**Part A - Risk Assessment**

**This risk assessment must be reviewed at the job site and any amendments recorded**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Assessed by |  | Approved by |  | Approved date |  |
| Description of Work | Removal of all solid waste and Cleaning of mud Tanks on board the vessel to brine standard |

|  | **Risk** |  | **Residual Risk** |
| --- | --- | --- | --- |
| **Task/Operation** | **Hazards** | **People affected** | **Possible Effects** | **L** | **S** | **R** | **Control Measures** | **L** | **S** | **R** |
| Working onboard a 3rd party supply vessel | 3rd party work activities | All personnel | Major Injury/Fatality | 3 | 5 | 15 | * All personnel must attend vessel specific inductions prior to commencing work.
* All personnel must adhere to the sites safety rules and procedures specific to Port and vessel.
* PPE specific to Site rules to be worn; this includes but is not restricted to coveralls, safety footwear, hard hat and gloves
* Beware of 3rd party activities and do not cross 3rd party barriers without permission.
* Be aware of cranes working and lifting loads overhead – Do not walk underneath any load
* Be aware of forklift trucks operating on quayside
 | 1 | 5 | 5 |
| Working over/near water | All Personnel | Major Injury/Fatality | 4 | 5 | 20 | * Personnel on Quayside to remain at 2 meters from edge at all times
 | 1 | 5 | 5 |
| Set-up and de-rigging equipment Set-up and de-rigging equipment Set-up and de-rigging equipment  | Slips, trips & falls | All personnel | Major injury, ill health or hospital stay.  | 4 | 4 | 16 | * Remove potential trip hazards; if not possible barrier off or mark and brief team.
* Use handrails when climbing stairs and trailing hand technique when descending; do not carry heavy/bulky items and always keep at least 1 hand free to hold handrails
* Maintain good housekeeping around work area
* Ensure hoses are routed correctly
 | 1 | 4 | 4 |
| Pinch Points | Operatives | Restricted work case, over 7 days lost time | 5 | 3 | 15 | * Gloves to be worn at all times when carrying out tasks that carry a pinch hazard to the hands.
* Care must be taken when open closing container doors.
* When entering/exiting containers in windy conditions, container door/s must be tied back.
* Beware of pinch points when connecting / disconnecting hoses.
* Opening and closing of skip lids is a two man operation and lids must be lifted by the handles when transferring onto skips.
* All vacuum skips must have enough clearance around all sides to ensure that there is adequate room and access when changing the vacuum skips lids between skips.
 | 1 | 3 | 3 |
| Manual Handling | Operatives | Major injury, ill health or hospital stay.  | 4 | 4 | 16 | * All personnel to have undertaken manual handling training.
* Check weight tape on all items to be moved or carried:
* **Red Tape**– crane/FLT to be used, client to control lift.
* **Amber Tape** – manual handling assessment to be completed to identify further controls;
* **Green Tape** – assessment indicates low risk but load must still be assessed before lifting
* Rigging and slinging of equipment must be carried out by client personnel
* Items which require crane to manoeuvre must be supervised by a client supplied Banksman and planned in advance by on site supervisor.
* If any personnel are unsure, they must **STOP!** and asses the load and/or speak to the supervisor.
 | 1 | 4 | 4 |
| Working With Hoses Under Pressure | All Personnel | Major Injury/Fatality | 5 | 5 | 25 | * Hoses should be visually checked to ensure they are fit for purpose.
* Care should be taken at all times when coupling and uncoupling hoses.
* Hoses must be de-pressurised prior to disconnecting and when not in use.
* Suspended hoses are to be tied off and prevented from catching or rubbing on sharp edges, including tank hatches, during operations.
* Whip checks and R-pins (where applicable) are to be fitted to all connection points.
* Only use hoses which are uniquely identified and hold a current pressure test certificate.
* Only the correct pressure fittings are to be used which are compatible with hoses and have a safe working pressure greater than the maximum pressure of the system.
 | 1 | 5 | 5 |
| Setting up temporary lighting /Electric Shock | All Personnel | Major Injury/Fatality | 5 | 5 | 25 | * Only ex lighting to be used in confined spaces.
* Only use equipment with a current PAT test ID label attached.
* Care must be taken to keep connections dry.
* Cables to be routed away from walkways
* Extension reels and leads to be fully rolled out to prevent heat build-up.
 | 1 | 5 | 5 |
| Entering, exiting and working within confined spaceEntering, exiting and working within confined spaceEntering, exiting and working within confined space | Ingress of gases, liquids or solids into confined space – Mechanical isolations | All Personnel | Serious injury / Fatality / Major pollution to Environment | 3 | 5 | 15 | * Isolation to be raised with permit to work before starting each shift and isolations to be checked at this point.
* Supervisor to visually check that isolations have been implemented and locked off by vessel personnel and ensure that these isolations are adequate.
* Isolation certificate must be issued stating that the isolations have been implemented and signed by all parties.
 | 1 | 5 | 5 |
| Entering/exiting confined space/ Working at height | All Personnel | Major Injury /Fatality | 5 | 5 | 25 | * All personnel trained in working at height.
* Barriers and signs to be erected to restrict access to third parties.
* Safety harnesses connected to the retractable fall arrest inertia reel for entering/exiting tank.
* Use only fixed ladders and stairways.
* Operatives must maintain 3-points of contact with ladders at all times.
* Operatives must not carry equipment on ladders.
* All equipment must be lowered into or removed from the confined space securely tied to a suitable rope.
* Personnel must move away from the access hatch during raising/lowering of equipment.
* When using the scaffold for HP jetting, all personnel must be attached directly to the inertia reel as scaffold has bee designed with a single hand rail and no toe boards to allow access for jetting operations.
 | 1 | 5 | 5 |
| Confined Space working – poor atmospheric conditions and restricted access/egress | All Personnel | Major Injury /Fatality | 5 | 5 | 25 | * Only Personnel trained in Vessel Entry/Confined Space procedures to enter/work in confined space.
* All work to be carried out in accordance with TIPA/Client Vessel Entry and Confined Space Procedure.
* Confined space to be adequately force vented prior to entry until such time as gas levels have reached an acceptable level.
* A rescue plan must be devised prior to any work being carried out. This plan must be agreed by Vessel representative and Client Safety representative and all Personnel must be fully aware and understand the contents.
* A Man rescue winch, BA escape sets and rescue stretcher are to be readily available to affect a rescue in accordance with the agreed plan.
* Escape sets to be available for each person entering tanks.
* BA cylinders to be checked on a daily basis. Escapes sets showing indicator in the red, must be withdrawn from service and swapped out with one fit for purpose.
* Gas monitors must be used to test atmospheric conditions prior to entry in to the confined and each and every time confined space has been vacated.
* Only trained and competent personnel shall undertake gas testing.
* Continual gas monitoring must also take place when confined space work is on-going.
* Where the contents of the confined space have the potential to release nauseas gases, confined space must only be entered under BA wearing conditions.
* When using compressor fed BA equipment, air purification unit must be checked.
* Standby personnel to be located at point of entry at all times whilst personnel are within confined space.
* Standby man to log all personnel in and out of confined space.
* Lines of communication to be established prior to entry and maintained thereafter.
 | 1 | 5 | 5 |
| HP jetting of tank internalsHP jetting of tank internals | Using HP jetting equipment | Operatives, third parties | Major Injury/Fatality  | 5 | 5 | 25 | * All personnel to follow TIPA Safe Operating Water Jetting Procedure.
* All personnel to have been trained in use of water jetting equipment
* Appropriate PPE specific to the task to be undertaken jetting operations are to wear full 1,000 Bar TST suit (over overalls) metatarsal boots, hard hat with visor, PVC gauntlets and ear defenders or plugs.
* All equipment to be run up and functioned tested including all safety shut downs.
* Jetting hose must be flushed through before being attached to lance/jet
* If Possible A foot valve or similar pressure relief device is incorporated in the system near the jetting operative to enable immediate release of pressure in an emergency situation
* The jetting operative must be in the line of sight of the standby man at all times
* Regular checks must be carried out to assess integrity and security of all hoses, fittings and accessories.
* Regular rotation of personnel to avoid the possibility of fatigue.
* Jetting unit must be shut down and all external feed hoses fully de energised when not in use.
 | 1 | 5 | 5 |
| Flying Particles | All Personnel | Serious injury | 4 | 4 | 16 | * Work area to be cordoned off and warning signs to be posted
* Jetting Operative to wear full face visor when jetting and visor must be in the down position.
* All 3rd parties to be kept clear of work area.
 | 1 | 4 | 4 |
| Noise | All Personnel | Damage to Hearing | 3 | 4 | 12 | * Ear plugs/defenders to be worn when HP jetting and when working near the jetting unit.
 | 1 | 4 | 4 |
| Waste transfer operations | Contact with hazardous substances | All Personnel | Serious injury / ill health or hospital stay.  | 4 | 4 | 16 | * All personnel to have COSHH training.
* MSDS and COSHH assessments for all hazardous materials must be on site and followed at all times.
* All personnel must be fully aware and understand contents of COSHH assessments and the control measure followed at all times.
* All personnel to ensure they adhere to high standards of cleanliness and ensure that they are washing all areas of exposed skin at break times and end of shift.
* All different types of waste must be segregated accordingly and disposed off into the correct waste container.
* All waste must be recorded in Waste disposal log and signed by the client.
 | 1 | 4 | 4 |
| Potential for spill | All personnel and 3rd parties | Serious injury/ ill health or hospital stay | 4 | 4 | 16 | * Periodic checks to be made to ensure that discharge hoses going in to the waste transportation container are securely tied.
* All hose connections to be secured to prevent accidental uncoupling.
* The waste transportation containers must be manned by the client at all times during waste transfer operations.
* Spill kits and booms to be located at work site
* Good lines of communication must be established and maintained by all personnel involved in the waste transfer operations.
 | 1 | 4 | 4 |
| Use of Vacuum Transfer Unit | Entrapment with Vacuum Nozzle | All Personnel  | Major Injury | 3 | 4 | 12 | Personnel to be aware not to get hands / feet in direct line adjacent to nozzle. Use spade or similar implement to move Mud / Waste towards nozzle, not hands. | 1 | 4 | 4 |
| Working with vacuum Hoses | All Personnel | Fatality | 2 | 5 | 10 | * Care should be taken at all times when coupling and uncoupling hoses.
* Hoses are to be routed safely, securely tied off and prevented from catching on sharp edges during operations.
* Whip checks and R-pins are to be fitted.
* Suspended hoses must be securely restrained to prevent them falling from height.
* Only use hoses which are uniquely identified and hold a current pressure test certificate.
* Ensure all hoses with cam lock fittings have the locating clamps taped or tied to reduce the chance of accidental un-coupling.
* Only suitably trained and competent personnel are to carry out vacuum transfer operations
* Where hoses are suspended they are to be checked on a regular basis to ensure they are secure
* Suction and discharge hose’s to be emptied and removed from skip lid prior to the lid being lifted off by a two man team.
 | 1 | 2 | 2 |
| Working with Mechanical equipment | All Personnel | Fatality | 2 | 5 | 10 | * Only suitably trained and qualified personnel to operate engine driven machinery & equipment.
* Ensure that all applicable Mechanical and Electrical Isolation tags are in place
* Use certified regularly maintained plant.
* All equipment shall be function tested and certification checked before use.
 | 1 | 2 | 2 |
| Heat Exhaustion | All Personnel | Medical treatment Injury | 5 | 4 | 20 | * All personnel to take regular breaks and drink plenty of water to remain hydrated.
* All personnel shall take breaks in a well shaded area.
 | 3 | 2 | 6 |
| Erecting and Dismantling Scaffolding | Falls from Height | All Personnel | Fatality |  |  |  | * All personnel trained in working at height.
* All personnel trained in Scaffolding Awareness
* Safety harnesses connected to the retractable fall arrest inertia reel at all times when working at height.
* Working lifts must be adequately boarded before continuing to erect/dismantle the lift above.
 |  |  |  |
| Dropped Objects | All Personnel | Fatality |  |  |  | * Operatives must not carry equipment on ladders.
* All scaffold equipment must be lowered/raised using rope with recommended scaffold knots. Clove Hitch with Half hitch used for tubes. Timber hitch used for boards.
* 2 persons must be used to erect and dismantle the kicker lift of the scaffold
* When working at height, there must be no personnel standing on the deck of the tank.
* Agreed hand signals and/or verbal comms to be used to signal the top man to raise or lower the rope.
* Personnel must move away from the access hatch during raising/lowering of equipment.
 |  |  |  |
| **Reviewed at the worksite by:** | **Name** |  | **Signature** |  | **Date** |  |
| **New or changed hazards identified?** Circle as applicable | **YES** | **NO** | **If YES, record and assess using Part B** |

**Part B - Risk Assessment – Additional On-Site Hazards**

**Following risk assessment review on-site, any additional/changed hazards identified must be recorded and assessed below**

|  | **Risk** |  | **Residual Risk** |
| --- | --- | --- | --- |
| **Task/Operation** | **Hazard** | **People affected** | **Possible Effect** | **L** | **S** | **R** | **Control Measures** | **L** | **S** | **R** |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Assessed by |  | Approved by\* |  | Approved date |  |

**\* Work must not proceed until approval is obtained via the Project Owner from a designated authority for the changes / additions listed above**

**Part C - Risk Assessment – Briefing**

**Briefing carried out by:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name |  | Position |  | **Date** |  |

**Attendees**

**By signing this form**, **I confirm that I have been briefed on the risk assessments listed below**: (tick as applicable)

Risk assessment Part A 🞎

Risk Assessment Part B 🞎

COSHH 🞎

Manual Handling 🞎

HAV 🞎

Other 🞎 specify \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**I further confirm that I have asked my Supervisor about anything I did not understand in the briefing, and I have been given a full explanation**.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Name** | **Signature** | **Date** |  | **Name** | **Signature** | **Date** |
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**Risk Assessment Guidance**

**Introduction**

The TIPA risk assessment process places responsibilities on everyone in the Company, from the Directors downwards, to contribute towards improving safety and managing risk. These responsibilities are described in Risk assessment management. This document provides guidance on how to complete a TIPA Risk Assessment.

**Definitions**

Hazard something that has the potential to cause harm, can include substances, plant, equipment, temperatures, noise, vibration, and so on. What is important in the risk assessment process is the way in which people interact or come into contact with hazards.

Risk a combination of the likelihood that someone will suffer harm when they come into contact with a hazard, and the potential severity or consequences of that harm. Risk is affected by how often a person comes into contact with a hazard and for how long.

Risk assessment described by HSE as ‘nothing more than a careful examination of what could cause harm to people, so that employers can weigh up whether enough precautions have been taken or whether more should be done to prevent harm’.

**Link between Risk Assessment and Method Statements**

Method statements should describe the work to be carried out and the way in which it will be managed and controlled. This includes how the risks associated with the work are to be dealt with. The results of risk assessment, the control measures or precautions that need to be put in place for safety, form part of the method statement. In practice, risk assessment and method statement preparation will normally be carried out at the same time to ensure that the process of planning work is carried out properly.

**Identifying Hazards - what could go wrong?**

The first step in risk assessment is to identify what could go wrong with an activity or task. There is no set way of identifying hazards however it may be useful to think in terms of categories when trying to identify all of the things that can go wrong, for example:

a) hazards related to the environment in which an activity will be carried out e.g. remote, urban, internal, external, hot, cold, noisy, near water, near traffic, at height, near a slope, in a confined space, in a noxious, flammable or explosive atmosphere, near livestock and so on;

b) hazards resulting from the activity itself e.g. from physical agents such as dust, noise, vibration, harmful chemicals or asbestos, tools, equipment, plant, slippery or uneven surfaces, hot work, electricity, gas, and so on;

c) Hazards that are the result of something going wrong or from activities outside the worksite e.g. loss of power, flooding, fire, unauthorised access, and so on.

**Deciding who could be harmed and how**

Decide who might be affected by the hazards that have been identified, giving consideration to:

1. The people actually involved in the work and the worksite (individuals carrying out the task)
2. Others in the vicinity, who are not involved in the worksite but who might also be affected (client or other workers, cleaners, visitors including inspectors, surveyors, regulators, etc, members of the public, road or railway users, adjacent businesses)
3. People who might be more vulnerable if they are exposed to hazards, such as young persons, people with learning/mobility difficulties, etc.

The potential effect of harm also needs to be identified. Generally, the worst **reasonable** scenario is the one that should be used.

**Assessing Risks**

RISK = LIKELIHOOD X SEVERITY. By assigning values to both likelihood and severity, and using the matrix below, you can arrive at a risk value for a particular hazard.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  **Severity****Likelihood** | No Damage/No Pollution | Minor Damage/ Minor Pollution | Lost Time Damage/ Lost time Pollution | Serious Damage/ Significant Pollution | Total Loss/ Major Incident |
| First aid injury/ no lost time | Medical treatment/ 7 days or less lost time | Over 7 days lost time/ restricted work | Major injury or ill health/hospital stay | Fatality |
| 1 | 2 | 3 | 4 | 5 |
| Rare | 1 | **1** | **2** | **3** | **4** | **5** |
| Unlikely | 2 | **2** | **4** | **6** | **8** | **10** |
| Possible | 3 | **3** | **6** | **9** | **12** | **15** |
| Likely | 4 | **4** | **8** | **12** | **16** | **20** |
| Certain | 5 | **5** | **10** | **15** | **20** | **25** |

Use the following values to assign a level of likelihood for each of the hazards identified:

***Level Description***

Certain More likely to occur than not

Likely Known to have happened many times within the Company

Possible Known to have happened at least once within the Company

Unlikely No history of event occurring within the Company but known about within the industry

Rare No history of event occurring over a period of years but there is still a remote possibility

The risk level indicates how significant a risk is, and what the relative priority is for dealing with it. The higher the risk the higher the priority is to reduce it to a manageable level:

High 15 to 25 do not proceed. Review the risk controls again to identify how the risk can be reduced to as low as is reasonably practicable. If RISK remains high, additional authorisation is required from one of the designated authorities listed further on in this guidance.

Medium 6 to 12 do not begin until risk controls have been reviewed and additional precautions put in place to reduce risk further and the risk assessment has been updated

Low 1 to 5 Proceed with care and be prepared to re-assess the risk if the work or the conditions change.

**Control measures - deciding what action to take**

The aim of taking action is to reduce the risks that people are exposed to, by either making it less likely that they will be harmed, or by limiting the potential severity of harm, or by a combination of the two. Firstly, you should try to eliminate hazards altogether, e.g. by doing the work in a different way, using a non-hazardous substance, working from outside of a confined space, etc. If there is no hazard for people to interact with, there can be no risk of harm. Care must be taken, though, to ensure that new hazards are not introduced.

If it is not possible to eliminate hazards, there are some key principles that should be applied when deciding what action needs to be taken and what precautions need to be put in place to manage risk:

a) Deal with risks at source, rather than taking palliative measures, e.g. if walkways are slippery, treating or replacing them is better than displaying a warning sign

b) Adapt work to the requirements of the individual(s) carrying it out, e.g. by rotating people in and out of monotonous work the likelihood of a slip or a lapse in concentration can be reduced

c) Take advantage of new technology and changes to working methods or equipment, which can offer opportunities for improving working methods, making them safer and potentially reducing cost

d) Give priority to those measures which protect the whole workplace and everyone who works there and so give the greatest benefit, e.g. by using engineering means of segregating people from hazards. Issuing personal protective equipment is the least preferred method for reducing risk. Each item protects only the wearer, some items can be bulky, awkward and hot to wear, and standard equipment does not fit everyone, particularly where more than one item needs to be worn

e) If risks still remain, provide appropriate personal protective equipment and ensure that the wearer is trained on the correct use and maintenance

f) Ensure that workers have a clear understanding, through training, briefing and other means of communication, of what they must do.

In the majority of cases, adopting Company and industry best practice will be enough to ensure risks are reduced sufficiently. If, however, you are not sure about what precautions are required, or whether the action you have taken is sufficient, you should contact the health and safety manager for advice.

Once the control measures have been identified, the level of risk must be re-assessed to identify whether you have done enough to prevent harm from occurring, or whether additional precautions are still needed. Keep reviewing the control measures and reassessing the risk until you are satisfied that no more can be done to control the risk. Under no circumstances should work start if there is a HIGH risk still present.

**Recording the findings**

Record the findings on the risk assessment form S104. You only need to record the significant findings; trivial risks do not need to be recorded although you will still be expected to be able to talk through how you assessed and took action to manage them if asked.

**Risk assessment approval – designated authorities**

Risk assessments must be reviewed and approved before being brought into use by one of the following designated authorities:

* Project Manager/Director
* Operations Manager/Director
* Projects Delivery Manager
* Technical Manager
* Health & Safety Manager

**On-site review and assessment of additional hazards.**

Before being brought into use, the Site Supervisor must review the risk assessment to check if the assessment and its findings are still applicable. The Supervisor must record this review by signing and dating the relevant box. The original assessment can be amended at any time throughout the work by hand as necessary with any additional hazards identified and control measures implemented. Approval must then be obtained via the Project Owner from one of the designated authorities identified above. Once approval has been given, the new or amended risk controls must then be briefed to the work group who must sign the assessment to confirm their understanding.

**Briefing**

The Site Supervisor is required to brief the work team on the risk assessment and on any additional assessments that apply, including COSHH, manual handling, hand arm vibration, etc as noted on the risk assessment. The Supervisor must also ensure that all present sign to confirm that they have been briefed on, understand and will comply with the control measures specified within the Risk Assessment.

**Monitoring how effectively risks are being controlled**

The site Supervisor must monitor the control measures in place to ensure that risks are in fact being controlled. This is particularly important as the tasks carried out and the conditions in the work area can change frequently as a task progresses. Accidents and incidents are an indication that risk control measures are not as effective as they should be but safety inspections and tours should also be carried out to identify problems before they result in accidents. SOCs should be used, and actively promoted by the Site Supervisor to the work team, as an invaluable way of reporting hazards so that the risk assessment can be reviewed and the potential for harm averted.