



U.S. COAST GUARD



Homeland Security

FACILITY HANDLING LIQUEFIED HAZARDOUS GAS JOB AID

| | |
|---------------------------------|---------------------------------|
| Facility: | FIN: |
| MISLE Activity #: | Date: |
| Unit: | COTP Permit #: |
| FSO | FSO Phone Number |
| USCG Facility Inspector: | USCG Facility Inspector: |
| USCG Facility Inspector: | USCG Facility Inspector: |

Guidance for completing the Liquefied Hazardous Gas Facility Job Aid – Coast Guard facility inspectors shall complete the job aid by verifying the contents within are in line with the requirements as per **33 CFR 127**.

| Administrative Items | Y | N | N/A |
|--|---|---|-----|
| Schedule Inspection | | | |
| Review Files | | | |
| - Applicability of regulations | | | |
| - History of deficiencies | | | |
| - MISLE records | | | |
| - Changes since last exam | | | |
| Review/Verify | | | |
| - Alternatives <i>(if applicable)</i> 33 CFR 127.17 | | | |
| - Emergency and Operations Manuals Submitted IAW 33 CFR 127.19 | | | |
| - Hot work program 33 CFR 127.1603 | | | |
| Prepare Inspection Plan | | | |
| - Generate Facility Inspection Activity in MISLE; and select appropriate Sub-Activity type | | | |
| - Perform a risk assessment & review safe work practices for facility | | | |
| - Prior to departing for the Facility: Conduct safety brief & have appropriate PPE ready | | | |

| Pre-Inspection Items | Y | N | N/A |
|--|---|---|-----|
| Is the facility MTSA Regulated per 33 CFR 105? | | | |
| - Record date of last MTSA Compliance Exam Date: _____ | | | |
| - If exam is due; may perform exam utilizing the MTSA Facility Compliance Guide found in the NVIC 03-03 CH. 2, Encl. 7 <i>(Note: SSI when filled out)</i> | | | |
| - If not due; may perform Security Spot check utilizing the Facility Security Spot Check Guide found in NVIC 03-03 CH. 2, Encl. 11 <i>(Note: SSI when filled out)</i> | | | |
| Is the facility a MARPOL Reception Facility per 33 CFR 158? | | | |
| - Record date of last MARPOL Exam; Date: _____ | | | |
| - Record date of current COA: Date: _____ | | | |
| - If exam is due; may perform exam utilizing the MARPOL Reception Facility Inspection/Investigation Job Aid | | | |

| Administration Items on Location | 33 CFR | Y | N | N/A |
|---|-----------------|----------|----------|------------|
| Review Persons In Charge Qualifications and Certification | 127.1301 | | | |
| Requirements for Marine Terminals Safety Training: | | | | |
| - LHG properties and hazards | 127.1302(a)(1) | | | |
| - Use of gas detectors | 127.1302(a)(2) | | | |
| - Respiratory protection | 127.1302(a)(3) | | | |
| - Basic LHG Firefighting procedures | 127.1302(a)(4) | | | |
| - LHG Vessel configuration | 127.1302(a)(6) | | | |
| - LHG transfer procedures | 127.1306(a)(7) | | | |
| - LHG Release response procedures | 127.1302(a)(8) | | | |
| - First Aid procedures | 127.1302(a)(9) | | | |
| - Restrictions on access to the transfer area | 127.1302(a)(10) | | | |
| - Refresher training every 5 years | 127.1302(b) | | | |
| - Employee training records kept for 12 months or more | 127.1302(c) | | | |
| - OSHA Hazard Communication training 29 CFR 1910.1200 | | | | |
| Verify Declarations of Inspection | 127.1317 | | | |
| Access to Marine Transfer Area | | | | |
| - Access to transfer area limited as required | 127.1325(a) | | | |
| - Only authorized personal allowed in to transfer area, non-employees of the facility display a ID badges | 127.1325(b) | | | |
| - Guards, fences, and other devices installed as required | 127.1325(c) | | | |
| Maintenance Records | 127.1409 | | | |
| Inspect LHG Facility | 33 CFR | Y | N | N/A |
| Piping System | | | | |
| - Verify not exposed to physical damage from vehicular traffic/cargo handling equipment | 127.1101(b) | | | |
| - Verify isolation valve with bleed connection meets requirements | 127.1101(c) | | | |
| - Verify isolation valve location and is readily accessible | 127.1101(d) | | | |
| - Verify power-operated isolation valve | 127.1101(e) | | | |
| - Verify vapor return line design | 127.1101(f) | | | |
| - Verify manifolds marked as required | 127.1101(g) | | | |
| - Verify precautions against static, lightning and stray currents API RP 2003 | 127.1101(h) | | | |

| Inspect LHG Facility (continued) | 33 CFR | Y | N | N/A |
|---|----------------|----------|----------|------------|
| Transfer Hoses | | | | |
| - Made of LHG resistant materials | 127.1102(a)(1) | | | |
| - Withstand temperature and pressure during transfer | 127.1102(a)(2) | | | |
| - Minimum bursting pressure at least 5x the MAWP | 127.1102(a)(3) | | | |
| - Verify hoses have full threaded connections/flanges/quick connect couplings | 127.1102(a)(4) | | | |
| - Adequately supported | 127.1102(a)(5) | | | |
| - No defects (kinks/bulges/soft spots/other) | 127.1102(a)(6) | | | |
| - Permanently attached nameplate | 127.1102(a)(7) | | | |
| Loading Arm | | | | |
| - Made of LHG resistant materials | 127.1102(b)(1) | | | |
| - Withstand temperature and pressure during transfer | 127.1102(b)(2) | | | |
| - Adequately supported | 127.1102(b)(3) | | | |
| - Equipped with alarm or person to indicate extension limits | 127.1102(b)(4) | | | |
| - Permanently attached nameplate | 127.1102(b)(5) | | | |
| Piers and Wharves | | | | |
| - Complies with seismic construction per 49 CFR part 41 | 127.1103(a) | | | |
| - Verify substructures meet requirements | 127.1103(b) | | | |
| Layout & Spacing of LHG Marine Transfer Area | | | | |
| - Verify structures prevent the accumulation of flammable or toxic gases | 127.1105(a) | | | |
| - Verify LHG impounding space designed so heat flux from fire does not cause damage to a vessel preventing movement | 127.1105(b) | | | |
| - Verify manifolds, loading arms or independent mating flanges located at least 60 meters (197 ft) from bridges crossing navigable waterways and/or each entrance to any tunnel under a navigable waterway. | 127.1105(c) | | | |
| - Verify manifolds, loading arms or independent mating flanges located at least 30 meters (98.5 ft) from public roadway or railway | 127.1105(d) | | | |
| Electrical Systems | | | | |
| - Electrical equipment and wiring are of the kind specified by and installed in accordance with NFPA 70. | 127.1107 | | | |

| Inspect LHG Facility (continued) | 33 CFR | Y | N | N/A |
|--|----------------|----------|----------|------------|
| Emergency Shutdown | | | | |
| - Emergency shutdown systems meet standards | 127.1205 | | | |
| Lighting System | | | | |
| - Outdoor lighting illuminates marine transfer area | 127.1109(a) | | | |
| - Verify lighting does not interfere with ATON or navigation | 127.1109(b) | | | |
| - Verify illumination requirement | 127.1109(c) | | | |
| Communication Systems | | | | |
| - Verify transfer area has continuous 2 way voice communications | 127.1111(a) | | | |
| - Verify 2 way comms are fixed or portable telephones or 2 way radios which operate in all weather conditions | 127.1111(b) | | | |
| - Communication system used at facility is certified as intrinsically safe by National Testing Laboratory or other approved organization. | 127.1111(c) | | | |
| Warning Signs | | | | |
| - Signs can be seen from shore & water | 127.1113(a)(2) | | | |
| - Signs contain required text | 127.1113(a)(3) | | | |
| - Sign lettering meets requirements | 127.1113(b) | | | |
| - The words, "No Smoking" and No Open Lights may be omitted when product transfer is non-flammable | 127.1113(c) | | | |
| Gas Detection System | | | | |
| - Two portable flammable OR one fixed detector in marine transfer area. Meets ANSI S12.13, Part 1 | 127.1203 (a) | | | |
| - Each detector must indicate whether concentration exceeds 30% of lower flammable limit for each flammable product | 127.1203 (a) | | | |
| - Two portable toxic or one fixed detector in marine transfer area (other than anhydrous ammonia) | 127.1203(b) | | | |
| - Indicates whether concentration is above/at/below permissible limit in 29 CFR 1910.1000, Table Z-1 or Z-2 | 127.1203(b) | | | |
| - Detectors listed above must detect leaks, structures for gas accumulation, & indicate worker's exposure to toxic gases | 127.1203(c) | | | |
| Portable Fire Extinguishers | | | | |
| - Each operator of a waterfront facility handling LHG must provide portable fire extinguishers of appropriate, number, size, & kind in marine transfer area for LHG IAW NFPA 10. | 127.1503 | | | |
| Warning Alarms | | | | |
| - Rotating flashing amber light visible for 1600 meters from transfer connection in all directions | 127.1207(a) | | | |

| | | | | |
|---|----------------|----------|----------|------------|
| - Transfer area has a siren audible for 1600 meters from transfer connection | 127.1207(b) | | | |
| Inspect LHG Facility (continued) | 33 CFR | Y | N | N/A |
| - Light and siren are located so as to minimize obstruction. | 127.1207(c) | | | |
| Respiratory Protection | | | | |
| - Each employee in the transfer area has respiratory protection that protects the wearer for at least 15 minutes when transferring the following toxic LHGs. Chlorine, Dimethylamine, Ethylene oxide, Methyl bromide, Sulphur dioxide, Vinyl chloride, and Anhydrous Ammonia | 127.1209 | | | |
| Motor Vehicles | | | | |
| - During LHG transfer, motor vehicles only parked in designated spaces | 127.1311(a)(1) | | | |
| - No motor vehicles refueled within transfer area | 127.1311(a)(2) | | | |
| - Vehicle or mobile equipment does not present an ignition source IAW standards | 127.1311(a)(3) | | | |
| - Parking spaces do not block fire lanes impede entrances and exits, and are located within 15 meters of containers, loading arms or equipment containing hazardous residues | 127.1311(b) | | | |
| Emergency Response and Rescue | | | | |
| - If by facility personnel: Furnished appropriate training and equipment meeting the requirements of 29 CFR 1910.120 (HAZWOPER) | 127.1505(a)(1) | | | |
| - If off-site organization: Written agreement indicating services it will perform; time within which it will perform services | 127.1501(a)(2) | | | |
| Fire Equipment | | | | |
| - Verify evaluation for firefighting equipment submitted to COTP | 127.1501(a) | | | |
| - Verify equipment adequately maintained, inspected and tested | 127.1501(b) | | | |
| - Verify fire equipment is red or some other conspicuous color (accessible) | 127.1501(c) | | | |
| - Verify fire equipment bears the required approval markings | 127.1501(d) | | | |
| Water Systems for Fire Protection | | | | |
| - Facility has a water supply and a means of distributing and applying water to protect personnel, cool tanks, equipment, piping and vessels and control un-ignited leaks and spills. - Water system includes one 2½ inch supply line, one 2½ inch fire hydrant & enough 2½ inch hose to connect the hydrant to the vessel | 127.1507(a) | | | |
| Equipment for Controlling and Extinguishing Fires | | | | |
| - Portable or wheeled fire extinguishers suitable for gas fires, are available at strategic sites, as determined by evaluation in 127.1501(a) | 127.1509(a) | | | |

| | | | | |
|--|---------------|----------|----------|------------|
| - If specified, fixed systems available IAW with standards | 127.1509(b) | | | |
| Inspect LHG Facility (continued) | 33 CFR | Y | N | N/A |
| International Shore Connection meets requirements | 127.1511 | | | |
| Smoking only allowed in a place designated and marked IAW local law when flammable LHG or its vapors are present | 127.1601 | | | |
| No other sources of ignition in the marine transfer area | 127.1605 | | | |

| Document Inspection Results | Y | N | N/A |
|---|----------|----------|------------|
| Complete Inspection report | | | |
| Review the report with facility representatives | | | |
| Explain inspection results/discrepancies | | | |
| Discuss possible enforcement options (if necessary) | | | |
| Obtain signatures of representative | | | |

| Post Inspection Items | Y | N | N/A |
|--|----------|----------|------------|
| Complete all required MISLE entries (as per MISLE user guides) | | | |
| Initiate enforcement actions (if necessary) | | | |
| Schedule follow-up inspection (if necessary) | | | |
| Update Facility File | | | |
| | | | |

LIQUEFIED HAZARDOUS GAS FACILITY – Inspection Summary

Comments:

CG form 835F shall be used to issue deficiencies observed during examinations on the facility and by the appropriately qualified representative of the COTP.