

Tank and Vessel Cleaning Job Safety Analysis (JSA)

Job/Task/Operation: Traditional Facility Tank Cleaning	Date of Work:	<input type="checkbox"/> Revised JSA <input type="checkbox"/> New JSA
	Optional ID:	Page __1__ of __3__

Business Unit/Area/Department:	Name of Person Supervising Job:	Analysis Performed By:
---------------------------------------	--	-------------------------------

Personal Protective Equipment Needed: Pump monitor, Personal 4-gas monitor, Hard hat, Safety-toed boots, FR clothing, Impact/cut resistant gloves, Respiratory protection (as needed), confined space entry equipment (as needed)	Field/Rig/Location:	HES Review:	Task Supervisor Approval:
		Date:	Date:

1) Job Steps Sequence of Basic Job Steps <small>(See instructions on next page)</small>	2) Hazards (energy sources), Dangers (potential harm from those sources), and Potential Environmental Impacts	3) Hazard Controls: Assignments to make before the job is completed to minimize exposure to dangers and environmental impacts
---	---	---

1) Job Steps Sequence of Basic Job Steps <small>(See instructions on next page)</small>	2) Hazards (energy sources), Dangers (potential harm from those sources), and Potential Environmental Impacts	3) Hazard Controls: Assignments to make before the job is completed to minimize exposure to dangers and environmental impacts
Stage equipment	Property damage, backing-into/over, driving related, ignition sources	<ul style="list-style-type: none"> - Designate spotter - Clear driving path - Follow Life-Critical Driving expectations - Safe Work Permit needed for any hot work – consider vehicle entry – Utilize Work Authorization Procedure
Isolate tank/vessel & perform LOTOTO	Energized or auto-start equipment, trapped pressure, stored energy, trips/slips hazards, sharp or hot surfaces	<ul style="list-style-type: none"> - Follow ROMS Energy Isolation Procedure to identify, de-energize, isolate, & apply LO/TO-Try-out to all energy sources - Ensure valves aligned correctly and functioning as designed - Check low-point drains - Verify pressure/energy released - Housekeeping - PPE
Identify if tank/vessel is a confined space and if confined space entry will be required for task	Confined space, hazardous atmosphere	<ul style="list-style-type: none"> - Utilize Confined Space Identification Tool - Follow Confined Space Entry Procedure
Disconnect tank/vessel after isolation	Hazardous atmospheres, spills, ignition sources, open manways/hatches, trapped pressure	<ul style="list-style-type: none"> - Follow Opening Process Piping and Equipment Procedure - Follow Respiratory Protection Procedure
Prepare equipment for task	Hazardous atmospheres, spills, ignition sources, open manways/hatches, trapped pressure	<ul style="list-style-type: none"> - Verify valve alignment - Ensure adequate bonding and grounding of all equipment - Utilize camlock straps - Vent truck away from work area and all potential ignition sources - Safe Work Permit potentially needed – reference Work Authorization Procedure

	Clean tank/vessel		Hazardous atmospheres, spills, ignition sources, open manways/hatches, Trapped pressure		<ul style="list-style-type: none"> - Ensure all lights (if needed) are rated for use in hazardous/explosive environments - DO NOT use metal tools such as shovels, chippers, bars, etc. inside the tank Continue to follow: <ul style="list-style-type: none"> - Work Authorization Procedure - Confined Space Entry Procedure - Opening Process Piping and Equipment Procedure - Respiratory Protection Procedure
	Remove all cleaning equipment and reinstall plates, pipes, valves, etc. to get ready to return equipment back to its original process (if needed)		Hazardous atmospheres, spills, ignition sources, open manways/hatches		Continue to follow: <ul style="list-style-type: none"> - Work Authorization Procedure - Confined Space Entry Procedure - Opening Process Piping and Equipment Procedure - Respiratory Protection Procedure
	Purge process of oxygen		Hazardous atmosphere, explosive atmosphere		<ul style="list-style-type: none"> - Utilize Purging Procedure
	Ensure all valves aligned correctly and return equipment back to process/production		Trapped pressure		<ul style="list-style-type: none"> - Utilize ECP to remove all LOTO equipment and ensure all valves are aligned correctly

SIGNATURES

JSA reviewed by the following personnel involved in the job:		

JSA INSTRUCTIONS

Use a JSA to identify hazards, understand the risk of the hazards and determine the actions to reduce risk and protect personnel exposed to potential hazards.

Steps to Complete a JSA

- Document the results of the JSA using the front of this form or equivalent
- 1. Break the job down into steps**
 - For each step, describe what is done (not how it is done) and begin with an action verb, e.g., “remove”, “open”, “weld”
 - Avoid being too detailed or general so the basic steps are easy to identify
 - 2. Identify the Hazards (energy sources)**
 - Examine each job step for actual and potential hazards that might reasonably be expected during the work
 - Consider the impacts of potential hazards, emergencies and changes in weather
 - Position personnel to avoid hazards that are associated with work inside the Buffer or Exclusion Zones (e.g. dropped objects, pressure, vehicles, etc.)
 - 3. Determine Hazard Controls and Assign Responsibilities**
 - For each hazard identified, determine the controls needed to eliminate or mitigate the identified hazards and manage the overall risks to an acceptable level
 - Assign, by name or position, each hazard control action to personnel involved in the job. Once assigned, the JSA is communicated to all affected by the job
 - 4. Review, Communicate and Sign the completed JSA**
 - Obtain a signature on the JSA form from everyone involved in the job to acknowledge approval and acceptance of their role (specific responsibilities) in the job
 - Review the JSA at the Pre-Job Safety Meeting (PJSJSM)
 - 5. Amend the JSA if scope changes, new hazards are identified or if new personnel are added to the work crew**
 - 6. Conduct Post-Job Review when activities do not go as planned or specific learnings were identified**

POST-JOB REVIEW

<input type="checkbox"/> Post-Job Review Conducted	<ul style="list-style-type: none">• Did the JSA accurately detail the job steps?• Were any hazards encountered that were not identified in the JSA?• Were the mitigating measures effective?• Suggestions for improvements?	Comments:
---	--	-----------