

U1 - UST INSTALLATION AND RETROFITTING JOB TASK ANALYSIS & EXAMINATION OUTLINE

1-1/2 Hours, Closed Book

Approximate % of 70 Questions

01	SITE PREPARATION (Content Area)	15%
0101	<u>Property Clearances</u> (Task) Determine location and necessary clearances to nearby structures, such as buildings, utility and sewer lines.	2%
0102	<u>Site Drainage</u> (Task) Determine normal and expected high water tables and site drainage characteristics.	2%
0103	<u>UST System Layout</u> (Task) Verify correct site layout for tanks and piping, including clearance between tanks, and between tanks and other structures or property line.	3%
0104	<u>Tank Unloading</u> (Task) Unload tank on site using proper procedures to avoid tank damage, chalking tank to prevent movement. Verify that tanks are lifted using tank lifting lugs when required.	2%
0105	<u>Pre-Installation Testing</u> (Task) Conduct pre-installation tank tightness test and pipe tightness tests on new or retrofit installations. Conduct hydrostatic pressure test on pipe.	6%
02	MATERIALS (Content Area)	8%
0201	<u>Verify Materials</u> (Task) Verify that pipe and tank materials are undamaged and meet minimum EPA requirements for strength and durability. Repair or report damage.	2%
0202	<u>Tank Condition and Protective Coating</u> (Task) Verify that tank condition and protective coating meet minimum EPA requirements for strength and durability. Repair or report damage as required.	2%
0203	<u>Valves, Fittings & Materials</u> (Task) Verify that valves and fittings are of correct weight and type of materials.	2%
0204	<u>Compatibility</u> (Task) Verify compatibility of stored product with the tank and piping materials	2%
03	EXCAVATION, BEDDING AND BACKFILL (Content Area)	20%
0301	<u>UST System Excavation</u> (Task) Verify the correct location and dimensions of the UST system excavation.	4%
0302	<u>Burial Depth</u> (Task) Verify burial depth of tanks and pipes as specified by the designer.	6%
0303	<u>Tank and Pipe Bedding</u> (Task) Verify depth, material and compaction of tank and pipe bedding.	4%
0304	<u>Backfill Tanks</u> (Task) Inspect tank backfilling, ensuring compaction of layers as required.	4%
0305	<u>Tank Deflection</u> (Task) Measure inside tank diameter after backfilling, and verify that tank deflection is within acceptable limits.	2%

04 PLACEMENT OF EQUIPMENT (Content Area)		21%
0401	<u>Tank Anchoring</u> (Task) Install tank anchoring per manufacturers instructions which may include the following methods; hold-down pads, deadman anchors, anchoring cables and tank midanchors.	4%
0402	<u>Ballast Tanks</u> (Task) Ensure that tanks are ballasted after backfilling when required by high water table.	2%
0403	<u>Tank Fill Lines, Devices and Connections</u> (Task) Verify correct installation of tank fill lines, connectors and other devices. Verify that pipes slope toward tank(s). Verify that fittings and joints are properly tightened.	3%
0404	<u>Product Pipe Installation</u> (Task) Verify correct installation of tank suction lines, valves and pressurized piping including leak detection. Verify that fittings and joints are properly tightened.	3%
0405	<u>Vent Piping</u> (Task) Verify correct installation of tank vent piping.	3%
0406	<u>Automatic Leak Detection Systems</u> (Task) Verify compliance with regulations requiring installation and proper operation of line leak detection and automatic leak detection systems and devices for product piping and tanks.	3%
0407	<u>Observation Wells and Ground Water Wells</u> (Task) Verify correct installation of observation and ground water monitoring wells.	3%
05 SECONDARY CONTAINMENT (Content Area)		6%
0501	<u>Tank Overfill Protection</u> (Task) Verify installation tank overfill protection as required.	3%
0502	<u>Tank and Pipe Secondary Containment</u> (Task) Verify proper installation of tank and pipe secondary containment and release detection method.	3%
06 VAPOR RECOVERY SYSTEMS (Content Area)		2%
0601	<u>Stage I Vapor Recovery</u> (Task) Verify correct installation of Stage I vapor recovery system when required.	1%
0602	<u>Stage II Vapor Recovery</u> (Task) Verify correct installation of Stage II vapor recovery system when required.	1%
07 TANK DECOMMISSIONING AND CLEANING (Content Area)		2%
0701	<u>System Drainin andWaste Liquid Disposal</u> (Task) Verify that residual product is disposed of properly.	1%
0702	<u>Tank Purging</u> (Task) Remove hazardous vapors from tank, venting at appropriate height.	1%
08 CATHODIC PROTECTION (Content Area)		5%
0801	<u>Tank and Pipe Coating</u> (Task) Verify that tank and pipe has proper coating and that damaged coating is repaired when necessary.	1%
0802	<u>Galvanic Anode</u> (Task) Verify that tank and pipe anode(s), anode wires and test leads are installed correctly. Ensure proper electrical connections between anodes and system components.	1%
0803	<u>System Electrical Isolation</u> (Task) Verify electrical isolation between system and other buried structures. Verify that hold-down straps are electrically isolated from steel tanks. Inspect isolation bushings between tank(s) and piping.	1%

0804	<u>Impressed Current Rectifier</u> (Task)	1%
	Verify correct installation of impressed current rectifier.	
0805	<u>Impressed Current Anode</u> (Task)	1%
	Verify correct installation of impressed current anode.	

09 TEST METHODS AND TESTING REQUIREMENTS (Content Area) 6%

0901	<u>Release Detection Requiements</u> (Task)	3%
	Report system leaks as required. Notify the tank owner/operator that a "failed" test must be reported as a suspected release to the appropriate state agency within 24 hours.	
0902	<u>Periodic Tests at Required Intervals</u> (Task)	3%
	Determine whether or not the tightness test results are valid and whether additional testing is required to obtain valid results.	

10 HEALTH AND SAFETY FOR UST WORKERS (Content Area) 15%

1001	<u>Control of Vapors and Sources of Ignition</u> (Task)	6%
	Identify and control concentrations of flammable or combustible vapors before repairing, decommissioning or tank and pipe tightness testing. Use breathing support devices when necessary. Remove sources of ignition within distances required.	
1002	<u>Excavation Safety</u> (Task)	3%
	When working around excavations, verify that excavation walls are sloped properly for the soil conditions, that excavations provide adequate space for workers and means of exit, and that excavations are properly fenced or barricaded for protection of the public.	
1003	<u>Grounding and Bonding of Equipment</u> (Task)	2%
	Verify grounding of electrical equipment to minimize the possibility of sparks from static electricity or other differences in electrical potential.	
1004	<u>Personal Safety Equipment</u> (Task)	2%
	Observe safety precautions and use personal safety equipment necessary for the work involved in, including the use of protective clothing, safety line and other recommended equipment.	
1005	<u>Health Safety Regulations</u> (Task)	2%
	Review applicable OSHA and state health and safety regulations pertaining to preparing a site safety plan.	