# LBCC VIKING EXPLORER JOB SAFETY ANALYSIS (JSA)

**PROJECT:** Viking Explorer ROV - Odin

While each task has a responsible person, all activities are completed with supervision from the **LBCC safety officer,** whose role is to ensure all team members are in compliance with safety procedures.

**Required Personal Protective Equipment (PPE) for all activities:**

- Safety glasses
- Non-slip work boots
- Appropriate clothing (tight fitting, waterproof if necessary)

## Task: Tether Setup

| Step | Potential Hazards | Controls | Responsible Person |
|---|---|---|---|
| 1. Unroll the tether. | Tripping over the tether. | Ensure area is clear before unrolling. | Equipment Technician |
| 2. Position control box. | Electrical hazards near water. | Maintain distance from pool; use signage. | Pilot |
| 3. Connect tether to control box. | Improper connection causing failure. | Train on proper connection techniques. | Equipment Technician |
| 4. Secure strain relief. | Tether pulling loose. | Check and double-check secure attachments. | Equipment Technician |
| 5. Inform about tether location. | Team members tripping. | Verbal and visual notifications. | Safety Officer |
| 6. Connect airline to ROV. | Airline disconnection. | Follow standard connection procedures. | Mechanical Engineer |
| 7. Attach air supply. | Pressure hazards. | Ensure correct and secure attachment. | Mechanical Engineer |
| 8. Fasten strain relief to ROV. | Tether strain causing damage. | Inspect and maintain tether integrity. | Mechanical Engineer |

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## Task: Tether Disconnect

| Step | Potential Hazards | Controls | Responsible Person |
|---|---|---|---|
| 1. Ensure all power is off | Electrical shock | Follow power-down procedures | Electrical Engineer |
| 2. Disconnect tether from control box | Electrical hazards, tripping | Safely unplug; manage cable placement | Equipment Technician |
| 3. Detach airline from supply and ROV | Pressure release incidents | Use slow-release valves and proper technique | Mechanical Engineer |
| 4. Neatly coil tether for storage | Tripping over loose tether | Coil and secure immediately after use | Equipment Technician |

## Task: Deck Pre-Run

| Step | Potential Hazards | Controls | Responsible Person |
|---|---|---|---|
| 1. Check electrical connections | Loose connections causing failure | Regular inspections and maintenance | Electrical Engineer |
| 2. Ensure cameras are operational | Blocked or faulty cameras | Pre-operational checks and cleaning | Pilot |
| 3. Secure waterproof seals | Water ingress leading to failures | Verify seal integrity before deployment | Mechanical Engineer |
| 4. Inspect thrusters | Obstructions or malfunction | Clear debris and perform functional tests | Mechanical Engineer |
| 5. Check grabber functionality | Grabber failure during operation | Test operations and response times | Mechanical Engineer |

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**Task:** Deck Post-Run

| Step | Potential Hazards | Controls | Responsible Person |
|---|---|---|---|
| 1. Turn off all power sources | Electrical hazards post-operation | Adhere to shutdown protocols | Electrical Engineer |
| 2. Disconnect power supply | Electrical shock | Ensure equipment is de-energized | Equipment Technician |
| 3. Turn off pneumatics supply | Compressed air hazards | Follow standardized shutdown procedures | Mechanical Engineer |
| 4. Bleed pneumatics | Pressure-related accidents | Use pressure release valves | Mechanical Engineer |
| 5. Dry and store the ROV securely | Slipping hazards, equipment damage | Use absorbent materials; secure storage | Equipment Technician |
| 6. Clean up area | Trip hazards, clutter | Enforce cleanliness and organization | All Team Members |