RISK ASSESSMENT

RISK CRITERIA		Date:	Category:	Salvage operations
Acceptable	Marginally Tolerable		Revision:	May 2024
Tolerable	Not Tolerable		Location:	Irish coast
SCOPE OF RA / DESCRIPTION:		Removal of cargo of wrecks		

No.	Steps to Complete the Task	Hazard / Cause Identification	Associated Risk			Control Measures	Residual Risk		
			Cons (C)	Like (L)	Risk (R)		Cons (C)	Like (L)	Risk (R)
1	Pre-job planning	Weather conditions	4	3	12	Operating a crane on a vessel in open waters during Beaufort scale 6 or higher poses a significant danger and increases the risk factors involved. The strong winds and rough sea conditions associated with Beaufort scale 6 or above can create unstable and unpredictable conditions, compromising the stability and control of the crane. The vessel's motion becomes more pronounced, making it challenging to safely maneuver heavy loads and increasing the likelihood of accidents, such as swinging or dropping of cargo. Furthermore, the higher wind speeds can cause the crane's lifting capacity to be reduced, further jeopardizing the safety and effectiveness of the operation. Hence, it is crucial to prioritize the safety of personnel and equipment by refraining from crane operations during Beaufort scale 6 or higher in open waters.	4	2	8
		Job description and working permits read and understood by all parties.	4	3	12	A briefing of the job should be carried out and any company-specific checklist to be complied with, should be filled.	4	2	8
		RAs/ SJAs read and understood by all parties.	1	3	3	Identify each basic step of the job for any potential hazards and to recommend the safest way to do the job.	4	2	5
		Proper Training and Certification	4	3	12	Ensure that personnel involved in the operation are adequately trained and certified for their respective roles. This includes crane operators, spotters, deck and bridge personel. Unexperienced personel should not work unless supervised by a more experienced crewmember.	4	2	8
2	Inspection of work tools.	Faulty working tools; Hammers, harnesses, pliers, screwdrivers etc.	3	4	12	Daily inspections as planned will be conducted according to the operating standards of the tools and equipment inspected. Defective equipment must be identified with a "DO NOT OPERATE" or "OUT OF SERVICE" card and appropriate measures should be taken to repair or replace it.	3	3	9
		Faulty PPE: safety eye googles, helmets, working gloves, safety toe shoes, safety harness.	4	3	12	PPE can loose its effectiveness or become damaged due to exposure to grit, dirt, chemicals, UV light, misuse, or general wear or tear. Regular inspections are essential for making sure that the PPE is fit for its purpose, in date, And fully compliant.	3	3	9
		Lifting equipment	4	3	12	Evaluate the safety and integrity of lifting equipment used during the operation, including the crane's lifting capacity, the condition of the wires, slings and shackles, and proper securing and attachment of the grabber for lifting and lowering. All equipment to be used for the job shall be thoroughly inspected.	3	3	9
3	Crane operations; The operation involves the use of a 100-ton crane for cargo retrieval at a depth of 300 meters	Equipment failure	4	3	12	Assess the risks related to crane operations, such as malfunction or failure of the crane, potential collisions, stability of the crane during lifting operations, and the possibility of loads falling. The crane equipment may be subjected to heavy loads and operating conditions, increasing the risk of mechanical failure. Regular equipment inspections and maintenance are necessary to mitigate this risk. The loads are always limited to a 20% of the crane maximum operation limit.	4	2	8
		Falling Objects	4	3	12	During cargo retrieval, there is a risk of objects falling from the crane, potentially endangering personnel or causing damage to the salvage vessel. Proper securing and handling procedures should be followed to prevent such incidents.	4	2	8
		Operator Error	4	3	12	Crane operations require skilled and experienced operators. Errors in load handling, positioning, or control could result in accidents or damage to the cargo, wreck, or vessel. The crane operator follows strict operating procedures and has previous experience in open seas worldwide.	2	2	6
4	Working overseas	Communication and Coordination	4	3	12	Evaluate the effectiveness of communication systems and protocols between the vessel, crane operator, and other personnel involved. Proper communication is critical for the safe and efficient execution of the operation	4	2	8
		Security and Emergency Response	4	3	12	Evaluate security concerns and potential emergency scenarios that may arise during the operation. This includes having appropriate emergency response plans, access to medical facilities if needed, and contingency measures in case of emergencies.	4	2	8
		Environmental Considerations	4	3	12	Assess the potential impact on the environment, such as accidental spills or leaks of fuel or other hazardous materials. Adequate measures should be in place to prevent or mitigate any environmental risks.	4	2	8
		Safety of Personnel	3	3	9	Evaluate the risks associated with personnel. This may include risks related to boarding the vessel, working at heights, exposure to adverse weather conditions, and potential accidents during crane operations.	3	2	6
		Structural Integrity	3	3	9	Evaluate the risks associated with the structural integrity of both the wreck being removed and the vessel itself. Consider the risk of collapse or disintegration during lifting, the potential for damaging the vessel or other nearby structures, and the load distribution on the vessel's deck.	3	2	6
		Warning notices.	2	2	4	Signs are required where significant risks to the health and safety of employees and others continue to exist even after all other relevant precautions have been taken.	2	1	2
5	Regulatory Compliance	Legality of operation	4	3	12	Ensure that the operation complies with all relevant maritime regulations, international standards, and guidelines. Adhering to regulatory requirements helps mitigate risks and ensures the safety and legality of the operation	4	2	6

RISK CRITERIA		
Acceptable	5	5
Tolerable	4	4
Marginally Tolerable	3	3
Not Tolerable	2	2
	1	1