Advanced Certificate in Tank Storage and Terminal Operations in Oil and Gas (Oman)

Security And Risk Management

AAR analysis is a method used to identify the root cause of a problem or an event, it is commonly used in safety and risk management to identify the root cause of an incident or accident, in the context of tank storage and terminal operations, AAR analysis can be used to identify the root cause of a leak or a spill, for example, an AAR analysis of a leak in a storage tank may reveal that the root cause was a corrosion issue that was not properly addressed.

ABC analysis is a method used to categorize inventory items based on their importance and value, in the context of tank storage and terminal operations, ABC analysis can be used to categorize inventory items such as spare parts and materials, for example, critical spare parts may be categorized as A items, while less critical items may be categorized as B or C items.

Abnormal situation is a situation that is not normal or expected, in the context of tank storage and terminal operations, an abnormal situation may be a leak or a spill, or an unexpected change in pressure or temperature, for example, an abnormal situation may be a sudden drop in pressure in a storage tank, which could indicate a leak or other problem.

Access control is the process of controlling who has access to a facility or a system, in the context of tank storage and terminal operations, access control is critical to prevent unauthorized access to the facility, which could pose a safety risk or a security risk, for example, access control may be used to control who has access to the control room or the storage tanks.

Accident investigation is the process of investigating an accident to determine the root cause, in the context of tank storage and terminal operations, accident investigation is critical to identify the root cause of an accident and to prevent similar accidents from occurring in the future, for example, an accident investigation of a leak in a storage tank may reveal that the root cause was a design flaw or a manufacturing defect.

Accountability is the state of being accountable, in the context of tank storage and terminal operations, accountability is critical to ensure that individuals and organizations are responsible for their actions, for example, accountability may be used to ensure that individuals are responsible for following safety procedures and protocols.

ACD system is an automated system used to control and monitor the movement of liquid products, in the context of tank storage and terminal operations, an ACD system can be used to control and monitor the movement of crude oil or refined products, for example, an ACD system may be used to control the flow of oil from a storage tank to a pipeline.

Active threat is a threat that is currently ongoing, in the context of tank storage and terminal operations, an active threat may be a cyber attack or a physical attack, for example, an active threat may be a hacker who is currently attempting to breach the facility's computer system.

Administrative control is a type of control that is used to manage and regulate the activities of an organization, in the context of tank storage and terminal operations, administrative control may be used to manage and regulate the activities of employees, contractors, and visitors, for example, administrative control may be used to ensure that employees are following safety procedures and protocols.

Alarm system is a system used to detect and alert individuals of a potential problem or threat, in the context of tank storage and terminal operations, an alarm system can be used to detect and alert individuals of a leak or a spill, for example, an alarm system may be used to detect a drop in pressure or a change in temperature in a storage tank.
API standard is a standard developed by the American Petroleum Institute, in the context of tank storage and terminal operations, API standards may be used to design and operate storage tanks and other equipment, for example, API standards may be used to design and operate atmospheric storage tanks or pressure vessels.
Asset management is the process of managing and maintaining an organization's assets, in the context of tank storage and terminal operations, asset management may be used to manage and maintain storage tanks, pipelines, and other equipment, for example, asset management may be used to schedule maintenance and inspections of storage tanks.
Assessment tool is a tool used to assess and evaluate the risk of a particular situation or activity, in the context of tank storage and terminal operations, an assessment tool may be used to assess the risk of a leak or a spill, for example, an assessment tool may be used to evaluate the likelihood and impact of a leak or spill.
Audit trail is a record of all changes made to a system or process, in the context of tank storage and terminal operations, an audit trail can be used to track changes made to the facility's computer system or process controls, for example, an audit trail may be used to track changes made to the facility's access control system.
Authentication is the process of verifying the identity of an individual or a system, in the context of tank storage and terminal operations, authentication is critical to prevent unauthorized access to the facility, which could pose a safety risk or a security risk, for example, authentication may be used to verify the identity of employees or contractors before allowing them to access the facility.
Authorization is the process of granting access to a system or a facility, in the context of tank storage and terminal operations, authorization is critical to ensure that only authorized individuals have access to the facility, which could pose a safety risk or a security risk, for example, authorization may be used to grant access to the facility to employees or contractors.
Availability is the state of being available, in the context of tank storage and terminal operations, availability is critical to ensure that the facility is operating at maximum capacity, for example, availability may be used to ensure that storage tanks are available to store crude oil or refined products.
Backup system is a system used to provide backup power or functionality in the event of a failure, in the context of tank storage and terminal operations, a backup system can be used to provide backup power to the facility in the event of a power outage, for example, a backup system may be used to provide backup power to the facility's pumps and valves.
Barrier analysis is a method used to identify and evaluate the barriers that prevent a particular event or situation from occurring, in the context of tank storage and terminal operations, barrier analysis can be used to identify and evaluate the barriers that prevent a leak or a spill, for example, barrier analysis may be used to evaluate the effectiveness of a containment system in preventing a leak or spill.
Basic safety is the minimum level of safety required to prevent harm to individuals or the environment, in the context of tank storage and terminal operations, basic safety may include personal protective equipment, emergency response planning, and hazard identification, for example, basic safety may include

the use of hard hats and safety glasses to prevent injury.
BMP plan is a plan used to manage and prevent stormwater pollution, in the context of tank storage and terminal operations, a BMP plan can be used to manage and prevent stormwater pollution, for example, a BMP plan may include the use of best management practices such as spill prevention and containment systems.
Bow tie analysis is a method used to evaluate the risk of a particular situation or activity, in the context of tank storage and terminal operations, bow tie analysis can be used to evaluate the risk of a leak or a spill, for example, bow tie analysis may be used to evaluate the likelihood and impact of a leak or spill.
Business continuity is the ability of an organization to continue operating in the event of a disruption, in the context of tank storage and terminal operations, business continuity is critical to ensure that the facility can continue operating in the event of a disruption, for example, business continuity may include the use of backup systems and emergency response planning.
Certification is the process of verifying that an individual or a system meets a particular standard or requirement, in the context of tank storage and terminal operations, certification is critical to ensure that individuals and systems meet the required standards and requirements, for example, certification may be used to verify that employees have completed the required training and have the necessary qualifications.
Classification system is a system used to categorize and classify individuals, systems, or equipment based on their risk or hazard level, in the context of tank storage and terminal operations, a classification system can be used to categorize and classify storage tanks and other equipment based on their risk or hazard level, for example, a classification system may be used to categorize storage tanks as high, medium, or low risk.
Compliance audit is an audit used to evaluate an organization's compliance with a particular standard or requirement, in the context of tank storage and terminal operations, a compliance audit can be used to evaluate the facility's compliance with safety and environmental regulations, for example, a compliance audit may be used to evaluate the facility's compliance with API standards or OSHA regulations.
Consequence analysis is a method used to evaluate the potential consequences of a particular event or situation, in the context of tank storage and terminal operations, consequence analysis can be used to evaluate the potential consequences of a leak or a spill, for example, consequence analysis may be used to evaluate the potential environmental and health impacts of a leak or spill.
Containment system is a system used to prevent the release of a hazardous substance into the environment, in the context of tank storage and terminal operations, a containment system can be used to prevent the release of crude oil or refined products into the environment, for example, a containment system may be used to prevent a leak or a spill from a storage tank.
Control measure is a measure used to prevent or mitigate a particular risk or hazard, in the context of tank storage and terminal operations, control measures may include engineering controls, administrative controls, or personal protective equipment, for example, control measures may include the use of valves and pumps to control the flow of liquid products.
Corrective action is an action taken to correct a particular problem or deficiency, in the context of tank storage and terminal operations, corrective action may be taken to correct a leak or a spill, for example, corrective action may include the use of repair techniques or replacement of faulty equipment.
Countermeasure is a measure used to counter a particular threat or risk, in the context of tank storage and terminal operations, countermeasures may include security measures, safety measures, or environmental measures, for example, countermeasures may include the use of access control systems or surveillance

systems to prevent unauthorized access to the facility.
CP plan is a plan used to manage and prevent crisis situations, in the context of tank storage and terminal operations, a CP plan can be used to manage and prevent crisis situations such as a leak or a spill, for example, a CP plan may include the use of emergency response planning and business continuity planning.
Critical infrastructure is infrastructure that is critical to the operation of an organization, in the context of tank storage and terminal operations, critical infrastructure may include storage tanks, pipelines, and other equipment, for example, critical infrastructure may include the facility's computer system or control system.
Crisis management is the process of managing and responding to a crisis situation, in the context of tank storage and terminal operations, crisis management may include the use of emergency response planning, business continuity planning, and communication planning, for example, crisis management may include the use of a crisis management team to respond to a leak or a spill.
Cyber security is the process of protecting an organization's computer systems and networks from cyber threats, in the context of tank storage and terminal operations, cyber security is critical to prevent unauthorized access to the facility's computer systems, which could pose a safety risk or a security risk, for example, cyber security may include the use of firewalls and intrusion detection systems.
Damage control is the process of controlling and mitigating damage to an organization's assets, in the context of tank storage and terminal operations, damage control may include the use of repair techniques or replacement of faulty equipment, for example, damage control may include the use of containment systems to prevent a leak or a spill.
Data analysis is the process of analyzing data to identify trends and patterns, in the context of tank storage and terminal operations, data analysis can be used to analyze data on safety and environmental performance, for example, data analysis may be used to analyze data on incident rates or emission levels.
Design review is the process of reviewing and evaluating the design of a system or a facility, in the context of tank storage and terminal operations, design review may include the use of hazard identification and risk assessment techniques, for example, design review may include the use of HAZOP or HAZID techniques to identify and evaluate potential hazards.
Disaster recovery is the process of recovering from a disaster or a crisis situation, in the context of tank storage and terminal operations, disaster recovery may include the use of business continuity planning and emergency response planning, for example, disaster recovery may include the use of a disaster recovery team to respond to a leak or a spill.
Dispersion modeling is a method used to model and predict the dispersion of a hazardous substance in the environment, in the context of tank storage and terminal operations, dispersion modeling can be used to model and predict the dispersion of crude oil or refined products in the event of a leak or a spill, for example, dispersion modeling may be used to predict the environmental and health impacts of a leak or spill.
Dose response is the relationship between the dose of a hazardous substance and its effect on the environment or human health, in the context of tank storage and terminal operations, dose response may be used to evaluate the potential environmental and health impacts of a leak or a spill, for example, dose response may be used to evaluate the potential cancer risk or birth defect risk associated with exposure to a hazardous substance.
Drainage system is a system used to manage and prevent stormwater pollution, in the context of tank storage and terminal operations, a drainage system can be used to manage and prevent stormwater

pollution, for example, a drainage system may include the use of stormwater ponds or wetlands to manage and prevent stormwater pollution.
Ecological risk is the risk of harm to the environment, in the context of tank storage and terminal operations, ecological risk may include the risk of harm to aquatic or terrestrial ecosystems, for example, ecological risk may include the risk of harm to wildlife or fish populations.
EHS management is the process of managing and integrating environmental, health, and safety management systems, in the context of tank storage and terminal operations, EHS management may include the use of ISO 14001, ISO 45001, and ISO 9001 standards, for example, EHS management may include the use of a management system to manage and integrate EHS activities.
Emergency response is the process of responding to an emergency situation, in the context of tank storage and terminal operations, emergency response may include the use of emergency response planning, crisis management, and business continuity planning, for example, emergency response may include the use of a spill response team to respond to a leak or a spill.
Energy efficiency is the process of reducing energy consumption and improving energy efficiency, in the context of tank storage and terminal operations, energy efficiency may include the use of energy-efficient equipment or process improvements, for example, energy efficiency may include the use of LED lighting or energy-efficient pumps.
Environmental impact is the impact of an organization's activities on the environment, in the context of tank storage and terminal operations, environmental impact may include the impact of air emissions, water pollution, or waste generation, for example, environmental impact may include the impact of crude oil or refined products on the environment.
Environmental management is the process of managing and reducing an organization's environmental impact, in the context of tank storage and terminal operations, environmental management may include the use of ISO 14001 standard, for example, environmental management may include the use of a management system to manage and reduce environmental impact.
EPA regulation is a regulation developed by the Environmental Protection Agency, in the context of tank storage and terminal operations, EPA regulations may include regulations related to air emissions, water pollution, or waste generation, for example, EPA regulations may include regulations related to the storage and handling of hazardous substances.
Equipment inspection is the process of inspecting and maintaining equipment to ensure it is in good working condition, in the context of tank storage and terminal operations, equipment inspection may include the use of API standards or OSHA regulations, for example, equipment inspection may include the use of a inspection checklist to ensure that equipment is in good working condition.
ER plan is a plan used to manage and respond to emergency situations, in the context of tank storage and terminal operations, an ER plan can be used to manage and respond to emergency situations such as a leak or a spill, for example, an ER plan may include the use of emergency response planning, crisis management, and business continuity planning.
ESD system is a system used to prevent and mitigate the effects of an electrical discharge, in the context of tank storage and terminal operations, an ESD system can be used to prevent and mitigate the effects of an electrical discharge, for example, an ESD system may be used to prevent a static discharge that could ignite a flammable substance.
Exposure assessment is the process of assessing and evaluating the exposure of individuals or the

environment to a hazardous substance, in the context of tank storage and terminal operations, exposure assessment may include the use of monitoring and modeling techniques, for example, exposure assessment may include the use of air monitoring or water sampling to assess exposure to a hazardous substance.
Failure mode is a mode of failure that can occur in a system or a component, in the context of tank storage and terminal operations, failure mode may include the failure of a pump or a valve, for example, failure mode may include the failure of a pressure relief valve that could lead to a leak or a spill.
Fire safety is the process of managing and reducing the risk of fire, in the context of tank storage and terminal operations, fire safety may include the use of fire detection and suppression systems, for example, fire safety may include the use of fire alarms and sprinkler systems.
Flow rate is the rate at which a fluid flows through a pipe or a system, in the context of tank storage and terminal operations, flow rate may include the flow rate of crude oil or refined products, for example, flow rate may include the flow rate of oil from a storage tank to a pipeline.
Forecasting tool is a tool used to predict and forecast future events or trends, in the context of tank storage and terminal operations, forecasting tools may include the use of statistical models or machine learning algorithms, for example, forecasting tools may be used to predict demand for crude oil or refined products.
Functional safety is the process of managing and reducing the risk of functional failures, in the context of tank storage and terminal operations, functional safety may include the use of functional safety assessments and risk analyses, for example, functional safety may include the use of HAZOP or HAZID techniques to identify and evaluate potential hazards.
Gas detection is the process of detecting and monitoring gas levels in a facility or a system, in the context of tank storage and terminal operations, gas detection may include the use of gas detectors or monitors, for example, gas detection may include the use of hydrogen sulfide detectors or explosive gas detectors.
Hazard analysis is the process of identifying and evaluating potential hazards, in the context of tank storage and terminal operations, hazard analysis may include the use of HAZOP or HAZID techniques, for example, hazard analysis may include the use of a hazard matrix to identify and evaluate potential hazards.
Hazard identification is the process of identifying potential hazards, in the context of tank storage and terminal operations, hazard identification may include the use of checklists or guidelines, for example, hazard identification may include the use of a hazard checklist to identify potential hazards.
HCL system is a system used to manage and prevent the release of hazardous chemicals, in the context of tank storage and terminal operations, an HCL system can be used to manage and prevent the release of hazardous chemicals, for example, an HCL system may be used to manage and prevent the release of hydrogen sulfide or ammonia.
Health risk is the risk of harm to human health, in the context of tank storage and terminal operations, health risk may include the risk of cancer, birth defects, or other health effects, for example, health risk may include the risk of exposure to hazardous substances such as benzene or toluene.
HSE management is the process of managing and integrating health, safety, and environmental management systems, in the context of tank storage and terminal operations, HSE management may include the use of ISO 14001, ISO 45001, and ISO 9001 standards, for example, HSE management may include the use of a management system to manage and integrate HSE activities.
Human factors is the study of how humans interact with systems and equipment, in the context of tank storage and terminal operations, human factors may include the study of how operators interact with control systems or equipment, for example, human factors may include the study of how operators respond

to alerts or alarms.
Hydrocarbon detection is the process of detecting and monitoring hydrocarbon levels in a facility or a system, in the context of tank storage and terminal operations, hydrocarbon detection may include the use of hydrocarbon detectors or monitors, for example, hydrocarbon detection may include the use of gas detectors or liquid detectors.
IA plan is a plan used to manage and respond to internal audits, in the context of tank storage and terminal operations, an IA plan can be used to manage and respond to internal audits, for example, an IA plan may include the use of audit checklists or guidelines.
Incident investigation is the process of investigating an incident to determine the root cause, in the context of tank storage and terminal operations, incident investigation may include the use of root cause analysis or failure mode analysis, for example, incident investigation may include the use of a incident investigation team to investigate a leak or a spill.
Inspection plan is a plan used to manage and conduct inspections, in the context of tank storage and terminal operations, an inspection plan can be used to manage and conduct inspections of storage tanks and other equipment, for example, an inspection plan may include the use of API standards or OSHA regulations.
Instrument calibration is the process of calibrating instruments to ensure accuracy and reliability, in the context of tank storage and terminal operations, instrument calibration may include the use of calibration procedures or guidelines, for example, instrument calibration may include the use of a calibration checklist to ensure that instruments are properly calibrated.
Integrity management is the process of managing and maintaining the integrity of a system or a facility, in the context of tank storage and terminal operations, integrity management may include the use of API standards or OSHA regulations, for example, integrity management may include the use of a management system to manage and maintain the integrity of storage tanks and other equipment.
Inventory management is the process of managing and controlling inventory levels, in the context of tank storage and terminal operations, inventory management may include the use of inventory tracking systems or just-in-time inventory systems, for example, inventory management may include the use of a management system to manage and control inventory levels of crude oil or refined products.
ISO standard is a standard developed by the International Organization for Standardization, in the context of tank storage and terminal operations, ISO standards may include ISO 14001, ISO 45001, and ISO 9001 standards, for example, ISO standards may include the use of a management system to manage and integrate environmental, health, and safety activities.
Job safety is the process of managing and reducing the risk of injury or illness to employees, in the context of tank storage and terminal operations, job safety may include the use of job safety analyses or hazard assessments, for example, job safety may include the use of a job safety checklist to identify and evaluate potential hazards.
Leak detection is the process of detecting and monitoring leaks in a facility or a system, in the context of tank storage and terminal operations, leak detection may include the use of leak detectors or monitors, for example, leak detection may include the use of acoustic emission detectors or thermal imaging cameras.
Level measurement is the process of measuring the level of a liquid or a gas in a tank or a system, in the context of tank storage and terminal operations, level measurement may include the use of level sensors or transmitters, for example, level measurement may include the use of radar level sensors or ultrasonic level

sensors.
LNG terminal is a terminal used to store and handle liquefied natural gas, in the context of tank storage and terminal operations, an LNG terminal can be used to store and handle LNG, for example, an LNG terminal may include the use of storage tanks and regasification facilities.
Loop current is the current that flows through a control loop, in the context of tank storage and terminal operations, loop current may include the current that flows through a control valve or a pump, for example, loop current may include the current that flows through a level control loop or a pressure control loop.
Loss prevention is the process of preventing and minimizing losses, in the context of tank storage and terminal operations, loss prevention may include the use of loss prevention techniques or risk management strategies, for example, loss prevention may include the use of a management system to prevent and minimize losses.
MA plan is a plan used to manage and respond to major accidents, in the context of tank storage and terminal operations, an MA plan can be used to manage and respond to major accidents such as a leak or a spill, for example, an MA plan may include the use of emergency response planning, crisis management, and business continuity planning.
Maintenance scheduling is the process of scheduling and managing maintenance activities, in the context of tank storage and terminal operations, maintenance scheduling may include the use of maintenance schedules or planning tools, for example, maintenance scheduling may include the use of a maintenance management system to schedule and manage maintenance activities.
Material balance is the process of balancing and reconciling material quantities, in the context of tank storage and terminal operations, material balance may include the use of material balance equations or inventory tracking systems, for example, material balance may include the use of a management system to balance and reconcile material quantities of crude oil or refined products.
Meter calibration is the process of calibrating meters to ensure accuracy and reliability, in the context of tank storage and terminal operations, meter calibration may include the use of calibration procedures or guidelines, for example, meter calibration may include the use of a calibration checklist to ensure that meters are properly calibrated.
MOC plan is a plan used to manage and control changes to a facility or a system, in the context of tank storage and terminal operations, an MOC plan can be used to manage and control changes to storage tanks and other equipment, for example, an MOC plan may include the use of change management procedures or approval processes.
Monitoring system is a system used to monitor and detect changes in a facility or a system, in the context of tank storage and terminal operations, a monitoring system can be used to monitor and detect changes in pressure, temperature, or level, for example, a monitoring system may include the use of sensors or transmitters to monitor and detect changes.
NDE technique is a non-destructive evaluation technique used to inspect and evaluate the condition of equipment or a facility, in the context of tank storage and terminal operations, NDE techniques may include the use of ultrasonic testing or radiographic testing, for example