
CMCS' SAMPLE INSTRUCTIONS

FIRE WATCH

- Post Fire Watch During All Hot Work Operations.
- Maintain Active Fire Watch At Point Of Hot Work & On Opposite Side Of Bulkheads, Decks & Overheads.
- Fire Watch Required, One On Each Side.
- Maintain Fire Watch 30 Minutes After Completion Of Hot Work.
- Maintain Fire Watch With Fire Extinguisher & 30 Minutes After The Hot Work.
- Fire Watch To Remain 30 Min For Cool Down At Interruption Or Completion Of Hot Work.
- Maintain Two Fire Watches With Charged Water Hoses & Charged Fire Extinguishers.
- Fire Watch With A Charged Extinguisher Will Be Stationed In The Area During Hot Work.
- Post Fire Watch Per SCP's Requirements.
- Marine Chemist Standing-By With Charged Fire Extinguishers.
- Post Fire Watch As Required By OSHA 29 CFR 1915 Subpart P.
- Maintain Fire Watch In Accordance With 29 CFR 1915, Subpart P.
- Fire Watch To Remain In The Hot Work Area For At Least 30 Minutes After Completion Of The Hot Work, Unless The SCP Surveys The Exposed Area & Makes A Determination That There Is No Further Fire Hazard.
- Stand-by Fire Watch Must Be In Force At Point Of Hot Work.
- Fire Watch Required With Charged Fire Extinguisher And/Or Charged Fire Hose Required For Hot Work Areas.
- Maintain Fire Watches!
- Maintain Active Fire Watch During All Hot Work On/In Tanks.
- Fire Watch With A Charged Fire Hose Will Be Present During Hot Work.

TANK WATCH/HOLD WATCH

- Post Tank Watch/Hold Watch Continuously During All Entry.
- Tank Watch Or Hold Watch To Maintain Visual Contact With Entrants At All Times.
- Tank Watch/Hold Watch To Maintain Verbal/Radio Contact With All Entrants.
- SCP To Monitor Atmospheres Inside Tanks For Safe Conditions During Hot Work.

COMBUSTIBLE MATERIALS

- All Combustibles & Flammable Removed From Hot Work Areas.
- Polyurethane Insulation Has Been Removed 12" From Point Of Heat Application.
- Maintain All Areas Of Hot Work Free Of Flammables & Combustibles.
- Maintain All Spaces Listed "Safe For Hot Work" Free Of Combustibles & Flammables.
- Maintain Areas Of Hot Work Free Of Combustibles, Insulation & Flammables.
- Insulation Removed 6 Inches In Way Of Hot Work.
- No Hot Work Permitted On, Nor Heat Transfer To (exceeding 200°F), Adjacent Spaces Or Hollow Structures Not Certified Safe For Hot Work, Nor Against Insulated And/Or Toxic Coated Surfaces.
- The Glossy Yellow Coating Located In The DB/WTs Is To Be Removed Within 4 Inches Of The Hot Work Areas.

ADJACENT SPACES

- All Insulation Removed From Adjacent Spaces.
- No Hot Work Within 6 Inches Of Adjacent Spaces.
- No Hot Work Within 12" Of Adjacent Tanks Or Spaces Not Certified Safe For Hot Work.
- See Previous Marine Chemist Certs: ----1234, ----5678 For Previous Certifications.
- Keep All Cargo Lines Closed & Secured.
- Keep All Hot Work Off & Away From Adjacent Closed & Secured Tanks, Voids and Other Spaces. No Hot Work On Bulkheads.
- All Adjacent Tanks Are Closed/Secured & NOT Authorized For Hot Work.
- Keep Hot Work Off Adjacent Untested Spaces.
- No Hot Work On/Against Any Unchecked Adjacent Space.
- Hot Work Is Not Permitted Within 3" Of Bulkheads Common To The Adjacent Spaces Not Designated "SAFE FOR HOT WORK".
- No Hot Work Against Non-Tested Adjacent Spaces.

PROTECTION & ISOLATION

- Keep Areas Of Hot Work Covered & Isolated With Fire-Retardant Blankets.
- Maintain Fire-Retardant Barrier Around Perimeter Of Hot Work.
- Refrain Heat/Spark/Slag From Bilges.
- SCP To Ensure Common Combustibles Remain OUT OF THE WAY Of Hot Work.
- Maintain Tanks Free Of Oil Leak Back. Maintain ER Bilge Free Of Oil Leak Back.
- No Cargo Pumps Turning.
- Maintain Fire Cloth Barriers To Prevent Hot Work Sparks From Entering The Engine Room Bilge. Maintain Spaces Free From Oil & Other Combustibles.

FIRE PROTECTION EQUIPMENT

- Maintain Charged Fire Hose On Barge With Hot Work.
- Post 1-1/2" Charged Fire Hose With Fog Nozzle.
- Post Fire Watch & Fire Protection Equipment As Required By the SCP.
- SCP To Oversee The Posting Of Fire Watch & Fire Protection Equipment During All Hot Work Operations.
- Fire Watch Duties Shall Be Performed By The Shipyard Competent Person.
- Fire Watch Must Be Posted In Accordance With OSHA 29 CFR 1915 Subpart P.
- Post An Active Fire Watch. Maintain Forced-Air Ventilation. Keep All Valves & Piping Secured. Hot Work Prohibited Within 4" Of Uncertified Spaces. SCP To ReTest Each Work Day & Must Call The Undersigned Chemist When Safe Conditions Changed.

SEPARATION–DISTANCE FROM HOT WORK

- Keep Hot Work 6" From Boundaries Of All Uncertified Tanks & Spaces.
- Keep Hot Work 12" From Areas Containing Polyurethane Foam Insulation.
- All Soft & Waxy Preservatives Have Been Scrapped & Removed From Areas Of Hot Work.
- Keep Hot Work 3" From Boundaries Of Fuel Oil Tanks.
- Hot Work Is NOT Authorized On Or Within 12 Inches Of Bulkheads Of All Adjacent/ Uncertified Tanks & Spaces Including Superstructures & Accommodation.
- No Hot Work Permitted On Or Heat Transfer To Boundaries Of Adjacent Or Other Enclosures Not Certified As "Safe For Hot Work".

LIMITATIONS–RESTRICTIONS–REQUIREMENTS

- Keep Areas Of Hot Work Covered & Isolated With Fire-Retardant Blankets.
- No Hot Work On DFO/Hydraulic Oil/Lube Oil Pipe Systems.
- Entry With Restrictions: 1) Boots & Gloves For Petroleum; 2) Coveralls Or Tyvek Type Suit; 3) Forced-Air Ventilation; 4) Buddy System.
- No Hot Work In Way Of Insulation Deck Covering Or To Adjacent Spaces Not Certified “Safe For Hot Work”.
- This Is An ENTRY ONLY Certificate. NO HOT WORK IS AUTHORIZED. SCP Is To Re-Inspect At Least Daily IAW 29 CFR 1915.15.
- Respiratory Protection: Wear Minimum Half-Face Air-Purifying Type With Cartridges Rated For Organic Petroleum Hydrocarbons.
- See QUALIFICATIONS Below Regarding Piping, Valves & Equipment.
- Maintain A Fire Watch For At Least 1/2 Hour After Completion Of Hot Work Operations In Order To Detect & Extinguish Smoldering Fires.
- All Other Cargo Tanks To Remain Secured.
- Work IAW NAS Procedures & Processes. (IAW = In Accordance With / IWO = In Way Of / NAS = Naval Auxillary Ship?)
- Keep Areas Of Hot Work Covered & Isolated With Fire-Retardant Blankets.
- Space Is Safe To Enter To Inspect. Adhere to QUALIFICATIONS Below. (Referring to printed “QUALIFICATIONS” on bottom of Certificate).
- No Hot Work Is Intended. Nature Of Work Is Inspection With Tanks To Be ReClosed Afterwards. Continue Ventilation.
- Hot Work Is Prohibited Within 12 Inches Of Bulkheads Common To Spaces Not Certified “SAFE FOR HOT WORK”.
- Torpedo Mag–Empty–Not LOADED. Not Safe For Hot Work Due To Combustibles Within Space–However Limited Hot Work Permitted To Exterior Weather Deck.
- Needle-Gunning, Flapper Wheel, Sanding on JP-5 Tanks & Piping Deemed Cold Work.

Alert FIRE WATCH & Proper VENTILATION REQUIRED In Accordance W/NavSea Std Items & OSHA 1915 NO Hot Work Within 6 Inches DIRECT CONTACT Of Adjacent Non 'Gas-Free' Tanks/Spaces. NO Hot Work DIRECTLY OVER-AGAINST Cable/Insulation/Boxes/ Buckets Or Debris.

–Comply W/All Applicable 29 CFR 1915 & NNS/USN Requirements, Including Maintaining Mechanical Ventilation.

–This Certificate Shall Be VALID Up To 24 Hours Provided Mechanical Ventilation Is Maintained & Conditions Do Not Change.

INERTION

–Measure For Safe Disposal Of Inert Gas: "Leave In Void Space".

–Complete All Hot Work On Inerted Spaces Within 24 Hours From Time Survey Completed.

–Remove Inerting Medium (Argon) IAW Y-1073.

–Maintain A Positive Argon Flow While Hot Work Is In Progress.

–Maintain A Slight Positive Pressure Of CO₂ Gas On The Tank Until Hot Work Is Complete.

–Disposal Of Inert Gas Shall Be Accomplished At Time Fuel Pipe Is Re-Filled.

–Ventilate Inert Gas To Open Atmosphere Upon Completion Of Hot Work.

VENTILATION

- Maintain Ventilation.
- Maintain Sufficient Ventilation & Fire Protection.
- Maintain Ventilation Prior To & During Hot Work.
- Maintain Hot Work Areas Mechanically Ventilated.
- Forced Air Ventilation Required In Work Tanks.
- Maintain Forced-Air Ventilation During All Entry & Internal Hot Work.
- Keep Headers Open For Ventilation.
- Ventilate Spaces While Entering.
- Low-Point Exhaust Ventilation Required.
- Use Natural Ventilation Through Cargo Hatch Ventilation Ports; Preferably In Evening, When Readings Exceed 20% LEL.
- Maintain Suction Ventilation On Piping.
- Maintain Forced-Air Exhaust Ventilation During Mucking & Tank-Cleaning Operations.
- Apply & Maintain Forced-Air Ventilation On All Spaces During Internal Work.
- Maintain Continuous Mechanical Ventilation At Volumes & Flow Rates Sufficient To Maintain Safe Conditions When Entering/Working Ins Tanks/Voids.
- Due To Extreme Heat Of The Day--Maintain Forced-Air Ventilation While Workers Are Inside.
- Maintain Slight Flow Of Air Through Line During Hot Work.
- Maintain Air Passing Through Piping.
- Maintain INFLATED Plug With Water Seal While Conducting Hot Work On Diesel Fill Line.
- Apply & Maintain Forced-Air Ventilation During All Hot Work In/On Pipelines, Coils & Diesel Tanks.

SCP RE-INSPECTIONS/MAINTENANCE OF CERTIFICATE

- SCP To Recheck Daily Prior To Hot Work.
- SCP To Re-Test All Certified Spaces EACH Work Day.
- SCP To Re-Test All Certified Spaces EVERY Day.
- SCP NEED NOT Re-Test For THC ppm.
- SCP To Retest Line Prior To Blasting.
- SCP Shall Frequently Test As Often As Necessary.
- SCP Check Spaces Stay Safe.
- Maintain Bilges Free Of Oil Residues.
- Stay Out Of All Inerted Tanks & Spaces.
- Re-Call Marine Chemist Every Time Safe Conditions
- SCP To Comply With Re-Inspection Requirements Of NFPA 306-14 §8.4 and OSHA 29 CFR 1915.15(c).
- SCP Shall Test & Visually Inspect All Certified Spaces, Including All Adjacent Spaces That Were Part Of The Original Inspection Daily Or More Often As Necessary In Support Of Work Prior To Entry Or Re-Commencement Of Work In Accordance With NFPA 306-14 §8.4 and OSHA 29 CFR 1915.15(c).
- SCP Shall Test & Visually Inspect All Certified Spaces, Including All Adjacent Spaces, Accessory Piping, Valves & Coils That Were Part Of The Original Inspection Daily If Work Occurs On Vessel. OK To Go Up To 72 Hours Without Re-Inspection If No Work Occurs On Vessel.
- This Certificate Expires 24 Hours From Time Of Issuance.
- Space Is Safe To Enter. Maintain Ventilation & SCP To Update Every 24 Hrs.
- SCP To Update The Certificate At The Start Of Each Workday OR Immediately Following A Weekend Or Holiday Period.

–SCP Shall Test For O₂, Combustible Gases, Diesel Vapor & Visually Inspect Each Listed Space Daily OR More Often As Necessary In Accordance With OSHA 29 CFR 1915.15(c).

–Tanks Are To Be Re-CP Tested After Covers Have Been Removed From Temporary Closure.

–CP Is Authorized To Re-Inspect/Test All Inspected Spaces To Verify No Change In Conditions Have Occurred. If A Change In Conditions Have Occurred, Stop Work & Contact The Undersigned Marine Chemist.

LOCAL SHIFTING

–Local Shifting Along Pier Authorized. SCP To Recheck After Movement.

–Local Movement Authorized. SCP To Recheck Prior To Restarting Hot Work.

–The Competent Person Shall Re-Inspect/Re-Test Each Listed Space/Area (Including Adjacent Spaces) At Least Daily & After Any Shifting/Movement Of The Vessel.

–Movement Of Vessel Within Shipyard Or Repair Facility Authorized.

–Local Shifting Of Vessel Within This Facility Is Authorized. Shipyard Competent Person Must Re-Inspect Vessel Immediately After Movement & Prior To Any Entry Or Work In Order To Verify Conditions Initially Found By Marine Chemist.

–Vessel May Be Shifted In Yard. Recheck O₂/LEL/Visual After Each Move.

–Vessel May Be Locally Shifted Within Facility. Retest O₂/LEL/Visual After Shifting Vessel & Entry/Work Can Begin.

–OK To Shift Vessel Within The Above Named Facility. SCP To Re-Inspect The Work Areas After Shifting & Daily IAW 29 CFR 1915.15.

CARGO LINES/PIPING/HEATING COILS/ETC..

- Cargo Lines Drained/No Product & Blown With Air. Maintain Air Flowing In Lines With Hot Work.
- All Fuel Piping & Sewage Lines Have Been Washed With Detergent/Flushed With Water & Blown With Air.
- Pipe Lines Shall Remain Closed For Hot Work.
- Piping Must Remain Isolated By Disconnection From All Machinery & Fuel Manifold/ Distribution System.
- Keep Forced-Air ON During Hot Work To Pipelines, Deep-Well, Vapor Line & Coils.
- Keep Piping System Isolated/LOTO'ed.

TOXICITY/OTHER REQUIREMENTS

- Notify USCG Captain Of The Port When Temperature Readings Reach Or Exceeds 55°C or 131°F.
- Contact Marine Chemist When Carbon Monoxide Readings Reach Or Exceeds 50ppm Or If LEL Readings Rise Dramatically.
- Properly Decontaminate Prior To Eating, Drinking, Smoking or Vaping.
- Entry & Work On CHT Piping With "Skin Contact Precautions". Wash Hands & Exposed Skin Upon Completion Of Work.
- SCP To Monitor For Paint VOCs Each 30 Minutes Until VOCs Are Below 20 PPM.
- This Tank Last Contained Human Waste Products. Practice Good Hygiene Upon Exiting Such As Washing Hands Before Eating Or Drinking.
- All Persons Entering The Tank Shall Wear A Minimum 1/2 Face Organic Vapor Respirator, Suits, Boots & Gloves.
- Wash Hands & Face Thoroughly Before Eating, Smoking or Chewing Gum.