the requirements for classification, and should be handled with appropriate safe procedures.

Where the PSN (proper shipping name) is a N.O.S (not otherwise specified) it should be supplemented by the technical name (the recognised chemical name of the constituents of the substance). This also applies where the PSN is not fully descriptive.

Cleaning requirement

Cleaning may be undertaken to one of a number of standards according to client needs and depot needs to be informed in advance.

- “Clean to standard” defined by industry body e.g. EFTCO or specify alternative.
- Visually clean and verified by full interior inspection.
- Clean to lease off-hire standard ACC.
- Toxic clean (top outlet only)
- Food grade clean
- Action in event of cargo residue
- Valves and fittings cleaned in-situ as standard. Inform depot in the event of special requirements.
- Man-lid seals are cleaned as standard or if not cleanable (due to condition/last cargo) replaced at tariff cost.

Note: if the tank is under pressure or inert blanket or has contained an inert gas, the depot must be informed in advance.

Cleanliness Document

Each clean tank must be issued with a cleaning document detailing at least the minimum requirements (see Appendix)

- If the tank has been issued with a cleaning document prior to booking-in to the depot the cleaning document must be of a suitable type and issue date to meet the depot requirements.
- If the client requires the depot to provide a cleaning document after the tank is clean the depot must be informed of the required document type.

There are differing cleaning documents:

- Cleaning Receipt (wash ticket) - issued by the cleaning contractor.
- EFTCO document - issued in Europe by an EFTCO approved contractor.
- Cleaning Document (Cleaning certificate) - issued by a qualified surveyor after inspection. This may be to ITCO ACC format.
- Entry certificate – issued by a qualified person in order that personnel may safely carryout required tasks. Nb. Regulations govern entry certificate requirements.

Examples of cleaning documents are shown in Appendix.

Client Requirements for the tank

Standard requirements enable the depot processes to function efficiently. When deciding upon requirement clients should consider:

- Cleaning – if cleaning to a specific requirement is required e.g. to off-hire standard, this should be advised along with the type of cleaning document (certificate) required.
- Inspection/estimate – inspection to ACC is the standard option. If alternative requirements are essential to a clients’ business is helpful to base on ACC and pre-inform the depot to inspect to ACC+ (and listing the extra requirements, or ACC – (listing the reduced requirements)
- Estimate – preparing an itemised estimate can be time consuming, especially if there is a requirement for a format different from the depot standard. Package agreements that cover remedial works (up to an agreed sum) reduce administration costs.
- Storage – advice as to the expected actions for the tank allows the depot to store the tank efficiently. Depots plan for a client’s standard process but if there is a change advance information enables appropriate storage location and avoidance of excessive moves to locate tanks buried in stacks.

Reported issues	Proposed remedial action
Tank arrives with information of instruction	Complete standard information requirement in advance
Truck driver has no documentation	Ensure driver provided training and information
Cleaning document improper	Cleaning contractor properly instructed and document checked to meet booking-in requirements
Multiple trucks arrive simultaneously	Plan deliveries to accord with depot capacity

Depot Reporting

Depot reports detailing the units in depot and status will be required by the client at the time of delivery, periodically during the time in depot and at the time of departing the depot.

- Agree a standard depot reporting format and frequency at the time of the finalising the depot contract.

Handling

Handling is one of the major depot costs, requiring capital investment and on-going running and maintenance cost. A lift truck could be a capital investment of about US\$ 250,000 plus the considerable annual running cost of fuel, maintenance and personnel. Handling charges are likely to fund a small part of these costs requiring cross funding from other depot services.

A prime efficiency issue is the number of lift trucks each depot is required to operate and the major factor in this equation is the number of lifts to be undertaken beyond the obvious “lift-in” and “lift-out”. Often there is a requirement for 13 lifts and in many cases up to twenty times (20).

- Lift off truck to store stack
- Lift from stack to clean
- Lift from clean to stack
- Lift from stack to survey
- Lift from survey to stack
- Lift from stack to joint survey
- Lift from joint survey to stack
- Lift from stack to repair
- Lift from repair to quality control
- Lift from repair QC to stack
- Lift from stack to PTI
- Lift from PTI to stack
- Lift from stack to truck out

This example does not take into account the lift moves to access the tank in the stack i.e. moves to other tanks that might be stacked above.

Leased tanks might require more moves resulting from on-hire surveys, photographs and independent cleaning certificates.

In order to reduce handlings, prime actions are:

- Provide information in good time in order that depots may plan and reduce handling.
- Take account of the cost of handling when ordering surveys.
- Repair approval systems that allow for immediate repair.
- Liaise with depot to select tanks for booking-out that are positioned in the storage stack with ease of access.

Handling delays

At peak periods of the day and times of particularly heavy traffic or extreme weather there are likely to be depot handling delays.

Delays can be reduced by proper notice and information that enables depot planning but it should be recognised that certain conditions will result in handling delays.

Depot, clients and their trucking contractors should manage expectations according to prevailing conditions.

Photographs

Photographs are an excellent medium to explain and record an issue but they can add costs, especially so when there is a routine requirement to photograph each tank, in some cases up to 12 photographs per unit. Photograph costs include:

- Labour to take the photograph
- Administration to electronically load and transmit the image
- Handling the tank to make it accessible to the photographer.
- Safety stand-by person in the event of interior photographs.

Independent surveys

Independent surveys are a necessity but there is scope for reducing the number of routine surveys. Surveys result in hidden costs including administration and management time, handling, provision of access equipment, confined entry watch, meetings to convey the outcome and not least the delays to the depot process that surveys inevitably cause. When arranging surveys, clients should consider:

- Routine survey requirement reviewed to determine necessity and options
- Surveyor contracts ensure surveyor qualified and in possession of all safety equipment including protective clothing, certified gas meter, safety torch.
- Surveyor holds appropriate insurance.
- Surveyor trained to regulatory and depot safety requirements.
- Provision made with the depot for working at height.
- Provision made for confined space entry safety attendant.
- Tank access and lift truck booked in advance.

Joint survey

If a joint survey is to be undertaken, clients should ensure:

- Both appointed surveyor and the surveyor appointed by their customer is qualified as above for independent surveys.
- Depot informed of finding and depot response recorded on the survey report.

Damage Estimates

Preparation of damage estimates entails the skilled services of the depot surveyor followed by administration time to process the estimate and transmit to the client. There are a number of factors to consider that would reap efficiency benefits:

- Damage criteria – Use standard ACC. This enables the surveyor to adopt a standard approach and improve accuracy.
- Damage and repair codes – Adopt standard depot coding system and estimate format.
- Special requirements – Inform the depot in advance.
- Tariff – Agree tariff costs in advance.
- Transmitting estimate to client – Agree the standard depot document management system.

Undetected damage

Tank damage repair estimates are mostly undertaken in the open and are subject to all weather conditions and the pressures of completing estimates to the required schedule. Inevitably some damages will be undetected until the repair or quality control stage. For example, damages might be hidden from view, or the extent of the damage might not be apparent without intrusive investigation that takes place once repairs are underway. Procedures need to be in place to remedy missing or under-estimated damages.

Damage estimate repair authorisation to repair

Prompt authorisation of repair requirements ensure that the depot is more able to plan repair production, achieve work continuity and better serve clients. Factors to improve repair authorisation efficiency are:

- Package deals where specific items are pre-authorised to a standard cost.
- Automatic authorisations to a repair cost limit.
- Repair continuity by prompt authorisations enables depots to better use resources.
- Repair delays soon become a backlog.
- Delayed repair authorisations at times of low demand often means repair backlog at the time demand is restored.
- If a commitment has been made to provide a minimum number of repair hours it is incumbent upon both parties to maintain that agreement.

Repair Package-Deals

Increasingly depots are agreeing with clients fixed costs for a range of services to include reporting in, cleaning, a range of repairs and testing. This enables tanks to be quickly moved through the depot process and made available.

- Package deals enable the depot process to run smoothly and for the tank to be promptly made available.
- Package deals are typically for a fixed fee to cover the cost of specific routine items or remedial work up to a fixed maximum.

In Depot

Repair specification

The quality of repairs should be specified as part of the depot agreement. Generally repairs are best carried out to reinstate the damage to “as new” i.e. restore the damaged component to practically the original specification. If the depot is required to employ a range of repair standards differing by client the work might become inefficient and more difficult to control.

- ACC is a manual of damage criteria that defines when damage is at a point that is considered to be unacceptable.
- ACC does not necessarily describe an acceptable repair specification other than to provide guidance to frame and cladding patch repair criteria.
- Agree repair standard “as new”. This is not literally as new in appearance from the factory but as near as is practical to the original specification.
- Alternatively define expectations such as repairs that result in the tank being restored only to the limits of ACC.
- If selective repairs are to be carried out only for the purpose of meeting limited needs of the next operational the risk to the vulnerability to further consequential damage or deterioration should be assessed.

Handrails fitted to the tank container for unloading/loading terminal operations

Working at height procedures, for the purpose of operating a tank container for loading or unloading, require that the unloading/loading terminal provide a suitable gantry.

Alternatively, and generally as a last resort, the container might be fitted with a temporary handrail. This might be a temporary structure fitted by the depot prior to entry to the loading/unloading plant. A risk assessment is required to ensure that the structure is safe to transport on public roads and is fit for purpose.

Tank containers might alternatively be permanently fitted with a collapsible handrail. Such handrails might be of lightweight construction and intended for “balance” rather than full support.

- Clients, when commissioning the fitting of handrails, should ensure that the design is fit for purpose.
- Clients requiring the erection of handrails prior to entry into the loading plant should ensure that this is undertaken safely.
Note: It is reported that some unloading/loading plants are reluctant to permit the erection of the handrail on their premises and it is reported that truck drivers are instructed to erect the handrail prior to plant entry.
- If the handrail is to be fitted at the depot by the truck driver this should only be with the depot agreement and in compliance with depot safety requirements.
- Depot personnel working at height for the purpose of inspection or repair should ensure the depots own working at height requirement is met e.g. gantry, handrail or safety harness.
- Depots should ensure the design specification of the handrail that they supply is fit for purpose.

Quality Assurance

Each repaired tank should be completed to the agreed quality standard and the depot should verify the quality by the depot QA system.

- Depot QA system should be agreed in advance.
- Depots should design their QA system to a recognised standard and seek independent audit and accreditation.
- Client QA, either by in-house engineers or appointed third party surveyor should be undertaken to the agreed standard.
- Client audits of the depot QA system may serve the clients purpose and overcome the delays and handling issues that 100% inspection might cause.
- Client inspections, including that by third party surveyors, should adopt the safety procedures outlined herein.

Replacement parts (Spare parts)

The industry standard procedure is that replacement parts used in the course of repair are fitted “like for like”. This means using materials of the same specification, grade and thickness.

Incorrect replacement parts might impair safety, invalidate the original manufacturer’s warranty as might be detailed in repair manuals/instructions and possibly contravene regulations e.g. CSC in the case of frame repairs.

- Frame material replacement parts should be of the same specification. Most frame material is of high yield grade steel and should be replaced according to the original specification and of the same minimum thickness.
- Insulation and cladding should be of the same specification material.
- Valves and fittings replacements should be the original manufacturer’s parts or compatible specification parts.
- Materials used in shell repairs should be of the same specification and verified by the competent authority surveyor appointed to verify the repair and statutory inspection and test.
- Replacement part quality and source should be agreed by the client.
- Mark-up on the manufacturers’ list price agreed within the terms of the contract.
- Parts supplied by the client (perhaps pre-used valves or fittings from another tank) should be quality checked by the depot prior to use and compensatory mark-up fee within the repair estimate agreed.
- Parts removed from the tank and required to be stored by the depot require a procedure and agreement for holding the inventory, provision of a safe store, storage charges and instruction when to re-use the parts.

Spare parts (client owned)

Parts removed from the tank during modification might be required by the client to be stored in readiness for future use, usually on another of the clients owned tanks.

Procedures and agreements should be in place for the renovation and inspection of the parts, holding

of the stock inventory, provision of a safe store, storage charges and instruction when to re-use the parts.

- Parts should be clean and safe of dangerous substances and the condition recorded prior to storage.
- Parts should be tagged to identify source and the inventory reference number and the inventory record updated
- Decision should be made as to whether to repair the parts and store fit for re-use or to repair at the time of re-use.
- Inventory update frequency should be agreed.
- Instruction as to when to re-use the parts e.g. during a future modification or as part of a routine repair.
- Depots might provide a locked store managed by the depot or a separate locked store entirely managed by the client.
- Storage and insurance costs should be agreed as part of the client/depot contract.
- Depot revenue is derived from both labour and materials mark-up and depots might levy a charge for the re-use of client owned spare parts.

Periodic and Intermediate Inspection/Test

Planning ahead enables an efficient tank test programme to be in place.

Clients should maintain a record of the last and next test for each of the tanks in their fleet and arrange the test in good time prior to expiry.

Depots should ensure the tank is repaired and fit for test prior to the appointed surveyors visit. This should ensure an efficient test, eliminating the cost of a failed test and necessitating a return visit by the surveyor.

- Bringing the test forward to coincide with tank being in depot for repair or storage might be of economic and operational benefit.
- Tanks stored at the depot (after repair) might become due for test. Delaying the test until time of the next booking result in the depot being unable to respond

immediately if the tank is urgently scheduled to be booked-out of depot.

- The validity 5 year period inspection and test date starts from the time of test and it may be of economic benefit to undertake a 5 year test, i.e. to bring the 5yr test forward, in the event of a delayed 2.5 year intermediate test.
- Clients usually agree periodic test survey contracts directly with a survey company and inform the depot of the appointed surveyors contact details.
- Clients usually pay the appointed surveyors fees directly to the survey company and the depot fees directly to the depot.
- Best practice is for the depot to arrange the inspection directly with the appointed surveyor.
- Providing the appointed surveyor with ample notice of a test requirement helps to ensure the surveyor can better plan their work load and attend when required.

CSC – Convention for Safe Container: Examination Programme

CSC requirements are containers within IMDG regulations and require that containers, including tank containers, undergo periodic examinations to ensure that the tanks comply with the safety requirements of the programme. CSC provides the option of periodic examination and an on-going examination in accordance with an approved ACEP scheme.

CSC examination is usually undertaken at the time of the periodic inspection and test that is required by IMDG, ADR-RID, CFR49 and other national regulations. This enables the CSC examination date to be reported on the periodic test certificate.

- If the CSC examination is to be undertaken at the time of periodic test, clients should incorporate the requirement in the agreement with the appointed surveyor.
- Where tanks are operated under ACEP the depot should be informed by the client of the requirements as specified in their ACEP programme.
- Examination of Non-ACEP tanks is required at five years from manufacture and periodically at 30months thereafter. Normally this will coincide with the period

test required by IMDG and other regulations but for non-regulated tanks (non-hazardous) the client should instruct the depot.

Storage

Storage space is a major capital cost to the depot, both in the cost of land, construction of the surface and security fencing. Procedures are required such as block stacking of tanks, to ensure efficient use of the space.

- Depots store tanks in stacks to a height according to their ability to safely handle the tanks taking into account handling equipment, ground condition and weather.
- Depots might aim to segregate stacks of tanks by type, condition and client but this is not always possible due to space restrictions.
- Clients should be aware that the required tank might be buried deep in the stack and the depot might need multiple tank moves to make the tank available. Clients should provide ample notice of requirements.
- There is a limit to the number of tanks that can be removed from storage stacks and set out for inspection at any one time.
- Provision needs to be in place, according to the regional risk, to take preventative measures against severe weather conditions.

Booking-Out

Booking-Out

The key to an efficient operation and a smooth transition of the container from one party to the other is for all parties to provide all required information in good time and in the agreed format. Lack of information delays the process and can quickly develop into a backlog.

- Efficient depot planning requires advance information.
- Efficient operation requires documentation and instructions in place.
- Depots should inform clients of any delays.
- Clients should try to avoid, where possible, arranging trucking schedules for pick up during depot peak activity periods.
- Weather conditions is a major factor, clients consideration of inclement conditions is appreciated.

Allocation of units for booking-out

Efficiency requires time to plan and a procedure that seeks to allow the tanks nearest the front of the stack to be first allocated.

A number of factors come into play e.g. tank type, capacity, T Instruction, test date, notwithstanding the parallel requirement for stock turnaround.

- Prime requirement is adequate notice of the planned booking so as to give the depot time to make the tank available from the storage area and to prepare the tank for booking-out.
- Allocation of units by unit type enables the depot to select available units from the front of the storage stack always keeping general account of stock turnaround if that is a requirement of the client.
- Allocation by unit type requires the depot to be fully informed of the unit type coding system adopted by the client.
- Allocation by cargo compatibility requires full information of the last and the planned cargo.
- Allocation by unit number is arguably the most precise option but could result in the burden of multiple handlings to dig out a

unit buried deep in the storage stack. Optional unit numbers assists the depot.

- When quoting the serial number include the full prefix, serial number and check digit.

Booking out instructions

Standard procedures enable the depot to plan in advance and allocate resources.

If there are special requirements, the detailed instructions should be provided in good time.

- Release reference and trucking company
- Tank serial number and tank type
- Cleaning certificate type
- Special requirements
- Survey requirements
- PTI requirement

Trucking

- Security and prevention of theft requires the depot to be informed in advance of the clients release reference and trucking company name.
- The truck driver should arrive at the depot with the matching release reference and supporting documentation to enable the depot to validate the tank delivery.
- To avoid delays and additional handlings trucking needs to be planned in advance and the depot informed.
- When booking-out a batch of tanks of the types it is more efficient if the client provide the trucking company with a release reference and a list of alternative tank serial numbers applicable to the release reference. This enables the tank to be loaded directly onto the first authorised truck as the tank comes out of the stack. This procedure helps to reduce the waiting time and improve the flow of depot handling.
- CCTV installed to monitor gate movement provides a record of date, time and trucking company.
- Truck drivers should be trained and qualified according to applicable industry requirements to transport bulk liquids. In certain countries regulations apply.
- Truck drivers should carry required safety equipment and safety documents.

Pre-Trip Inspection

Requirements of the pre-trip inspection should be provided by the client. Typical standard procedures check list is as follows:

- Tank type according to allocation
- Condition meets required standard
- Valves, man-way and compartment closed and secure
- Man-lid seal clean and serviceable and compatible material
- Periodic test and CSC valid
- Cleaning certificate valid
- Leak-tightness verified by pneumatic leak-test of the tank.

Additional requirements might include:

- Electric heating
- Glycol heating
- Steam heating
- Temperature gauge

Note: Vacuum test bottom valve

- Vacuum tests of the bottom valve may be required, usually if specified by the loading station.
- Vacuum test results are often unreliable and there is a possibility that the receiving plant might not be able to replicate the successful depot test.
- Vacuum test results might be contested because valves are not necessarily designed to vacuum tightness.
- Failing a vacuum test does not necessarily mean that the tank is not liquid leak-tight, similarly passing the vacuum test does not necessarily prove the tank is liquid leak-tight.

Cleaning Document

- The client should provide instructions concerning the required cleaning document validity date.
- The depot should be advised if a replacement or updated certificate is to be issued and if so the required certificate type (see Appendix)

Independent Surveys

If an independent survey is required arrangements should be made by the client in advance.

Whereas surveys result in hidden costs including administration and management time, handling, provision of access equipment, confined entry watch and meetings to convey the outcome, there are benefits too.

All parties must be assured that the quality of work meets the required specification.

When arranging surveys, clients should consider:

- Review of previous survey reports to determine depot performance and to determine the percentage of surveys commensurate with the standards achieved.
- Surveyor contracts should ensure the surveyor is qualified and in possession of all required safety equipment including protective clothing, certified gas meter, safety torch.
- Surveyor should hold appropriate insurance
- Surveyor should be trained to regulatory and depot safety requirements
- Provision made with the depot for working at height, ladder access into the tank.
- Provision made for confined space entry attendant.
- Tank handling and access booked in advance.

Joint Survey

If a joint survey is to be undertaken, each client should ensure:

- Both appointed surveyors are qualified as detailed above.
- Documentation is provided by the client in advance.
- Findings of survey made know to the depot at the time.
- Clear instructions are provided.

Stock Turnover

- Clients generally aim to maintain stock-turnover and adopt so far as is practical, a "last-in first-out policy".
- Depots, so far as is practical, aim to turnover stock but are generally restricted by space and handling.

- The responsibility for stock turnover is that of the person allocating units but it should be recognised that there is a requirement for flexibility and for the requirement to be a general aim rather than a stringent procedure.

- implementation of effective regulations and standards to improve transport safety;
- Encourage the responsible management of all those who are involved in providing a service to them, in particular transport sub-contractors and cleaning stations.

Quality Management Systems – Audits

Quality management systems provide a means to efficiency.

- Depots and clients both afford a lot of time and effort setting up systems and undergoing audits to achieve accreditation.
- Once an accredited quality system is in place, clients should consider the necessity of expending management time to repeat the entire process to audit the depot.

Responsible Care

Depots and clients are recommended to support and implement the aims of responsible care (an initiative by the European Chemical Transport Association). This requires incorporating the principles into the company SHEQ management systems and daily operations.

- Continuously improve the environmental, health and safety performance of the transport operations of chemical goods so as to avoid harm to people and the environment;
- Ensure that proper care is taken to protect the safety and health of all people involved in chemical transport operations;
- Minimize the environmental impact of transport activities;
- Use resources and fuel efficiently and minimize waste;
- Take adequate measures to ensure the security of operations;
- Collect data and report openly on performance, achievements and shortcomings;
- Listen, engage and work with people to understand and address their concerns and expectations;
- Cooperate with governments, international institutions, organizations and authorities in the development and

Invoice and payment

Procedures concerning invoices and payment schedules should be defined in the contract. Payment should be completed in the agreed time.

An efficient invoicing process is generally aided by:

- Acceptance of electronic billing.
- No requirement to attach a hard copy of electronic back up-estimates and approval documents.

Insurance

All parties need to hold adequate insurance to meet the value of their liabilities and risk.

- The contract between the depot and client should include the scope of insurance liability.
- It might be that both depot and client, via their independent policy, could be each insured for the same risk. This is an issue to investigate to seek potential cost savings.
- Insured values affect premiums and expectations should be made clear at the time of depot contract.
- The obligations of the legal term “liability” might vary in different countries and there might be statutory restrictions to the obligations that may be entered i.e. respective law of the country of the depot might differ to that of an overseas client.

Internal and external administrative process system (Depot Systems)

The dry freight container industry has achieved a degree of standardisation to EDI depot systems and the tank container industry is developing along similar lines and adopting standard practice where compatible.

Adopting standard CEDEX reporting and damage/repair codes is an aid to efficiency.

ISO 9897:1997 provides lists of CEDEX codes used for reporting and coding damage and repairs and ISO is developing an enhanced edition of the standard to incorporate tanks.

It is proposed that the move to standardise tank systems should follow the ISO standards.

When designing new systems the recommendation is to align with ISO.

Telematics

RID/ADR Telematics Working Group initiative is to standardize the approach with TAF TSI (Technical Specification Interoperability – Telematics Freight Industry).

If depots/clients are developing new systems consideration to compatibility should be given.

Appendix

Figure 1: Anti-Trust Compliance "do's and don'ts"

Oversight/supervision

- An ITCO Secretariat representative should be present at each ITCO organised meeting.
- An agenda and minutes should accurately reflect what is discussed, as well as an attendance list; these documents must be kept secure and available
- Consultation with counsel on all questions related to competition law.
- Meeting discussions should be limited to topics on the Agenda.
- Each attendee should be provided with this checklist; a copy must be available at all meetings.

Record keeping

- An agenda and minutes of the meeting should accurately reflect the matters discussed.
- The agenda, minutes and other important documents should be reviewed by directors or other appropriate staff or counsel, in advance of distribution.
- The purposes, structures and authorities of the groups in the meetings should be clearly defined

Vigilance

- Protest against any discussion or meeting activities which may violate this checklist.
- Ask for those activities to be stopped so that appropriate legal check can be made
- Dissociate yourself from any such discussion or activities.
- Leave any meeting in which these activities continue and have it recorded in the minutes.
- Discuss with competitors information not conforming to competition law, including the following:

Prices

- Company/industry prices, price changes & differentials, discounts, allowances and credit terms
- Individual company data on costs, production, capacity (inventories and sales).

Production

- Plans of individual companies concerning the design, production, distribution or marketing of particular products, including proposed territories of customers.
- Changes in production, distribution capacities (other than nameplates capacities) or inventories.

Transportation rates

- Rates or rate policies for individual shipments

Market procedures

- Company bids on contracts for particular products; company procedures for responding to bids
- Matters relating to actual or potential individual suppliers or customers
- Blacklist or boycott customers or suppliers.
- Prohibited discussion topics also apply to social gatherings organised in conjunction with COA meetings.

Figure 2: Cleaning Documents

EFTCO® European Cleaning Document®		unique numbering
1		
2 Customer reference number*		3 Serial number
4 Customer		5 Identification numbers Vehicle Tank, Container
6 Nature of product*		7 Next Load*
8 Previous load Comp: UN No: Name		9 Cleaning Procedures EFTCO Code / Description*
10 Additional Services		
11 Comments		
12 Name cleaner*		13 Time In* Time Out
The cleaning station and the driver confirms that the above service(s) to clean the tank have been carried out (see EFTCO definition of 'clean').		
14 Cleaning Station Name Signature		15 Driver* Name Signature

TANK (CONFINED SPACE) ENTRY PERMIT	
TANK SERIAL NO:	
ISSUED BY (COMPANY):	
PLACE OF ISSUE:	DATE & TIME OF ISSUE:
LAST CARGO & UN NO:	
CLEANING PROCESS:	
VALID FROM: DATE; TIME;	VALID TO: DATE; TIME:
PURPOSE OF ENTRY:	
TESTS OF CONTAMINATES & ATMOSPHERE IN TANK: TEST TYPE: RESULT: ACCEPTABLE: YES - NO	
SAFETY EQUIPMENT REQUIRED:	
SPECIAL CONDITIONS:	
A full examination of the tank has been undertaken and appropriate tests completed. The tank is safe to enter.	
NAME: SIGNED:	

CLEANING RECEIPT
CLEANING COMPANY NAME AND ADDRESS:
TANK NO:
LAST CARGO & UN NO:
CLEANING PROCESS:
PLACE OF ISSUE:
DATE & TIME OF ISSUE:
INSPECTION PROCEDURE:
INSPECTION CARRIED OUT BY: NAME: SIGNED:

CLEANING DOCUMENT:	
SURVEY COMPANY NAME & ADDRESS:	
TANK SERIAL NO:	
INSPECTION DATE & TIME:	
INSPECTION LOCATION:	
CLEANING COMPANY:	
CLEANING PROCEDURE:	
LAST CARGO:	
UN NUMBER:	
EXTERIOR: FRAME TANK & WALKWAY FREE OF CONTAMINATION SPILL BOX FREE OF CONTAMINATION MARKINGS LEGIBLE CARGO LABELS REMOVED	YES NO YES NO YES NO YES NO
INTERIOR: ENTRY MADE INTO TANK FOR INSPECTION FREE OF ODOUR CLEAN & FREE OF CARGO & CONTAMINATION FREE OF CORROSION OR PITTING (IF NO, REPORT DETAIL)	YES NO YES NO YES NO YES NO
VALVES & FITTINGS (FREE OF ALL CONTAMINATION) VALVES MANLID & SEAL SYPHON/DIP TUBE SPILL BOX DRAINS	YES NO YES NO YES NO YES NO
GAS FREE TEST: TEST COMPLETE – READINGS ENTRY PERMIT ISSUED	YES NO YES NO
REMARKS:	
A THOROUGH VISUAL INSPECTION HAS BEEN CARRIED OUT AND THE INTERIOR OF THE TANK, VALVES AND FITTINGS ARE FREE OF CONTAMINATION, CARGO AND ODOUR. THE TANK IS CLEAN AND DRY	
NAME: SIGNED: DATE:	

Figure 3: Booking-in Format

BOOKING IN
CLIENT NAME
REFERENCE NO:
TANK SERIAL NO:
TANK TYPE:
SCHEDULED IN DATE & TIME
BOOKING-IN FOR – CLEANING, STORAGE, REPAIR, TEST, OFF-HIRE
SCHEDULED BOOKING OUT DATE
LAST CARGO
UN NUMBER
CLEANING STATUS – EMPTY DIRTY, EMPTY CLEAN, CLEAN WITH CLEANING DOCUMENT
CLEANING REQUIREMENT – INSERVICE CLEAN, OFF HIRE CLEAN
CLEANING DOCUMENT REQUIRED – CLEAN RECEIPT, CLEANING DOCUMENT ISSUED BY SURVEYOR, EFTCO CLEANING DOCUMENT
CLEANING INVOICE TO:
DAMAGE SURVEY TO ACC, OTHER (STATE)
SPECIAL REQUEST:
HANDLING INVOICE TO:
STORAGE INVOICE TO:
PERIODIC TEST INVOICE TO:
DAMAGE ESTIMATE TO:
NAME:
DATE:

Figure 4: Booking-out Format

BOOKING OUT
CLIENT NAME
REFERENCE NO:
TANK SERIAL NO:
TANK TYPE:
SCHEDULED OUT DATE & TIME:
TRUCKING COMPANY:
SURVEYOR REQUIRED:
CLEANING DOCUMENT – EXISTING – RENEW STATE TYPE REQUIRED
SPECIAL REQUIREMENT:

PTI REQUIREMENT:
NAME:
DATE:

Figure 5: Glossary of Terms

ANTI-TRUST – see ITCO “do’s and don’ts”

BOOKING IN – REPORTING IN, tank received into depot

BOOKING OUT – REPORTING OUT, tank delivered out of depot

CLEANING CERTIFICATE – a document issued by a qualified person declaring that the tank is clean.

CLEANING DOCUMENT – declaration that cleaning has been carried out. Depending on the circumstances this may be a cleanliness receipt, cleanliness certificate, entry permit

CLEANING RECEIPT – document issued by a qualified person of the cleaning company that carried out the cleaning

DELIVER/DELIVERY – booking out

DROP-OFF – booking –in

ESTIMATE – DAMAGE ESTIMATE – a document provided by the depot detailing the items of the tank that are damaged or requiring cleaning or maintenance and provides the costs of remedial work

MSDS – material safety data sheet is issued by the shipper of the substance and provides detailed safety data. See also SDS.

PICK-UP – booking out

QUALIFIED PERSON – a person that is properly trained, competent and experienced and is authorised by employer or governmental body as is appropriate, to undertake the task.

REDELIVER – booking in

REPORTING IN OR OUT – booking in or out

SERVICE PROVIDER – depot

SDS – SAFETY DATA SHEET (previously MSDS) issued by the shipper of the substance and provides detailed safety data.

TRUCKING COMPANY – transporter, contractor providing transport service

Figure 6: Example of a Typical Risk Assessment

Issue:	Rev:	Date:	Page No:
Title: Health & Safety Management System – Procedures Owner: Health & Safety Department Ref: Risk Assessment			
		Date of Assessment:	
Company:		Review Date:	
Work Activity: Field Operations		Depot Name:	
Who might be Harmed and how (Likelihood)		Depot Address:	
Significant Hazards and Environmental Issues (Severity)	Risk Rating S X L = R	Control measures in place to eliminate or reduce risks. (e.g. training, improved work practices, PPE etc.)	
1) Confined Space – working inside tanks and entering freight containers	5 5 25	<ul style="list-style-type: none"> Confined Space Procedure (ref) in place. Instruction specific to work (General Method Statement) issued and acknowledged. Confined Space Entry training provided to tank staff and inspectors Read and familiarise yourself with the depot procedures for recovery from confined space. Note if the depot does not have recovery procedures, refuse to enter confined space/tank. Working at Height training provided to staff and inspectors on(date) Staff / Contractors will not work in situations where safety harnesses / lanyards are required for fall arrest or prevention unless specifically trained to do so and a recovery plan is in place. Safety Procedures Ladders & Stepladders and Access Equipment for Working at Height. (Ref documents) Instruction specific to work (General Method Statement) issued and acknowledged. Freight container roof and tank top inspections will only be of short duration (5-10mins max) and carried out at 1 unit height. Instruction specific to Staff and Inspectors work (General Method Statement) issued and acknowledged. Work to be carried out in segregated or "frozen" areas. At all times remain within the walk way area as dictated by the depot. Never walk under a suspended load. Instruction specific to work (General Method Statement) issued and acknowledged. Dynamic Risk Assessments at point of work carried out and recorded. 	
2) Working at Height	5 5 25	Residual Risk Rating (After Control Measures) S X L = R	
3) Moving Vehicles and Suspended Loads	5 2 10	5 1 5	
4) Pressurised Systems	5 1 5	5 1 5	
Add extra risk items here.			

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Issue:	Rev:	Date:	Page No:
Title: Health & Safety Management System – Procedures Owner: Health & Safety Department Ref: Risk Assessment			

	Company:		Date of Assessment: Review Date:	Page (1 of 2)
	Work Activity: Field Operations		Depot Name: Depot Address:	
Significant Hazards and Environmental Issues (Severity)	Who might be Harmed and how (Likelihood)	Risk Rating S X L = R	Control measures in place to eliminate or reduce risks. (e.g. training, improved work practices, PPE etc.)	Residual Risk Rating (After Control Measures) S X L = R

If there is any doubt about what action to take, consult the Line Manager for advised. The H&S Department may be consulted for further advice/assistance if required

Assessor/Inspector (Print Name):

DECLARATION: I confirm that I have read and understood the hazards. I will adopt & comply with the control measures identified in this Risk Assessment Signature of Inspector:

Risk Rating code: Severity of Hazard, (S), Major (6), Serious (3), Slight (1); Likelihood of occurrence (L) High (5), Medium (3), Low (1); Risk Rating (R) = S x L. Risk rating of 15-25 are unacceptable, 6-14 may require additional control measures, 1-5 are generally acceptable

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Issue: 04	Rev: 04	Date: 01.06.2012	Page No: 3 of 3
Title: Health & Safety Management System – Procedures Owner: Health & Safety Department Ref: Risk Assessment			

Attached are specific procedures as stated on the above Risk Assessment, plus the General Method Statement.

PROCEDURE ATTACHED	CONFIRMATION OF RECEIPT OF ALL DOCUMENTS	
	NAME (PLEASE PRINT)	SIGNATURE
Confined Space Procedure	Date	
Safety Procedures Ladders & Stepladders	Print Name	
Access Equipment for Working at height		
Dynamic Risk Assessments		
General Method Statement		
Fall Arrest Inspection Form and Instructions		

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About ITCO and Contact

Established in 1998, the International Tank Container Organisation represents the international tank container industry to the public and to governmental bodies, with the aim of promoting the industry. With more than 120 members worldwide, ITCO's principle focus is on safety, regulatory, technical and environmental issues.

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