CHOPTECH

COMPREHENSIVE SAFETY PROGRAM

Safety Management System | Sections 1 – 40 | Complete Program

DOCUMENT INFORMATION

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CT-SMS-MASTER-001

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Director of Safety Operations

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ACTIVE — CONTROLLED DOCUMENT

CHOPTECH

EMERGENCY QUICK REFERENCE

CHOPTECH SHIPYARD | 1324 McCLOUD ROAD, CHESAPEAKE, VA 23320 | POST AT ALL STATIONS

IN ANY LIFE-THREATENING EMERGENCY — CALL 911

Fire | Medical | Police | Hazmat

CHESAPEAKE EMERGENCY SERVICES

Fire / Police / EMS *PRIMARY — All emergencies*	**911**
Non-Emergency Dispatch	**757-382-6161**
Fire Dept (Admin)	**757-382-6297**
Police Dept (Admin)	**757-382-6556**

USCG — MARITIME EMERGENCY

USCG Sector Virginia (24-Hr) *Search & rescue, vessel incidents*	**877-722-5727**
VHF Distress Channel *MAYDAY x3 — position, emergency, persons*	**CH 16 (156.8 MHz)**
Natl Response Center (NRC) *Oil/chemical spills — federal reporting*	**800-424-8802**

ENVIRONMENTAL & SPILL RESPONSE

National Response Center *Mandatory — any spill to water/land/air*	**800-424-8802**
Virginia DEQ — Emergency *Significant pollution incidents*	**804-750-8845**
Virginia DEQ — Tidewater *Non-emergency / permitting*	**757-518-2000**

MEDICAL & POISON CONTROL

Chesapeake Regional Med Ctr ER *Nearest ER (24/7) — call 911 for transport*	**757-312-6200**
Virginia Poison Center (24/7) *Chemical exposure, ingestion, inhalation*	**800-222-1222**

STATE & REGIONAL SUPPORT

Virginia State Police — Area 47 *State law enforcement, major incidents*	**757-424-6788**
Chesapeake Emergency Mgmt *Large-scale incident coordination*	**757-382-6161**

PUBLIC UTILITIES

Chesapeake Water/Sewer (After Hrs) *Water breaks, sewer, flooding*	**757-382-3550**
Chesapeake Utilities (Business Hrs)	**757-382-6352**
Dominion Power — Outages *Downed lines — evacuate area first*	**866-366-4357**
Virginia Natural Gas — Leaks *EVACUATE FIRST — then call from outside*	**877-572-3342**
Miss Utility / Before Digging *Mark underground utilities before excavation*	**811**

CHOPTECH INTERNAL

CHOPTECH Safety Hotline *24/7 — all incidents and hazards*	**757-630-9022**
CHOPTECH Security *On-site security emergency*	**757-560-9346**

PROPERTY ACCESS EMERGENCY | GATE & KNOX BOX

Bruce Shunkwiler — Gate / Access Emergency

757-560-9346

Gate malfunction | PIN issues | After-hours access

KNOX BOX — Located at entrance near mailbox

Contains: Evac plan, property map, hazmat locations, gate remote controller & keypad instructions.
Chesapeake Fire Dept has on-site familiarity.

CHOPTECH SHIPYARD
SAFETY MISSION STATEMENT

CHOPTECH Shipyard is unconditionally committed to safe and professional operations. The safety, health, and well-being of every employee, contractor, subcontractor, and visitor at our facility is our highest organizational priority — above production schedules, above cost, and above any other business objective.

OUR MISSION

CHOPTECH Shipyard's mission is to achieve and maintain full compliance with all applicable federal, state, and local safety, health, and environmental regulations — including OSHA 29 CFR 1910, 29 CFR 1915, Virginia OSHA (VOSH), EPA, and USCG requirements — as our minimum standard of performance, and to exceed those standards wherever operationally feasible. We are committed to operating a clean, organized, hazard-free shipyard that reflects the pride and professionalism of our workforce.

OUR GOALS

◆ Zero Workplace Injuries and Illnesses

We believe every injury and illness is preventable. Our goal is zero — not as a slogan, but as a daily operational standard that every CHOPTECH employee works toward on every shift.

◆ Full Regulatory Compliance at All Times

CHOPTECH will maintain full compliance with OSHA, VOSH, EPA, USCG, and all applicable regulations at all times. We do not view compliance as a ceiling — it is our floor. We will always strive to exceed minimum requirements.

◆ A Safe and Professional Work Environment

CHOPTECH is committed to maintaining a clean, organized, and professionally operated facility. Our yard, vessels, offices, and equipment will reflect the high standards we hold ourselves to. A professional environment is a safe environment.

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◆ A Culture of Safety Ownership

Every CHOPTECH employee — regardless of title, trade, or tenure — is empowered and expected to identify hazards, report unsafe conditions, stop unsafe work, and participate actively in maintaining a safe workplace. Safety is not done to our people — it is done with them.

◆ Continuous Improvement

CHOPTECH will continuously evaluate and improve our safety performance through regular inspections, incident investigations, employee feedback, and annual program reviews. We will measure what matters and act on what we find.

◆ Accountability at Every Level

Safety accountability at CHOPTECH is not limited to the Safety Department. Every supervisor, manager, director, and executive is personally accountable for the safety performance of their team. Safety performance is evaluated as part of every leader's annual review.

THESE ARE NOT ASPIRATIONS — THEY ARE DIRECTIVES. Every CHOPTECH employee, contractor, supervisor, manager, director, and executive is bound by this mission. No production target, client demand, or schedule pressure will ever supersede the safety of our people. Any instruction that conflicts with this mission is invalid and shall not be followed.

Mission Statement — Executive Authorization

General Manager Printed Name	Signature	Date
Safety Manager Printed Name	Signature	Date

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FORMAL PROGRAM ADOPTION & EXECUTIVE AUTHORIZATION

CHOPTECH SHIPYARD

1324 McCloud Road, Chesapeake, Virginia 23320

This Comprehensive Safety Program (Document No. CT-SMS-MASTER-001) constitutes the official Safety Management System of CHOPTECH Shipyard. By signing below, the undersigned executives of CHOPTECH Shipyard formally adopt, authorize, and commit to the implementation and enforcement of this program in its entirety, effective January 1, 2026.

This program has been developed in compliance with all applicable federal, state, and local regulations including OSHA 29 CFR 1910, OSHA 29 CFR 1915, OSHA 29 CFR 1926, Virginia Occupational Safety and Health Act (VOSH), EPA regulations, USCG requirements, NFPA standards, and ASME standards. It supersedes all previous CHOPTECH safety policies, procedures, programs, and directives.

Management's commitment to this program means that safety is not subordinate to production, schedule, or cost. No CHOPTECH employee will ever be required to perform work in a manner that violates this program. Any conflict between production demands and safety requirements shall be resolved in favor of safety — without exception.

EXECUTIVE AUTHORIZATION — SIGNATURES REQUIRED

_____	_____	_____
General Manager — Printed Name	**Signature**	**Date**
_____	_____	_____
Operations Director — Printed Name	**Signature**	**Date**
_____	_____	_____
Safety Manager — Printed Name	**Signature**	**Date**
_____	_____	_____
HR Director — Printed Name	**Signature**	**Date**

This program shall be reviewed annually. The next scheduled review date is January 1, 2027. Any interim revisions shall be documented in the Revision Log (see following page) and re-authorized by the Safety Manager.

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DOCUMENT REVISION LOG

This log records all revisions made to the CHOPTECH Comprehensive Safety Program (CT-SMS-MASTER-001). Every revision — no matter how minor — shall be recorded here with a description of what changed, the reason for the change, the name of the person who made the change, and the date. Revisions that affect regulatory compliance shall also be re-authorized by the Safety Manager and General Manager.

Rev.	Date	Description of Change	Reason	Revised By	Approved By
1.0	January 1, 2026	Initial Release — Complete Safety Management System, Sections 1–32	New Program	Safety Manager	General Manager

Instructions: When this program is revised, complete a new row in this log. Distribute updated pages to all controlled copy holders per the Distribution List. Archive the superseded version with the date it was retired.

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This document is a CONTROLLED document. Only holders of numbered controlled copies listed below are authorized to use this document for compliance purposes. Uncontrolled copies (printed from the electronic file without a copy number) are for reference only and must not be used as the basis for compliance decisions. When this program is revised, controlled copy holders are responsible for replacing superseded pages with current revisions.

Copy No.	Assigned To / Location	Department / Area	Format
001	Safety Manager	Safety Department	Master Copy — Electronic & Physical
002	General Manager	Executive Office	Physical Binder
003	Operations Director	Operations Office	Physical Binder
004	Production Superintendent	Production Office	Physical Binder
005	HR Director	HR Office	Physical Binder
006	Environmental Coordinator	Safety Department	Physical Binder
007	Dock Office	Pier Head Building	Posted — Laminated
008	Safety Shack	Main Production Area	Posted — Laminated
009	First Aid Station — Main	Building 1 Break Room	Posted — Laminated
010	Main Entrance Bulletin Board	Front Gate	Posted — Laminated
011	Drydock Control Shack	Floating Drydock	Posted — Laminated
012	CHOPTECH Safety SharePoint	Electronic — All Staff Access	Electronic

To add a controlled copy holder, contact the Safety Manager. Controlled copies must be returned to the Safety Department when the holder leaves CHOPTECH or changes roles. Lost or damaged controlled copies must be reported to the Safety Manager immediately.

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MASTER DEFINITIONS & GLOSSARY

The following definitions apply throughout the CHOPTECH Comprehensive Safety Program. Where terms are defined by OSHA regulations, those regulatory definitions govern. Additional terms may be defined within individual sections where specific context requires a more precise definition.

Affected Employee	An employee whose job requires them to operate or use a machine or equipment on which servicing or maintenance is being performed under LOTO, or whose job requires them to work in an area where such servicing or maintenance is being performed.
Authorized Employee	An employee who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment, or an employee authorized to enter a confined space.
Competent Person	One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. (OSHA definition)
Confined Space	A space that is large enough and so configured that an employee can bodily enter and perform assigned work; has limited or restricted means for entry or exit; and is not designed for continuous employee occupancy. (29 CFR 1910.146)
Controlled Document	A document that is formally managed through a revision control system. Only numbered controlled copies are authoritative for compliance purposes.
DART Rate	Days Away, Restricted, or Transfer rate — an OSHA metric calculated as (DART cases x 200,000) divided by total hours worked in the period.
Energized Electrical Work Permit (EEWP)	A written authorization, signed by the Safety Manager and Operations Director, permitting qualified electrical workers to perform work on energized electrical systems above 50V AC when de-energizing is infeasible.
Engineering Controls	Physical modifications to the work environment or equipment that reduce or eliminate exposure to hazards without relying on worker behavior. Examples: ventilation systems, machine guards, interlocks.
Exposure Control Plan	A written document, required by OSHA 29 CFR 1910.1030, that details how an employer will minimize employee exposure to bloodborne pathogens and other potentially infectious materials.
General Duty Clause	Section 5(a)(1) of the OSH Act, which requires employers to provide a workplace free from recognized hazards that are causing or likely to cause death or serious physical harm.
Hazardous Energy	Any electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or gravitational energy that could cause injury to employees during servicing or maintenance activities.
Hierarchy of Controls	A framework for selecting hazard control methods in order of effectiveness: Elimination, Substitution, Engineering Controls, Administrative Controls, Personal Protective Equipment.
IDLH	Immediately Dangerous to Life or Health — any atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.

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Incident	Any unplanned event that results in, or has the potential to result in, injury, illness, property damage, or environmental harm. Includes injuries, near misses, property damage, and environmental releases.
Job Hazard Analysis (JHA)	A technique that focuses on job tasks as a way to identify hazards before they occur. It focuses on the relationship between the worker, the task, the tools, and the work environment. Also called Job Safety Analysis (JSA).
KNOX BOX	A secure wall-mounted key container installed at a building's exterior that allows emergency responders to gain quick access to a building or property without forcing entry. The Chesapeake Fire Department holds the master key.
Lockout/Tagout (LOTO)	Procedures used to ensure that dangerous machines are properly shut off and not able to be started up again before maintenance or servicing work is completed. Governed by OSHA 29 CFR 1910.147.
Near Miss	An unplanned event that did not result in injury, illness, or damage — but had the potential to do so. Also called a close call or near hit. Near misses are leading indicators and shall be reported and investigated.
OSHA	Occupational Safety and Health Administration — the federal agency responsible for setting and enforcing workplace safety and health standards under the OSH Act of 1970.
Permit-Required Confined Space (PRCS)	A confined space that contains or has the potential to contain a serious hazard, including: a hazardous atmosphere, material that could engulf an entrant, an internal configuration that could trap or asphyxiate, or any other recognized serious safety or health hazard.
Personal Protective Equipment (PPE)	Equipment worn to minimize exposure to hazards that cause serious workplace injuries and illnesses. PPE is the last line of defense in the hierarchy of controls.
Qualified Person	One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project.
Recordable Injury/Illness	A work-related injury or illness that results in: death; days away from work; restricted work or job transfer; medical treatment beyond first aid; loss of consciousness; or diagnosis of a significant injury or illness by a licensed healthcare professional.
Risk Priority Number (RPN)	A numerical value (Likelihood x Severity, scale 1–25) used by CHOPTECH to prioritize hazards for corrective action. Higher RPN = higher priority.
Safety Data Sheet (SDS)	A document required by OSHA HazCom (29 CFR 1910.1200) that provides detailed information about a hazardous chemical, including its properties, health hazards, protective measures, and safety precautions. Formatted in 16 standardized sections per GHS.
Stop Work Authority (SWA)	The right and responsibility of every CHOPTECH employee to stop any work they believe poses an imminent danger to themselves or others, without fear of retaliation.
TRIR	Total Recordable Incident Rate — an OSHA metric calculated as (number of recordable incidents x 200,000) divided by total hours worked. Used to compare safety performance across organizations and time periods.
VOSH	Virginia Occupational Safety and Health — the state-plan OSHA agency that administers and enforces federal OSHA standards, plus Virginia-specific requirements, for public and private sector employers in Virginia.

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Zero Energy State	The condition in which all energy sources feeding a machine or piece of equipment have been isolated, locked out, and verified — such that the equipment cannot be energized, started, or moved during servicing or maintenance.

This glossary is reviewed and updated annually as part of the program review cycle. Additional definitions may be found within individual sections of this program.

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SECTION 1

Program Overview & Management Commitment

1.1 Introduction

CHOPTECH Shipyard operates a facility engaged in the construction, repair, conversion, and outfitting of marine vessels. The nature of shipyard work — involving confined spaces, heavy equipment, hazardous materials, hot work, marine environments, and complex multi-trade operations — demands a comprehensive, rigorously maintained safety management system. This Comprehensive Safety Program (CSP) represents CHOPTECH's commitment to providing a workplace free from recognized hazards that cause or are likely to cause death or serious physical harm.

This program governs all CHOPTECH operations at its Chesapeake, Virginia facility and applies to all employees, supervisors, managers, executives, contractors, subcontractors, and visitors present at any CHOPTECH work site.

1.2 Program Purpose and Objectives

The CHOPTECH Comprehensive Safety Program is designed to achieve the following objectives:

- Protect every person at CHOPTECH facilities from work-related injury, illness, and death.
- Comply fully with all applicable federal, state, and local safety and environmental regulations.
- Establish clear roles, responsibilities, and accountabilities for safety at every level of the organization.
- Create systematic processes for identifying, evaluating, and controlling workplace hazards before they cause harm.
- Foster a safety culture in which every employee is empowered and expected to speak up, stop unsafe work, and participate in safety improvement.
- Continuously improve safety performance through measurement, analysis, and action.
- Protect CHOPTECH's reputation, business continuity, and financial health by preventing the human and economic costs of workplace incidents.

1.3 Program Scope

This program consists of 30 sections covering the full spectrum of safety management at CHOPTECH. Sections 1–10 establish the program foundation — governance, policy, roles, hazard management, regulatory framework, worker rights, and onboarding. Sections 11–30 address specific technical hazard programs applicable to CHOPTECH's shipyard operations.

Sections	Category	Topics Covered
Sections 1–10	Program Foundation	Governance, policy, roles, JHA, risk assessment, regulatory compliance, worker rights, discipline, onboarding
Sections 11–15	Shipyard Hazard Programs I	Confined space, hot work, electrical safety, marine/waterfront, emergency response
Sections 16–20	Shipyard Hazard Programs II	HazCom, PPE, fall protection, crane & rigging, contractor safety
Sections 21–25	Shipyard Hazard Programs III	LOTO, incident investigation, drug & alcohol, heat/cold stress, safety training
Sections 26–30	Program Administration	Bloodborne pathogens, ergonomics, environmental compliance, inspections, program administration

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1.4 Management Commitment

Safety at CHOPTECH is not a priority that competes with production — it is a core value that underlies every business decision. CHOPTECH's management commits to:

- Providing the financial, human, and physical resources necessary to implement and maintain this safety program.
- Establishing measurable safety objectives and targets and reviewing progress quarterly.
- Participating visibly in safety walks, safety meetings, and incident investigations.
- Holding all levels of management accountable for safety performance in their areas of responsibility.
- Responding promptly and decisively to all safety concerns raised by employees.
- Never directing or allowing production to proceed when an imminent safety hazard exists.
- Leading by example — following all safety rules and wearing required PPE in all applicable areas.

1.5 Program Review and Update

This program shall be reviewed in its entirety at minimum annually by the Safety Manager and Operations Director. Reviews shall also be triggered by: a fatality or serious injury, a significant regulatory change, a major audit finding, or a significant change in CHOPTECH's operations, processes, or facility. All revisions shall be approved by the General Manager and distributed to all controlled copy holders.

Section 1 — Management Commitment Acknowledgment

_____	_____	_____
General Manager Printed Name	**General Manager Signature**	**Date**
_____	_____	_____
Operations Director Printed Name	**Operations Director Signature**	**Date**
_____	_____	_____
Safety Manager Printed Name	**Safety Manager Signature**	**Date**

SECTION 2 — Safety Policy Statement & Leadership Accountability

2.1 CHOPTECH Safety Policy Statement

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CHOPTECH SHIPYARD is committed to the health, safety, and well-being of every person who works at or visits our facilities. We believe that all workplace injuries and illnesses are preventable, and that no production target, schedule, or cost objective is worth compromising the safety of our people. CHOPTECH will provide a workplace free from recognized hazards. We will comply with all applicable federal, state, and local safety regulations as a minimum — and strive to exceed those standards wherever feasible. Every employee, at every level, is responsible for safety — both their own and that of their coworkers. We will identify and control hazards before they cause harm. We will investigate every incident to understand its root causes and prevent recurrence. We will continuously improve our safety performance through measurement, transparency, and action. Safety is not a condition of employment at CHOPTECH — it is employment at CHOPTECH.

Safety Policy — Official Execution

_____	_____	_____
General Manager Printed Name	**Signature**	**Date**

2.2 Leadership Safety Accountabilities

Safety accountability at CHOPTECH cascades from the General Manager through every level of the organization. The following accountabilities are non-negotiable and are evaluated as part of each leader's performance review.

Role	Safety Accountability
General Manager	Ultimate accountability for the safety culture and performance of CHOPTECH. Authorizes safety resources; conducts quarterly safety reviews; approves safety program; visible safety leadership in production areas minimum monthly.
Operations Director	Accountable for integrating safety into production planning and scheduling. Ensures supervisors have time, tools, and authority to enforce safety. Reviews all recordable incidents within 24 hours. Attends monthly safety committee.
Production Superintendent	Accountable for day-to-day safety performance in assigned production areas. Conducts weekly safety inspections. Reviews all first aid and near-miss reports. Ensures permit systems are used correctly. Conducts safety observations daily.
Supervisors / Foremen	Front-line safety accountability. Conduct daily pre-shift safety briefings. Ensure all workers are trained and equipped before starting tasks. Complete all required safety documentation. Enforce safety rules consistently. Report all incidents and hazards immediately.
Safety Manager	Develops, implements, and maintains the Safety Management System. Provides technical expertise and regulatory guidance. Conducts inspections and audits. Investigates incidents. Manages training program. Reports safety performance to leadership.
All Employees	Follow all safety rules and procedures. Use required PPE. Report hazards, injuries, and near misses immediately. Participate in safety training. Exercise Stop Work Authority when unsafe conditions are observed. Support fellow workers' safety.

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2.3 Safety Performance in Performance Reviews

Safety performance shall be a formal, weighted component of the annual performance review for all supervisors, superintendents, managers, and directors at CHOPTECH. Evaluation criteria include: incident rate in area of responsibility, inspection completion rate, training compliance rate, corrective action closure rate, and demonstrated safety leadership behaviors. No supervisor or manager may receive an 'exceeds expectations' overall performance rating if their safety rating is 'below expectations' for the review period.

Section 2 — Leadership Accountability Acknowledgment

_____	_____	_____
Supervisor/Manager Printed Name	**Signature**	**Date**
_____	_____	_____
Department	**Title / Position**	**Date**

SECTION 3

Roles & Responsibilities

3.1 Purpose

Clear roles and responsibilities are essential to an effective safety management system. Every person at CHOPTECH — from the General Manager to the most recently hired craft worker — has defined safety responsibilities. This section documents those responsibilities in detail and establishes the accountability structure that supports CHOPTECH's safety culture.

3.2 Safety Department

3.2.1 Safety Manager

- Develop, implement, maintain, and continuously improve the CHOPTECH Comprehensive Safety Program.
- Serve as the primary point of contact for all OSHA, EPA, USCG, and Virginia regulatory agencies.
- Conduct and coordinate incident investigations for all recordable injuries, near misses, and significant property damage.
- Plan and coordinate the annual safety audit — including engagement of external auditors on alternating years.
- Manage the safety training calendar; ensure all training is current for all employees.
- Analyze safety performance data monthly; prepare reports for leadership review.
- Review and approve all confined space entry permits, hot work permits, and critical lift plans.
- Maintain all OSHA 300 logs, 300A summaries, and 301 incident reports.
- Manage the contractor pre-qualification and oversight program.
- Serve as Chair of the CHOPTECH Safety Committee.

3.2.2 Safety Representatives

- Conduct weekly formal safety inspections in assigned production areas — documented on CT-INS-002.
- Assist supervisors with job hazard analysis (JHA) completion for non-routine tasks.
- Support incident investigations — photograph scenes, interview witnesses, document findings.

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- Facilitate toolbox talks and area-specific safety training as directed by the Safety Manager.
- Maintain area safety boards — current postings, inspection records, emergency contacts.
- Serve as the first safety contact for employees who have safety concerns or questions.

3.3 Operations / Production

3.3.1 Production Superintendent

- Integrate safety requirements into production planning — permit lead times, JHA completion, PPE availability.
- Conduct daily area walk-throughs and document findings on CT-INS-001.
- Review all first aid logs and near-miss reports within 24 hours of occurrence.
- Ensure all supervisors under their direction conduct daily pre-shift safety briefings.
- Attend monthly Safety Committee meetings and quarterly Leadership Safety Reviews.
- Authorize temporary work stoppages for safety reasons without requiring Safety Manager approval — notify Safety Manager within 1 hour.

3.3.2 Supervisors and Foremen

- Conduct pre-shift safety briefings for all employees before work begins each day.
- Ensure all employees have completed required training before performing assigned tasks.
- Verify that all required permits (confined space, hot work, LOTO, electrical) are in place before work begins.
- Conduct or oversee Job Hazard Analysis (JHA) completion for all non-routine and high-risk tasks.
- Enforce all safety rules consistently — no exceptions for schedule, relationships, or convenience.
- Report all incidents, injuries, near misses, and unsafe conditions to the Safety Department immediately.
- Ensure required PPE is available, in good condition, and being used correctly.
- Complete all safety documentation accurately and on time.
- Stop any work they observe that poses an imminent danger to any person.

3.3.3 All Employees

- Follow all CHOPTECH safety rules, procedures, and program requirements at all times.
- Use all required PPE for the task and work area.
- Report all injuries, near misses, hazards, and unsafe conditions to their supervisor immediately.
- Exercise Stop Work Authority when they observe an imminent danger — stop work, secure the area, report to supervisor.
- Participate actively in safety training, toolbox talks, and JHA preparation.
- Never operate equipment or perform tasks they have not been trained and authorized to perform.
- Assist in maintaining a clean, organized, hazard-free work area.
- Support and encourage the safety of coworkers — including speaking up when they observe unsafe behaviors.

3.4 Human Resources

- Maintain employee training records in coordination with the Safety Department.
- Coordinate occupational health services — pre-employment physicals, fit-for-duty evaluations, return-to-work programs.
- Manage the Employee Assistance Program (EAP) for substance abuse, mental health, and ergonomic referrals.
- Ensure safety performance criteria are incorporated into all performance review processes.
- Support the drug and alcohol testing program coordination.

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3.5 Procurement

- Require Safety Data Sheets (SDS) for all chemical products before purchase — no SDS, no purchase.
- Verify that equipment purchases meet applicable safety standards (ANSI, ASME, NFPA, OSHA).
- Notify the Safety Department before purchasing new chemicals, processes, or equipment that may introduce new hazards.
- Include CHOPTECH safety requirements in all contractor and vendor contracts.

Section 3 — Roles & Responsibilities Acknowledgment

_____	_____	_____
Employee Printed Name	**Employee Signature**	**Date**
_____	_____	_____
Supervisor Printed Name	**Supervisor Signature**	**Date**

SECTION 4 Safety Committee Structure

4.1 Purpose and Authority

CHOPTECH's Safety Committee is the primary cross-functional body for safety program oversight, employee engagement in safety, and recommendation of safety improvements. The Safety Committee has the authority to recommend corrective actions, program changes, and resource allocations to CHOPTECH leadership. All Safety Committee recommendations shall receive a written response from management within 14 calendar days.

4.2 Committee Composition

Member	Role	Term	Responsibilities
Safety Manager	Chair	Permanent	Agenda preparation, meeting facilitation, minutes, corrective action tracking
Operations Director	Executive Sponsor	Permanent	Management commitment, resource authorization, escalation
Production Superintendent	Member	Permanent	Production area safety performance, corrective action implementation
Craft Employee Representatives (3)	Members	1-year rotating term	Representing production, pipe/mechanical, and electrical trades — elected by peers
HR Representative	Member	Permanent	Training compliance, workers comp, EAP, return-to-work
Environmental Coordinator	Member	Permanent	Environmental compliance, spill response, regulatory updates
Safety Representative(s)	Secretary	Permanent	Minutes, action tracking, inspection report summaries

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Member	Role	Term	Responsibilities
Department Supervisors (rotating)	Guest Members	Monthly rotation	Presenting their area's safety performance data

4.3 Meeting Schedule and Agenda

4.3.1 Monthly Safety Committee Meeting

- Held on the second Tuesday of each month at 9:00 AM in the CHOPTECH Conference Room.
- Quorum requires at least 5 members including the Chair and at least 2 craft employee representatives.
- Meetings shall not exceed 90 minutes.
- Minutes distributed to all members and posted on the Safety Board within 5 business days.

4.3.2 Standard Monthly Agenda

#	Agenda Item	Time	Description
1	Safety Moment	5 min	Rotating member — brief safety topic, lesson learned, or recognition
2	Review of Previous Minutes	5 min	Approve or correct prior meeting minutes
3	Incident Review	15 min	All incidents since last meeting — classification, root cause, corrective actions
4	Inspection / Audit Results	15 min	Summary of all inspections — findings, trends, open items
5	Corrective Action Status	10 min	Review all open corrective actions — overdue items escalated
6	Leading / Lagging Indicators	10 min	TRIR, DART, near-miss rate, training compliance, PPE compliance
7	Regulatory Updates	5 min	New or proposed OSHA, EPA, or USCG regulations affecting CHOPTECH
8	Employee Safety Concerns	15 min	Open forum — craft representatives present employee-raised concerns
9	New Business / Recognition	10 min	New initiatives, safety recognition, upcoming events
10	Action Item Review	5 min	Confirm all action items from the meeting — owner and due date

4.4 Craft Employee Representatives — Election Process

Three craft employee representatives serve on the Safety Committee, each representing a different trade area. Representatives are elected by their peers annually in March for one-year terms beginning April 1. Any craft employee with at least 6 months of CHOPTECH service in good standing may stand for election. Representatives may serve a maximum of two consecutive terms before a one-year break is required.

4.5 Subcommittees

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Subcommittee	Members	Frequency	Focus
Emergency Response Subcommittee	Safety Manager, Security Supervisor, Medical Officer, Department Supervisors	Quarterly	Emergency plan review, drill planning, response equipment audit
Ergonomics Subcommittee	Safety Representative, HR, Production Superintendent, rotating craft member	Quarterly	MSD trend review, ergonomic improvement projects, early intervention program
Environmental Subcommittee	Environmental Coordinator, Safety Manager, Production Superintendent	Quarterly	Environmental compliance status, permit conditions, spill prevention updates

Section 4 — Safety Committee Member Acknowledgment

_____	_____	_____
Member Printed Name	**Member Signature**	**Date**
_____	_____	_____
Role / Trade Represented	**Term Start Date**	**Term End Date**

SECTION 5

Hazard Identification & Job Hazard Analysis (JHA)

5.1 Purpose and Scope

Hazard identification is the first and most critical step in preventing workplace injuries and illnesses. CHOPTECH uses the Job Hazard Analysis (JHA) process — also called Job Safety Analysis (JSA) — as the primary tool for systematically identifying hazards associated with specific tasks and implementing controls before work begins. JHAs are required for all non-routine, high-risk, and new tasks at CHOPTECH.

5.2 When a JHA Is Required

A JHA (Form CT-JHA-001) shall be completed before beginning any of the following:

- Any task requiring a confined space entry permit, hot work permit, LOTO, or energized electrical work permit.
- Any new task not previously performed at CHOPTECH.
- Any task that has previously resulted in an injury or near miss.
- Any task involving two or more simultaneous hazard categories (e.g., work at height + chemical exposure).
- Any critical or engineered lift (crane operations exceeding 75% of rated capacity).
- Any task identified by the supervisor or Safety Department as requiring additional hazard analysis.
- Non-routine maintenance or repair tasks on shipboard systems (electrical, fuel, hydraulic, steam).

NOTE: Routine, repetitive tasks with established procedures and demonstrated safety records do not require a new JHA each time — the existing JHA shall be reviewed and confirmed valid before beginning work. JHAs for routine tasks shall be reviewed annually.

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5.3 JHA Development Process

5.3.1 Step-by-Step JHA Methodology

Step	Description
Step 1 — Select the Job	Identify the specific task to be analyzed. JHAs are most valuable for high-frequency, high-consequence, and non-routine tasks.
Step 2 — Break the Job into Steps	List the sequence of discrete steps required to complete the task from start to finish. Typically 5–15 steps. Too broad = missed hazards; too narrow = unusable document.
Step 3 — Identify Hazards at Each Step	For each step, ask: What could go wrong here? What could harm the worker or others? Consider energy sources, equipment, materials, environment, and human factors.
Step 4 — Determine Controls	For each hazard, identify controls using the hierarchy: eliminate, substitute, engineering control, administrative control, PPE. Document the specific control to be used.
Step 5 — Review with Employees	Review the completed JHA with all employees who will perform the task. Incorporate their feedback — they know the job best. Workers must sign the JHA before starting work.
Step 6 — Implement and Monitor	Supervisor verifies all controls are in place before work begins. Monitors ongoing work to ensure controls remain effective. Updates JHA if conditions change.

5.3.2 Common Shipyard Hazard Categories to Consider

Hazard Category	Examples
Energy Hazards	Electrical, hydraulic, pneumatic, thermal, gravitational, chemical, radiation
Physical Hazards	Struck-by, caught-in/between, fall from elevation, fall to same level, struck against
Ergonomic Hazards	Awkward posture, repetitive motion, force, vibration, contact stress
Chemical Hazards	Toxic vapors, flammable liquids, corrosives, asphyxiants, carcinogens
Atmospheric Hazards	Oxygen deficiency/enrichment, toxic gas accumulation, flammable atmosphere
Environmental Hazards	Extreme heat or cold, noise, poor lighting, wet/slippery surfaces, marine conditions
Human Factor Hazards	Fatigue, time pressure, inadequate training, communication failure, complacency

5.4 Employee Participation in JHAs

Employee involvement is not optional — it is essential to an effective JHA. Employees performing the work have direct knowledge of the actual hazards and practical controls that experienced analysts may miss. CHOPTECH requires that:

- At least one employee who will perform the task participates in JHA development.
- All employees assigned to the task review and sign the JHA before work begins (signatures on CT-JHA-001).
- Employees may raise concerns about identified hazards or proposed controls without fear of retaliation.
- If an employee identifies a hazard not captured in the JHA during work, they stop work and notify the supervisor immediately.

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5.5 JHA Documentation and Retention

Completed JHAs shall be retained by the supervisor for the duration of the task and filed with the Safety Department upon completion. JHAs for recurring tasks are retained for 3 years. JHAs associated with incidents are retained for 5 years minimum.

JHA Employee Sign-Off — Task Authorization

Task / Job Description		Work Location
Employee #1 Printed Name	Employee #1 Signature	Date
Employee #2 Printed Name	Employee #2 Signature	Date
Employee #3 Printed Name	Employee #3 Signature	Date
Supervisor Printed Name	Supervisor Signature	Date

SECTION 6

Risk Assessment & Hierarchy of Controls

6.1 Purpose

Not all hazards carry the same risk. Effective safety management requires the ability to prioritize hazards by their likelihood and consequence, and to select controls that provide the highest degree of protection feasible. This section establishes CHOPTECH's risk assessment methodology and the hierarchy of controls framework that governs all hazard control decisions.

6.2 Risk Assessment Methodology

CHOPTECH uses a Risk Priority Number (RPN) approach for evaluating and prioritizing hazards. Risk is assessed on two dimensions: Likelihood (probability of the hazard causing harm) and Severity (consequence if harm occurs). The RPN = Likelihood x Severity.

6.2.1 Likelihood Scale

Score / Level	Description
1 — Rare	Has not occurred at CHOPTECH or similar facilities; requires multiple simultaneous failures

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Score / Level	Description
2 — Unlikely	Has occurred at similar facilities; unlikely under current conditions
3 — Possible	Has occurred at CHOPTECH in the past; plausible under current conditions
4 — Likely	Occurs occasionally at CHOPTECH; would not be surprising if it occurred
5 — Almost Certain	Occurs regularly; expected to occur if no action is taken

6.2.2 Severity Scale

Score / Level	Description
1 — Negligible	No injury or minimal first aid; no environmental impact; no property damage
2 — Minor	Minor injury requiring first aid; minimal environmental impact; minor property damage
3 — Moderate	Recordable injury; moderate environmental impact; significant property damage
4 — Serious	Lost time injury, hospitalization, or permanent partial disability; major environmental release
5 — Catastrophic	Fatality, permanent total disability, or multiple serious injuries; catastrophic environmental event

6.2.3 Risk Priority Matrix

RPN = Likelihood (1–5) x Severity (1–5). Maximum RPN = 25.

RPN / Risk Level	Color	Required Action
1–4 (Low)	GREEN	Manage with routine controls; document in area hazard register; annual review
5–9 (Moderate)	YELLOW	Implement additional controls within 30 days; supervisor review monthly
10–14 (High)	ORANGE	Immediate additional controls required; Safety Manager review; weekly monitoring
15–25 (Critical)	RED	Stop or restrict work until controls reduce RPN to Moderate or below; Safety Manager authorization required to proceed

6.3 Hierarchy of Controls

CHOPTECH requires that hazard controls be selected using the following hierarchy, from most to least effective. Controls higher in the hierarchy provide more reliable protection and require less ongoing human compliance. Multiple controls from different levels are often combined for maximum protection.

Level	Approach	Shipyard Examples	Effectiveness
1 — Elimination	Remove the hazard entirely from the workplace	Redesign the task to eliminate the need for the hazardous activity; substitute a non-hazardous material; remove the equipment creating the hazard	Most Effective

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Level	Approach	Shipyard Examples	Effectiveness
2 — Substitution	Replace the hazard with something less dangerous	Replace a solvent-based coating with a water-based equivalent; replace a hazardous chemical with a less toxic alternative	Very Effective
3 — Engineering Controls	Physically isolate workers from the hazard	Ventilation systems, machine guarding, interlocks, noise enclosures, blast containment, GFCI protection, safety valves	Effective — does not rely on worker behavior
4 — Administrative Controls	Change how work is performed or organized	Job rotation to reduce exposure duration, safe work procedures, permit systems, JHAs, training, scheduling hazardous work during low-occupancy periods	Moderate — relies on consistent human compliance
5 — PPE	Protect the worker's body from the hazard	Hard hats, safety glasses, gloves, hearing protection, respirators, fall protection harnesses, PFDs	Least Effective — relies entirely on correct use; does not reduce the hazard

WARNING: PPE is the last line of defense — not the first response to a hazard. When engineering and administrative controls are feasible, PPE alone is not an acceptable primary control. Always evaluate higher-level controls first.

SECTION 7

Regulatory Compliance Framework

7.1 Purpose

CHOPTECH's shipyard operations are subject to a complex and overlapping set of federal, state, and local regulations. This section identifies the primary regulatory bodies and standards applicable to CHOPTECH, establishes the compliance management process, and assigns regulatory accountability. Regulatory compliance is the minimum standard — CHOPTECH strives to exceed regulatory requirements wherever feasible.

7.2 Primary Regulatory Bodies and Standards

Regulatory Body	Key Standards	Authority / Application
OSHA — Federal	29 CFR 1910 (General Industry), 29 CFR 1915 (Shipyard Employment), 29 CFR 1926 (Construction — where applicable)	Workplace safety and health standards; inspection authority; citation and penalty authority
Virginia OSHA (VOSH)	Virginia Occupational Safety and Health Act; 16 VAC 25	State-plan OSHA; administers federal OSHA standards plus Virginia-specific requirements
EPA — Federal	Clean Water Act, Clean Air Act, RCRA, CERCLA, EPCRA, TSCA	Air and water emissions; hazardous waste; chemical reporting; spill response
Virginia DEQ	Virginia Air Pollution Control Law; Virginia Water Control Law; Virginia Waste Management Act	State environmental permits; stormwater; air emissions; hazardous waste
USCG	33 CFR (Navigation and Navigable Waters); 46 CFR (Shipping); MARPOL	Vessel safety; marine pollution; waterfront operations; casualty reporting

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Regulatory Body	Key Standards	Authority / Application
NFPA	NFPA 70 (NEC), NFPA 70E, NFPA 51B, NFPA 350, NFPA 10, NFPA 30	Electrical, hot work, fire prevention, confined space, extinguishers, flammable liquids
ASME	B30 series (cranes, rigging, hoists), B31.1/B31.3 (pressure piping), P30.1	Crane and rigging standards; pressure systems; lift planning
ANSI / ISEA	Z87.1 (eye protection), Z89.1 (head protection), Z359 (fall protection), Z41 (footwear)	PPE performance standards referenced by OSHA
DOT	49 CFR Parts 171–180 (Hazardous Materials Transportation)	Transport of hazardous materials by road; shipping papers; placarding

7.3 Compliance Management Process

7.3.1 Regulatory Tracking

- The Safety Manager subscribes to OSHA, EPA, USCG, and Virginia regulatory update services and reviews new and proposed rules monthly.
- Any new or amended regulation affecting CHOPTECH operations shall be evaluated within 30 days of effective date.
- Regulatory changes requiring program updates shall be implemented within the compliance deadline or 90 days, whichever is sooner.
- The Safety Manager maintains a Regulatory Compliance Calendar (CT-REG-001) tracking all permit renewal dates, reporting deadlines, and inspection schedules.

7.3.2 Permits and Registrations

Permit / Registration	Issuing Agency	Key Requirement	Responsible Party
Virginia Air Permit	Virginia DEQ	Annual compliance certification	Environmental Coordinator
VPDES Stormwater Permit	Virginia DEQ	Annual report; quarterly inspections	Environmental Coordinator
RCRA Large Quantity Generator	EPA / Virginia DEQ	Biennial report; manifest tracking	Environmental Coordinator
SPCC Plan	EPA	5-year review; update within 6 months of change	Environmental Coordinator
OSHA 300 Log	Federal OSHA / VOSH	Annual 300A posting Feb 1 – Apr 30	Safety Manager
USCG Facility Operations	USCG Sector Hampton Roads	Per USCG requirements	Operations Director

7.4 OSHA Inspection Protocol

CHOPTECH cooperates fully with all regulatory agency inspections. The following protocol shall be followed whenever an OSHA or Virginia OSHA compliance officer arrives at the facility:

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- Notify the Safety Manager and General Manager immediately upon arrival of any regulatory inspector.
- Request the inspector's credentials and document the name, badge number, and agency.
- The Safety Manager (or designated alternate) shall accompany the inspector at all times during the inspection.
- Do not deny entry to a compliance officer presenting proper credentials — cooperation is required by law.
- Employees have the right to speak privately with compliance officers — supervisors shall not interfere.
- Document all questions asked, areas inspected, equipment examined, and documents requested.
- Notify CHOPTECH's legal counsel if a formal citation, subpoena, or search warrant is presented.
- Provide a copy of this Safety Program and all requested records promptly.

SECTION 8

Worker Rights & Stop Work Authority

8.1 Purpose

Every employee at CHOPTECH has fundamental rights in the workplace — protected by federal law and reinforced by CHOPTECH policy. Understanding and exercising these rights is essential to maintaining a safe workplace. CHOPTECH is committed to ensuring that all employees are aware of their rights and feel safe exercising them without fear of retaliation.

8.2 OSHA-Protected Employee Rights

Right	Legal Basis	CHOPTECH Obligation
Right to a Safe Workplace	Employees have the right to work in conditions free from recognized hazards. OSHA Section 5(a)(1) — General Duty Clause.	CHOPTECH must provide and maintain a hazard-free workplace. Employees may file a complaint with OSHA if this right is violated.
Right to Information	Employees have the right to receive information about hazards in their workplace — including SDS access, exposure records, and injury/illness records.	CHOPTECH must provide SDS for all hazardous chemicals and maintain OSHA 300 logs accessible to employees.
Right to Training	Employees have the right to receive safety training in a language and vocabulary they understand.	CHOPTECH must provide training on all applicable OSHA standards before exposure to covered hazards.
Right to Report	Employees have the right to report injuries, illnesses, and unsafe conditions to OSHA without employer retaliation — OSHA Section 11(c).	CHOPTECH is prohibited from retaliating (firing, demotion, discipline, harassment) against an employee for reporting.
Right to OSHA Inspection	Employees have the right to request an OSHA inspection if they believe there is a serious hazard or OSHA violation.	Requests can be made anonymously. The reporting employee's identity is protected to the extent permitted by law.
Right to Participate	Employees have the right to participate in OSHA inspections and Safety Committee activities without retaliation.	Employee representatives may accompany OSHA compliance officers during workplace inspections.

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8.3 Stop Work Authority (SWA)

CHOPTECH grants every employee — regardless of position, seniority, or trade — the unconditional authority to stop any work they believe poses an imminent danger to themselves or others. This is not optional — it is expected.

> CHOPTECH STOP WORK AUTHORITY POLICY: ANY employee who observes an imminent danger condition shall STOP THE WORK, SECURE THE AREA, and immediately NOTIFY their supervisor and the Safety Department. No employee will be penalized, disciplined, or retaliated against for exercising Stop Work Authority in good faith. An employee who stops work for safety reasons is doing their job correctly. Work stopped under SWA shall not resume until the hazard has been identified, controlled, and cleared by the supervisor and Safety Department.

8.3.1 How to Exercise Stop Work Authority

- **STOP** — Stop work immediately. Shut down equipment safely if possible.
- **ALERT** — Notify all personnel in the area to move away from the hazard.
- **SECURE** — Secure the area to prevent others from entering the hazard zone.
- **REPORT** — Notify your supervisor and the Safety Department immediately.
- **DOCUMENT** — Describe what you observed on a Hazard Report (CT-INS-006).
- **WAIT** — Do not resume work until the supervisor and Safety Department have assessed and cleared the hazard.

8.3.2 Situations That Warrant Stop Work Authority

- Imminent risk of fall from elevation without adequate fall protection in place.
- Energized equipment being serviced without confirmed LOTO application.
- Confined space entry proceeding without a valid, signed entry permit.
- Hot work occurring without a valid hot work permit or in proximity to flammable materials.
- Crane operating with personnel in the load path or exclusion zone.
- Any condition that the employee believes could cause death or serious injury if work continues.
- Signs of atmospheric hazard in a confined or enclosed space.
- Structural instability — vessel movement, scaffold displacement, shoring failure.

8.4 Anti-Retaliation Policy

> **WARNING: Retaliation against any employee for reporting a safety concern, filing an OSHA complaint, participating in an OSHA inspection, or exercising Stop Work Authority is illegal under OSHA Section 11(c) and is a serious violation of CHOPTECH policy. Any supervisor found to have retaliated against an employee for safety reporting will be subject to immediate disciplinary action up to and including termination.**

Employees who believe they have been retaliated against for safety reporting may:

- Report to CHOPTECH HR or the General Manager directly.
- File a complaint with OSHA within 30 days of the retaliation at 1-800-321-OSHA (6742).
- Contact Virginia OSHA at 1-800-468-4009.
- Seek legal counsel — OSHA Section 11(c) provides for reinstatement, back pay, and compensatory damages.

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Section 8 — Worker Rights & Stop Work Authority Acknowledgment

_____	_____	_____
Employee Printed Name	**Employee Signature**	**Date**
_____	_____	_____
Supervisor Printed Name	**Supervisor Signature**	**Date**

SECTION 9

Disciplinary Action & Safety Enforcement

9.1 Purpose and Philosophy

Consistent, fair enforcement of safety rules is essential to maintaining a safe workplace and a credible safety culture. When safety rules are not enforced equally at all levels of the organization, the message is that safety is optional — and people get hurt. CHOPTECH's disciplinary program is designed to correct behavior, not to punish individuals, and is applied consistently regardless of seniority, position, or relationship with management.

Disciplinary action for safety violations is separate from and in addition to any remedial training or re-qualification required before the employee returns to the task. Discipline alone does not restore competency — retraining is always required following a safety violation.

9.2 Safety Violation Categories

Category	Definition	Examples
Category 1 — Critical Violation	Violation that creates an imminent risk of death or serious injury; deliberate disregard of safety rules	Working in a confined space without a permit; working on energized equipment without LOTO; working at height without fall protection; removing another employee's personal lock; performing hot work in a prohibited area; operating a crane while impaired; falsifying safety documentation; retaliating against an employee for safety reporting
Category 2 — Serious Violation	Violation of a fundamental safety requirement that significantly increases risk of injury	Failure to wear required PPE in a mandatory zone; bypassing a machine guard; operating equipment without authorization or training; failure to complete a required permit; failure to report an injury or near miss; directing an employee to violate a safety rule
Category 3 — General Violation	Violation of a safety rule or procedure that does not immediately create a serious hazard	Minor PPE non-compliance; housekeeping violations; failure to complete safety documentation on time; failure to attend required safety training without excuse

9.3 Progressive Discipline Process

CHOPTECH uses a progressive discipline process for Category 2 and Category 3 violations. Category 1 violations may result in immediate termination at the first occurrence, depending on severity and circumstances.

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Violation / Offense Level	Disciplinary Response
Category 3 — 1st Offense	Verbal counseling with documentation on CT-DISC-001; mandatory retraining; supervisor follow-up within 7 days
Category 3 — 2nd Offense	Written warning on CT-DISC-002; mandatory retraining; 30-day performance improvement observation
Category 3 — 3rd Offense	1-day suspension without pay; final written warning; mandatory retraining; 90-day review period
Category 3 — 4th Offense	Termination of employment
Category 2 — 1st Offense	Written warning on CT-DISC-002; mandatory retraining; removal from task pending requalification
Category 2 — 2nd Offense	3-day suspension without pay; final written warning; mandatory retraining; 6-month review period
Category 2 — 3rd Offense	Termination of employment
Category 1 — 1st Offense	Immediate removal from work site pending investigation; outcome ranges from final written warning to immediate termination depending on circumstances; mandatory retraining before return
Category 1 — 2nd Offense	Termination of employment — no exceptions

9.4 Supervisor Accountability for Safety Enforcement

Supervisors who fail to enforce safety rules bear equal or greater responsibility for the resulting violations. A supervisor who observes a safety violation and fails to address it is subject to the same disciplinary process as the employee committing the violation. Supervisors who direct employees to violate safety rules are subject to immediate Category 1 discipline.

9.5 Documentation and Appeals

- All disciplinary actions shall be documented on the appropriate CHOPTECH form, signed by the supervisor, and reviewed by HR before delivery to the employee.
- The employee receives a copy of all disciplinary documentation at the time it is issued.
- Employees may appeal any disciplinary action to HR within 5 business days of receipt.
- HR will review the appeal and issue a written decision within 10 business days.
- Disciplinary records are maintained in employee personnel files for the duration of employment plus 5 years.

Disciplinary Action — Acknowledgment of Receipt		
_____	_____	_____
Employee Printed Name	**Employee Signature**	**Date**
_____	_____	_____
Supervisor Printed Name	**Supervisor Signature**	**Date**
_____	_____	_____

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HR Representative	HR Signature	Date

SECTION 10

New Employee Safety Onboarding

10.1 Purpose and Scope

New employees are at significantly higher risk of workplace injury during their first weeks on the job — before they are fully familiar with the work environment, equipment, hazards, and CHOPTECH's safety culture. CHOPTECH's New Employee Safety Onboarding Program ensures that every new hire, transfer, and returning employee receives the safety foundation they need before being placed in a work area. No new employee may begin work in a production area without completing CHOPTECH Safety Orientation.

10.2 Onboarding Process Overview

Milestone	Conducted By	Duration	Notes
Day 1 — Safety Orientation	Safety Department	Full day (8 hours)	All new employees before entering any production area
Day 1 — Facility Tour	Safety Representative + Supervisor	2 hours	Emergency exits, first aid stations, AEDs, muster stations, safety boards, restrooms, break areas
Days 1–5 — Supervised Work Introduction	Assigned Mentor / Supervisor	First full week	Employee works only under direct supervision; no solo operation of equipment
Day 5 — First Week Check-In	Supervisor + Safety Rep	30 minutes	Review of questions, concerns, hazards observed; completion of CT-ONB-001
Days 6–30 — Structured OJT	Supervisor + Mentor	First month	Progressive responsibility; task-specific JHAs reviewed; position-specific training completed
Day 30 — 30-Day Safety Review	Supervisor + Safety Manager	1 hour	Competency verification; training record audit; goal-setting for next 60 days; CT-ONB-002 signed
Day 90 — 90-Day Safety Review	Supervisor	30 minutes	Performance review including safety; confirmation of full task authorization; CT-ONB-003 signed

10.3 Day 1 Safety Orientation — Required Content

CHOPTECH Safety Orientation is conducted by the Safety Department and covers the following topics. Completion is documented on Form CT-ONB-001, signed by the employee and the Safety Manager.

Orientation Topic	Key Content
CHOPTECH Safety Culture	Safety values, leadership commitment, Stop Work Authority, near-miss reporting, anti-retaliation policy

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Orientation Topic	Key Content
Emergency Procedures	Alarm signals and meanings, evacuation routes, muster stations, emergency contacts, Man Overboard, fire response
Hazard Communication	GHS system, SDS access, chemical labeling, area-specific chemical hazards
Personal Protective Equipment	Minimum PPE for all production areas, how to inspect and use standard PPE, where to obtain PPE
Lockout / Tagout Awareness	What LOTO is, why it matters, what to do if you see a lock on equipment, never remove another person's lock
Confined Space Awareness	What is a confined space, permit-required confined spaces at CHOPTECH, what to do if someone needs rescue — call, don't enter
Hot Work Awareness	What requires a hot work permit, fire watch responsibilities, what to do if fire is observed
Fall Protection Awareness	Where fall hazards exist at CHOPTECH, guardrail rules, never remove or bypass fall protection
Incident Reporting	What to report, how to report, reporting timeline, non-retaliation guarantee
Drug & Alcohol Policy	Zero tolerance policy, testing types, consequences, EAP availability
Worker Rights	OSHA rights, right to Stop Work, right to report, anti-retaliation protections
Site Rules	Parking, access control, visitor escort, cell phone policy, smoking areas, speed limits
Regulatory Overview	OSHA, VOSH, USCG, EPA — who they are and what they regulate at CHOPTECH

10.4 Buddy / Mentor Program

Each new employee is assigned an experienced buddy/mentor from their work area for the first 30 days. The mentor's role is to show the new employee the safe way to do the job — by example, explanation, and encouragement. Mentors are selected by the supervisor based on their safety record, technical skill, and willingness to teach. Mentors receive a $100 bonus upon the new employee's successful 30-day safety review completion.

10.5 Position-Specific Training Before Solo Work

Before a new employee may perform any task without direct supervision, they must complete all position-specific training required for that task. This includes task-specific JHA review, equipment-specific training and authorization, and any required permits or certifications. The supervisor documents task authorization on the Position Training Matrix (CT-ONB-004).

New Employee Safety Onboarding — Orientation Completion

Employee Printed Name	Employee Signature	Date
_____	_____	_____
_____	_____	_____

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Employee ID / Trade	Department	Start Date
_____	_____	_____
Safety Manager Printed Name	**Safety Manager Signature**	**Date**
_____	_____	_____
Assigned Mentor Name	**Mentor Signature**	**Date**

— END OF SECTIONS 1–10 —

Continue to Sections 11–30 for the complete CHOPTECH Technical Safety Program.

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SECTION 11

Confined Space Entry Program

11.1 Purpose and Scope

Confined spaces within a shipyard environment present unique and potentially fatal hazards, including oxygen-deficient or enriched atmospheres, toxic gas accumulation, flammable vapors, and engulfment. This section establishes the CHOPTECH Confined Space Entry Program (CSEP) in full compliance with OSHA 29 CFR 1910.146, OSHA 29 CFR 1915 (Shipyard Employment), and NFPA 350 – Guide for Safe Confined Space Entry and Work.

This program applies to all employees, contractors, and subcontractors who enter, supervise, or support entry into permit-required confined spaces (PRCS) at all CHOPTECH facilities.

11.2 Definitions

Term	**Definition**
Confined Space	A space large enough for a worker to enter; has limited means of entry or exit; and is not designed for continuous occupancy.
Permit-Required Confined Space (PRCS)	A confined space that contains or has the potential to contain a serious hazard: toxic/flammable atmosphere, engulfment risk, internal configuration hazard, or any other recognized safety hazard.
Non-Permit Confined Space	A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.
Authorized Entrant	An employee authorized by CHOPTECH to enter a confined space.
Attendant	An individual stationed outside one or more permit spaces who monitors authorized entrants and performs all attendant duties.
Entry Supervisor	The person responsible for determining if acceptable entry conditions are present, authorizing entry, overseeing entry operations, and terminating entry as required.
Rescue Service	Personnel designated to rescue employees from confined spaces.
Blanking/Blinding	Absolute closure of a pipe, line, or duct using a solid metal plate that completely covers the bore and is capable of withstanding maximum upstream pressure.
Inerting	Displacing the atmosphere in a confined space with an inert gas to render it non-flammable.
IDLH	Immediately Dangerous to Life or Health — any atmosphere that poses an immediate threat to life or would cause irreversible adverse health effects.

11.3 Confined Space Inventory and Classification

11.3.1 Identification Requirements

CHOPTECH Safety Department shall maintain a written confined space inventory for all work areas. Each confined space shall be evaluated annually and whenever physical changes occur that may affect entry conditions.

- Ballast tanks, void spaces, chain lockers, fuel tanks, pump rooms, and cofferdams aboard vessels under construction or repair shall be treated as PRCS until evaluated and reclassified.

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- Shore-based spaces include below-grade electrical vaults, manholes, sewage pits, storage tanks, and process vessels.
- All PRCS shall be posted with OSHA-compliant 'DANGER – PERMIT REQUIRED CONFINED SPACE – DO NOT ENTER' signage.

11.3.2 Classification Matrix

Space Type	Primary Hazards	Classification
Ballast Tanks	Oxygen deficiency, toxic gases (H2S, CO), flammable vapors	PRCS – Class I
Fuel/Lube Oil Tanks	Flammable/explosive atmosphere, toxic vapors	PRCS – Class I
Void Spaces	Oxygen deficiency, hydrogen sulfide	PRCS – Class I
Chain Lockers	Oxygen deficiency, biological hazards	PRCS – Class II
Boiler/Steam Drums	Heat stress, steam, oxygen deficiency	PRCS – Class I
Below-Grade Vaults	Oxygen deficiency, electrical hazards	PRCS – Class II
Sewage Holding Tanks	Toxic gases (H2S, methane), biological	PRCS – Class I
Dry Dock Sumps	Engulfment, flooding, oxygen deficiency	PRCS – Class I

11.4 Permit System

11.4.1 Confined Space Entry Permit Requirements

No employee shall enter a PRCS without a valid, fully executed Confined Space Entry Permit (Form CT-CSE-001). The permit shall be completed by the Entry Supervisor, posted at the entry point for the duration of the entry, and retained for at least one year for training and audit purposes.

■ WARNING: Entry into any PRCS without an approved, signed permit is a SERIOUS SAFETY VIOLATION subject to immediate disciplinary action up to and including termination.

Permit Element	Detail Required
Date/Time	Entry date, authorized duration, and time of issuance and cancellation
Space Identity	Location, unique identifier, and drawing reference
Purpose of Entry	Work to be performed
Authorized Entrants	Names of all personnel authorized to enter
Attendants	Name(s) of assigned attendant(s) — minimum one dedicated attendant per entry point
Entry Supervisor	Printed name and signature of authorizing Entry Supervisor
Hazards	All identified atmospheric, physical, and energy hazards
Hazard Isolation	Lockout/tagout numbers, blinding locations, line breaks, and blanking confirmations
Atmospheric Monitoring	Initial readings, acceptable ranges, monitoring frequency, and instrument ID/calibration date

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Permit Element	Detail Required
Acceptable Entry Conditions	O2: 19.5–23.5%; LEL: <10%; CO: <35 ppm; H2S: <10 ppm
Communication Procedures	Method and frequency of check-ins between entrant(s) and attendant
PPE Required	Specific respiratory protection, fall protection, chemical PPE, and other applicable equipment
Rescue Procedures	Emergency contact numbers, rescue team assignment, non-entry rescue equipment location
Special Permits	References to hot work permits, electrical work authorizations, or other concurrent permits
Authorized Signatures	Entry Supervisor initial authorization and re-authorization (if conditions change)

11.5 Atmospheric Testing and Monitoring

11.5.1 Pre-Entry Testing

Atmospheric testing shall be conducted by a competent person using calibrated direct-reading instruments BEFORE any body part enters the confined space. Testing shall be conducted in the following order to prevent instrument damage and ensure accurate readings:

- Oxygen content (%)
- Flammable gases and vapors (% LEL)
- Potential toxic contaminants (CO, H2S, SO2, benzene, etc.)

11.5.2 Acceptable Atmospheric Conditions

Contaminant	Acceptable Range	Action Level	Corrective Action
Oxygen	19.5% – 23.5%	< 19.5% or > 23.5%	Ventilate; do not enter until within range
Flammable/Explosive	< 10% LEL	≥ 10% LEL	Ventilate; identify and eliminate source
Carbon Monoxide (CO)	< 35 ppm	≥ 35 ppm	Ventilate; source identification required
Hydrogen Sulfide (H2S)	< 10 ppm	≥ 10 ppm	Ventilate; SCBA required above 10 ppm
Benzene	< 0.5 ppm (TWA)	≥ 0.5 ppm	Supplied air respirator; carcinogen protocol
Other Toxics	Below OSHA PEL	At or above PEL	Engineering controls; respiratory protection

11.5.3 Continuous Monitoring

Continuous atmospheric monitoring is required during all PRCS entries. Entrants shall carry personal continuous monitors with audible and visual alarms. Monitor alarms shall trigger immediate evacuation of the space.

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■ *NOTE: Instruments must be bump-tested prior to each use and calibrated per manufacturer specifications — typically every 6 months. Calibration records shall be maintained by the Safety Department.*

11.6 Roles and Responsibilities

11.6.1 Entry Supervisor

- Verify that acceptable entry conditions exist before signing and issuing the entry permit.
- Ensure all isolation measures (LOTO, blinding, purging, ventilation) are in place and verified.
- Verify entrant and attendant training is current (within 12 months).
- Ensure rescue services are available and on standby before and during entry.
- Cancel the entry permit and direct evacuation when unacceptable conditions arise.
- Conduct post-entry debriefs and document lessons learned.

11.6.2 Attendant

- Maintain continuous knowledge of the identity and location of each authorized entrant.
- Remain stationed outside the PRCS at all times during entry — no exceptions.
- Continuously monitor conditions inside and outside the space.
- Maintain communication with entrants at all times via radio, voice, or signal line.
- Order immediate evacuation when: alarm activates, entrant requests it, condition changes outside acceptable range, behavioral signs of exposure are detected, attendant cannot perform duties.
- Initiate rescue procedures and contact emergency services if an entrant needs rescue.
- NEVER enter the PRCS to attempt rescue unless trained as an emergency responder and relieved by another qualified attendant.

11.6.3 Authorized Entrant

- Know the hazards that may be encountered during entry.
- Properly use all required PPE and monitoring equipment.
- Communicate regularly with the attendant.
- Alert the attendant to any warning signs or symptoms of exposure.
- Exit immediately upon: attendant's order, activation of any alarm, perceived change in condition, recognition of symptoms of exposure.

11.7 Ventilation Requirements

Mechanical ventilation shall be used to control atmospheric hazards in PRCS whenever feasible. Natural ventilation alone is generally not acceptable for PRCS entry.

Atmospheric Condition	Ventilation Approach
Oxygen-Deficient	Forced air ventilation; do NOT use oxygen enrichment except for oxy-fuel cutting under specific hot work protocols
Flammable Vapors	Air-mover ventilation; intrinsically safe or explosion-proof fans only; eliminate ignition sources
Toxic Atmosphere	Exhaust ventilation at the source; supply fresh air from clean source; verify rate provides ≥ 20 air changes/hour

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Atmospheric Condition	Ventilation Approach
Heat Stress	Supply cooled air; limit exposure durations; provide rest areas; continuous monitoring
Combined Hazards	Develop site-specific ventilation plan reviewed by Safety Manager prior to entry

11.8 Rescue and Emergency Procedures

■ WARNING: Non-entry retrieval is the PREFERRED rescue method. Mechanical retrieval equipment shall be in place and ready before entry begins whenever the geometry of the space allows.

CHOPTECH maintains trained confined space rescue teams. Rescue team members shall:

- Complete initial confined space rescue training (minimum 8 hours) and annual refresher.
- Practice simulated rescues in representative confined spaces at least annually.
- Maintain proficiency with SCBA, retrieval systems, and patient packaging.
- Be designated on the permit and available within 4 minutes of alarm activation.

Emergency contact for rescue: CHOPTECH Safety Emergency Line – (757) 555-0911 (24/7). Local Fire Department Rescue: 911. All attendants shall have emergency numbers posted at the entry point.

11.9 Training Requirements

Role	Training Frequency	Key Training Elements
Authorized Entrant	Initial + Annual Refresher	Hazard recognition, permit review, alarm response, PPE use, emergency communication
Attendant	Initial + Annual Refresher	All entrant topics plus attendant duties, communication protocols, non-entry rescue
Entry Supervisor	Initial + Annual Refresher	All entrant/attendant topics plus permit issuance, hazard assessment, rescue coordination
Rescue Team Member	Initial 8-hr + Annual Practical	All supervisor topics plus SCBA, patient packaging, retrieval systems, first aid/CPR
Safety Personnel	Comprehensive + Annual	All elements plus program auditing, instrument calibration, regulatory compliance

SECTION 12 Hot Work & Fire Prevention

12.1 Purpose and Regulatory Basis

Hot work operations — welding, cutting, brazing, grinding, and any other process producing sparks, flame, or heat — are among the most prevalent causes of fire and explosion in shipyard environments. This section establishes CHOPTECH's Hot Work Program in compliance with OSHA 29 CFR 1915 Subpart B (Welding, Cutting, and Heating), NFPA 51B (Standard for Fire Prevention During Welding, Cutting, and Other Hot Work), and USCG regulations applicable to vessels under construction and repair.

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12.2 Hot Work Permit System

12.2.1 Permit-Required Hot Work

A Hot Work Permit (Form CT-HW-001) is required for ALL hot work performed at CHOPTECH facilities, without exception. Permits are location-specific, shift-specific, and expire at end of shift or when conditions change materially.

■ WARNING: Hot work without a valid permit is a Category 1 safety violation. Any employee who observes unpermitted hot work shall stop the work and report it to the Safety Department immediately.

Permit Element	Requirement
Location	Specific vessel, compartment, deck, or shop bay with drawing reference
Date and Valid Period	Issue date/time; expiration — maximum one shift (12 hours)
Type of Work	Welding, cutting, brazing, grinding, thermal spraying, other
Fire Watch Assignment	Name(s) of designated fire watch personnel; duration of watch post-work
Atmospheric Testing	Pre-work and continuous LEL readings; instrument ID and calibration date
Area Preparation	Combustibles removed or protected; decks wet down; drains plugged
Fire Extinguisher Placement	Type, rating, and exact location of extinguishers at the work site
Adjacent Space Clearance	Survey of spaces above, below, and adjacent for combustibles or vapors
Hot Work Supervisor	Printed name and signature
Fire Watch Acknowledgment	Fire watch printed name and signature confirming duties understood
Safety Dept Authorization	Safety officer signature confirming area inspection and permit approval

12.3 Fire Watch Requirements

12.3.1 Assignment and Qualifications

A dedicated Fire Watch shall be assigned for ALL permitted hot work. The fire watch shall have no other duties during the hot work period and must be trained in fire extinguisher operation and shipyard fire watch procedures.

- Fire watch shall be positioned to observe the hot work area AND any adjacent areas where sparks, slag, or heat transfer may cause ignition.
- A minimum of ONE fire watch shall be stationed for each side of a bulkhead, deck, or overhead through which heat transfer is possible.
- Fire watch shall remain in the area for a MINIMUM OF 30 MINUTES after hot work ceases — on vessels or in spaces with residual heat sources, this period shall be extended to 60 minutes.
- Fire watch shall have immediate access to at least one appropriate-class fire extinguisher and, where applicable, a charged fire hose.
- Fire watch shall know the location of all emergency exits, fire alarm pull stations, and how to summon the CHOPTECH Fire Brigade.

12.3.2 Fire Watch Duration Extension

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The Safety Supervisor or Vessel Foreman may extend the fire watch period beyond the 60-minute minimum based on: material type and thickness (high thermal mass), insulated structures, multiple adjacent combustible materials, or evidence of heat retention. Extended watch requirements shall be documented on the permit.

12.4 Area Preparation and Combustible Control

12.4.1 Pre-Work Clearance

Hazard Category	Required Action
Combustible Materials	Remove all combustibles within 35-foot radius OR protect with fire-resistant blankets/curtains
Flammable Liquids	Drain or positively isolate all flammable liquid lines and containers; verify empty; purge if required
Deck Surfaces	Wet down wooden decks; remove oil/grease deposits; plug open drains and scuppers to contain sparks
Adjacent Compartments	Physically inspect spaces directly above, below, and to each side; remove combustibles; post fire watch if required
Insulation	Remove or protect ship insulation within 3 feet of hot work; some ship insulations are fire hazards
Electrical	De-energize non-essential electrical equipment in the work zone; verify no energized cable trays will be exposed to sparks
Ventilation	Ensure adequate ventilation to remove welding fumes; direct exhaust away from personnel and combustibles

12.5 Special Hot Work Situations

12.5.1 Hot Work in Confined Spaces

Hot work inside confined spaces requires BOTH a Confined Space Entry Permit (Section 11) AND a Hot Work Permit. Additional requirements include:

- Continuous atmospheric monitoring throughout the hot work operation.
- Ventilation system must be designed to keep welding fumes below OSHA PELs and LEL below 10%.
- Gas cylinder storage outside the confined space — only hoses shall penetrate the space.
- Immediate cessation of hot work and evacuation if LEL reaches 10%.

12.5.2 Hot Work on Fuel Tanks and Contaminated Surfaces

■ WARNING: Hot work on or near fuel tanks, void spaces adjacent to fuel tanks, or surfaces contaminated with flammable residues requires a Marine Chemist Certificate (NFPA 306) issued by a certified Marine Chemist or Coast Guard authorized person. No exceptions.

- Marine Chemist shall inspect and certify the space/surface as 'SAFE FOR HOT WORK' before work begins.
- The Marine Chemist Certificate shall be attached to the Hot Work Permit.
- Hot work shall cease immediately if conditions change and a new certificate is required.
- Vessel Repair Superintendent shall coordinate Marine Chemist scheduling with 24-hour advance notice minimum.

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12.6 Fire Prevention — General Shipyard Requirements

12.6.1 Housekeeping and Combustible Control

- Work areas shall be kept free of combustible debris, oily rags, and waste materials. Waste containers with metal lids shall be provided for oily rags and combustible waste.
- Flammable and combustible liquids shall be stored in approved containers and designated storage areas consistent with NFPA 30 and OSHA 1910.106.
- Smoking is prohibited in all production areas, vessels, storage areas, and designated NO SMOKING zones. Smoking is only permitted in designated outdoor smoking areas.
- Spontaneous combustion hazards (paint-soaked rags, linseed oil-treated materials) shall be stored in UL-listed safety containers or submerged in water in metal pails.

12.6.2 Fire Extinguisher Program

Fire Class	Agent Types	Placement Standard
Class A (Ordinary Combustibles)	Water, foam, dry chemical (ABC)	Travel distance ≤ 75 feet
Class B (Flammable/Combustible Liquids)	CO2, dry chemical, foam	Travel distance ≤ 50 feet; ≥ 10-B:C rating for hot work
Class C (Energized Electrical)	CO2, dry chemical (ABC/BC)	Non-conductive agent; CO2 preferred near electronics
Class D (Combustible Metals)	Dry powder (metal-specific)	Consult Safety Dept — agent must match specific metal
Class K (Cooking Oils)	Wet chemical	Galley and food service areas

All extinguishers shall be inspected monthly by the responsible supervisor, maintained annually by a licensed fire equipment contractor, and hydrostatically tested per NFPA 10 schedules. Inspection tags shall be current and legible. Tampered, discharged, or overdue extinguishers shall be removed from service immediately and replaced.

12.7 Shipyard Fire Brigade

CHOPTECH maintains an Incipient Stage Fire Brigade trained to OSHA 1910.156 requirements. Brigade members receive a minimum of 5 hours initial training and 5 hours annual refresher training.

- Brigade activation: Pull station, radio, or phone to Security — ext. 0911.
- Brigade shall respond with appropriate PPE and extinguishing equipment within 4 minutes.
- Upon arrival of Chesapeake Fire Department, Brigade shall assume support role and transfer command.
- Monthly unannounced fire drills shall be conducted across all production shifts.

SECTION 13

Electrical Safety

13.1 Purpose and Scope

Electrical hazards — including shock, arc flash, arc blast, and electrocution — are among the most severe hazards present in shipyard environments. This section establishes CHOPTECH's Electrical Safety Program in compliance with OSHA 29

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CFR 1910 Subpart S, OSHA 29 CFR 1915.181, NFPA 70E (Standard for Electrical Safety in the Workplace), and NFPA 70 (National Electrical Code).

This program applies to all qualified and unqualified electrical workers, as well as any CHOPTECH personnel who may work in proximity to energized electrical equipment.

13.2 Qualified Electrical Worker Standard

Only Qualified Electrical Workers (QEW), as defined by NFPA 70E, shall perform electrical work on or near exposed energized conductors or circuit parts. A QEW must:

- Have training in construction and operation of electrical equipment and have demonstrable skills in the hazards involved.
- Be able to distinguish exposed live parts from other parts of equipment.
- Determine the nominal voltage of exposed live parts.
- Determine the arc flash boundary and incident energy at any point in the system.
- Select and properly don appropriate arc-rated PPE for the task.
- Be knowledgeable in and trained on lockout/tagout procedures.

> ■ *NOTE: Unqualified workers shall maintain the MINIMUM approach distances defined in NFPA 70E Table 130.4(D)(a) at all times and shall never perform work on or near exposed energized parts.*

13.3 Energized Work

13.3.1 Electrically Safe Work Condition (ESWC)

Establishing an Electrically Safe Work Condition (de-energizing the system) is the PREFERRED and required approach for all electrical work. ESWC shall be achieved by:

- Step 1: Identify ALL sources of electrical energy (including stored energy) that could energize the equipment.
- Step 2: Interrupt the load current and open the disconnecting means for each source.
- Step 3: Where possible, visually verify the open position of each disconnecting means.
- Step 4: Release or restrain stored energy (capacitors, inductors, springs, gravity).
- Step 5: Apply LOTO devices to all disconnecting means per Section 9 of this Safety Program.
- Step 6: Test the equipment with a properly rated and tested voltage detector to verify absence of voltage.
- Step 7: Verify the test instrument is functioning before and after testing (test on known source).
- Step 8: Install safety grounds if there is any possibility of induced voltage or backfeed.

13.3.2 Energized Electrical Work Permit (EEWP)

When it is infeasible to de-energize equipment (continuous process requirements, increased hazard from de-energizing, or diagnostic testing), work on energized equipment above 50V may be authorized by an Energized Electrical Work Permit (Form CT-EEW-001) signed by the Facility Safety Manager and Operations Director.

> ■ **WARNING: Working on energized systems above 50V AC or 100V DC without a valid EEWP signed by the Facility Safety Manager is a CATEGORY 1 violation. Justification of 'infeasibility' must be documented and cannot be based solely on convenience.**

13.4 Arc Flash Hazard Analysis

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CHOPTECH shall maintain a current (within 5 years or after significant system changes) Arc Flash Hazard Analysis per NFPA 70E Article 130 for all electrical distribution equipment 120V and above. Results of the analysis shall be documented and applied via arc flash warning labels on all electrical equipment.

PPE Cat.	Incident Energy Range (cal/cm²)	Arc Rating Minimum	PPE Required
0	1.2	< 1.2 cal/cm²	Arc-rated face shield/balaclava; arc-rated gloves; arc-rated clothing — 4 cal/cm² minimum
1	1.2 – 4	4 cal/cm²	Arc-rated face shield; arc-rated gloves; arc-rated shirt/pants — 4 cal/cm² minimum
2	4 – 8	8 cal/cm²	Arc-rated face shield (8 cal); arc-rated gloves; arc-rated shirt/pants — 8 cal/cm² minimum
3	8 – 25	25 cal/cm²	Arc flash suit — 25 cal/cm² minimum; arc-rated gloves; full hood
4	25 – 40	40 cal/cm²	Arc flash suit — 40 cal/cm² minimum; arc-rated gloves; full hood; hearing protection

13.5 Electrical PPE Requirements

PPE Item	Standard	Notes
Rubber Insulating Gloves	Class 00–4 per ASTM D120	Selected per max voltage; electrically tested every 6 months
Leather Protectors	Over rubber gloves	Protect rubber gloves from cuts/abrasion; always worn over rubber gloves
Arc Flash Face Shield	Per NFPA 70E arc rating	Mandatory for all energized work; rating must exceed incident energy
Insulating Sleeves	ASTM D1051	When upper arm exposure exists near energized parts
Arc-Rated Clothing	Per NFPA 70E PPE categories	Natural fiber underlayers; no synthetics against skin
Safety Glasses	ANSI Z87.1	Required under arc flash shields; protect against arc debris
Dielectric Overshoes	ASTM F1117	Required when working in damp/wet environments with energized equipment

13.6 Temporary Power and Extension Cords

Temporary power distribution is common in shipyard vessel-fit-out and repair work. All temporary power installations shall comply with NFPA 70E and OSHA 1915.181.

- All temporary power distribution boxes (spider boxes) shall be GFCI-protected and approved for marine/industrial use.
- Extension cords shall be 3-wire grounded type, rated for the load, in good condition, and free of splices, cuts, or damaged insulation.
- Extension cords shall not be used as permanent wiring, run through walls/decks, or coiled while in use (creates inductive heating).
- All extension cords and tools used in or near the water (drydock, marine railways) shall be GFCI-protected at the source.

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- Damaged cords shall be removed from service immediately — never repaired with electrical tape.
- Ground fault circuit interrupter (GFCI) protection is required for all 120V 15A and 20A receptacle outlets in construction areas, on vessels under construction/repair, and in wet/damp locations.

13.7 Electrical Incident Response

■ WARNING: Do NOT touch a victim of electrical shock until the power source is confirmed de-energized. Use insulating material (dry wood, rope, rubber) to separate victim from source if the power cannot be immediately shut off.

- Activate emergency response: Call 911 and CHOPTECH Safety Emergency Line (757) 555-0911.
- Perform CPR/AED if victim has no pulse and you are trained — AED units are located at all First Aid stations.
- Treat all electrical burns as serious — electrical injuries often have internal damage not visible externally.
- Secure and preserve the accident scene for investigation.
- Notify OSHA within 24 hours if any electrical incident results in inpatient hospitalization, amputation, or loss of an eye.

SECTION 14

Marine & Waterfront Safety

14.1 Purpose and Scope

CHOPTECH's operations include vessel construction, repair, and outfitting on marine railways, floating drydocks, and alongside piers and wharves. The marine and waterfront environment presents unique hazards including drowning, vessel movement, tidal changes, marine traffic, and working over and adjacent to water. This section establishes safety standards for all CHOPTECH waterfront operations.

Applicable regulations include OSHA 29 CFR 1915 (Shipyard Employment), 33 CFR Part 154 (USCG), OSHA 29 CFR 1918 (Longshoring), and applicable USCG Navigation Rules.

14.2 Personal Flotation Devices (PFDs)

14.2.1 Mandatory PFD Zones

Type I, II, or III USCG-approved PFDs (or equivalent EN ISO 12402 rated devices) shall be worn at all times when working in the following locations:

- On or over open water from piers, wharves, and floating docks when guardrails are not in place.
- In small boats, skiffs, and work vessels — all occupants.
- During overboard work (underwater hull cleaning, keel work on marine railway).
- During transfer between vessels and floating structures.
- Whenever a supervisor determines fall-into-water risk is elevated (weather, sea state, restricted space).

■ NOTE: Inflatable PFDs are permitted for workers with demonstrated proficiency in their use and inspection. Inflatable PFDs shall be inspected per manufacturer specifications and immediately following any deployment.

14.2.2 Ring Life Buoys

USCG-approved ring life buoys with 60 feet of polypropylene heaving line shall be stationed at maximum 200-foot intervals along all active working waterfront areas. Ring buoys shall be unobstructed, accessible, and inspected weekly.

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14.3 Drydock Safety

14.3.1 Floating Drydock Operations

- No personnel shall ride a vessel or floating drydock during pumping up (dewatering) or flooding (sinking) operations unless expressly authorized by the Drydock Master and safety briefed.
- Keel blocks and bilge blocks shall be inspected by the Ship Superintendent before personnel board the vessel for the first time after docking.
- A "Man Aloft" / "Man in Drydock" board shall be maintained at the head of the dock listing all personnel and their work locations.
- Flood valves and pumping controls shall be locked out and tagged when personnel are working in the dock bottom.
- Tide boards shall be posted at dock entrances showing current tidal range and expected high/low water times.

14.3.2 Marine Railway Operations

- Personnel shall not stand or walk on the marine railway track or cradle during hauling or launching operations.
- The haul area shall be barricaded 10 feet on each side during vessel movement.
- Railway winch and power controls shall be operated only by designated and trained Railway Operators.
- Cradle stands and shorings shall be inspected by the Ship Superintendent before personnel board the vessel.
- Grounding cables shall be attached before welding or electrical work begins on a vessel on the railway.

14.4 Pier and Wharf Operations

14.4.1 Housekeeping and Access

- Piers and wharves shall be kept clear of debris, lines, and tripping hazards. Cable and hose runs shall be elevated or marked.
- Unguarded edges of piers, wharves, and floats adjacent to the water shall be provided with portable guardrail systems or warning lines when active work is being performed.
- Gangways connecting vessels to the pier shall be equipped with guardrails on both sides and non-skid surfaces. Safety nets shall be rigged under gangways over water.
- Adequate lighting shall be provided on piers during all night shift work — minimum 5 foot-candles on working surfaces.

14.4.2 Mooring and Line Handling Safety

> ■ **WARNING: Mooring lines under tension can part without warning and cause fatal injuries. Personnel shall NEVER stand in the bight of a mooring line or in the direct snap-back zone.**

- Snap-back zones shall be identified with markings or barricades during mooring and unmooring operations.
- Only personnel trained in line-handling operations shall participate in vessel mooring and unmooring.
- Synthetic mooring lines shall be inspected for wear, chafing, and UV degradation before each use.
- Wire rope mooring lines shall be lubricated and inspected for broken wires per ASME B30.9.

14.5 Man Overboard Response

All CHOPTECH waterfront personnel shall be familiar with the Man Overboard (MOB) response procedure:

- **SHOUT:** Immediately shout 'MAN OVERBOARD' and point continuously at the victim to maintain a visual.
- **THROW:** Throw a ring buoy, throw bag, or other flotation device to the victim immediately.

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- **CALL:** Activate emergency response: Dial 911 and CHOPTECH Security at ext. 0911. State location and number of persons in water.
- **KEEP SIGHT:** Maintain eye contact with the victim at all times. Designate one person solely for this role.
- **RECOVER:** Launch rescue boat if available and trained crew is present. DO NOT jump in to rescue unless trained as a water rescue responder.
- **TREAT:** Upon recovery, treat victim for cold water shock and hypothermia; activate EMS; document incident.

14.6 Small Boat Operations

- All CHOPTECH small boat (vessels under 26 feet) operators shall hold a current USCG Auxiliary or equivalent boating safety certificate.
- All occupants shall wear Type I or Type II PFDs during small boat operations regardless of conditions.
- Small boats shall carry required USCG safety equipment: fire extinguisher, sound-producing device, visual distress signals, navigation lights, and bailing device.
- Maximum capacity placards shall not be exceeded under any circumstances.
- Small boat operations in the work harbor are subject to a 5-knot speed limit.
- No small boat operations during lightning, high winds (>20 knots), or poor visibility (<500 yards) without Safety Manager approval.

14.7 Environmental Protection at the Waterfront

CHOPTECH is committed to protecting the marine environment in compliance with 33 USC 1251 (Clean Water Act), 33 USC 2701 (Oil Pollution Act), MARPOL, and all applicable EPA and USCG regulations.

- All drains, scuppers, and drydock sump outlets shall be plugged or directed to the Stormwater Treatment System before and during painting, blasting, and any chemical application work.
- Oil-absorbent pads and boom shall be pre-positioned at all waterfront work areas where fuel, oil, or hydraulic fluid is present or being transferred.
- Spills of any petroleum product, hazardous substance, or regulated pollutant reaching or threatening to reach navigable waters shall be reported immediately to the Facility Environmental Coordinator AND to the National Response Center at 1-800-424-8802.
- Sandblasting, hydroblasting, and paint over-spray shall be controlled with containment screens and drop cloths. No abrasive blast media, paint chips, or coating materials shall be allowed to enter the water.

SECTION 15

Emergency Response & Crisis Management

15.1 Purpose and Regulatory Framework

CHOPTECH is committed to protecting the safety of all employees, contractors, visitors, the community, and the environment during emergencies. This Emergency Response Plan (ERP) has been developed in accordance with OSHA 29 CFR 1910.38 (Emergency Action Plans), OSHA 29 CFR 1910.120 (HAZWOPER), EPA 40 CFR 68 (Risk Management Program), and Virginia Emergency Management regulations. This plan is reviewed annually and updated following any emergency activation or significant organizational change.

15.2 Emergency Response Organization

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15.2.1 Emergency Command Structure

Role	Assigned Position	Primary Responsibilities
Emergency Director (ED)	General Manager or designee	Overall ERP activation authority; interface with external agencies; media coordination
Incident Commander (IC)	Safety Manager or designee	On-scene command; resource coordination; communication hub; NIMS compliance
Operations Section Chief	Production Superintendent	Personnel accountability; evacuation coordination; production area control
Medical Officer	Senior First Aid/EMT-qualified person on shift	First aid/triage; EMS interface; medical documentation
Environmental Officer	Environmental Coordinator	Spill response; regulatory notification; environmental documentation
Security Officer	Security Supervisor	Facility lockdown; gate control; emergency access; crowd management
Communications Officer	Admin Supervisor	Internal/external communications; notification lists; media liaison support

15.3 Emergency Notification and Alerting

15.3.1 Internal Alerting System

- CHOPTECH utilizes a facility-wide PA/alarm system with distinct alarm patterns for different emergency types.
- Intermittent horn (3 blasts, repeated): FIRE — Evacuate immediately via nearest exit; proceed to muster station.
- Continuous horn: HAZMAT/CHEMICAL release — Shelter-in-place or evacuate as directed by PA announcement.
- Rapid short blasts (5+): MAN OVERBOARD — Report to assigned response stations.
- PA announcement with all-clear tone: Emergency terminated; normal operations may resume.

15.3.2 External Notification Requirements

Emergency Type	Notification Timing	Required Contacts	Follow-Up Reporting
Fire	Immediately	911 – Chesapeake Fire Dept.	N/A
Medical Emergency	Immediately	911 – EMS	N/A
Chemical/Hazmat Release	Immediately upon detection	911; NRC 1-800-424-8802 (if reportable qty)	OSHA, EPA, VDEQ within 24 hrs
Oil Spill to Water	Immediately	911; USCG Sector Hampton Roads (757) 668-5555; NRC 1-800-424-8802	EPA, VDEQ within 24 hrs
Fatality or Hospitalization	Within 8 hours	OSHA Virginia 1-800-321-6742	VOSH if applicable
Vessel Casualty	Immediately	USCG Sector Hampton Roads VHF-FM Ch 16	USCG Marine Casualty Report

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Emergency Type	Notification Timing	Required Contacts	Follow-Up Reporting
Explosion/Structural Collapse	Immediately	911; OSHA within 8 hours	Site secured; investigation initiated

15.4 Evacuation Procedures

15.4.1 General Evacuation

- Upon hearing the fire evacuation signal or receiving a PA evacuation announcement, all personnel shall STOP WORK, SECURE TOOLS, and EXIT via the nearest safe evacuation route.
- Personnel shall NOT use elevators during building evacuations.
- Personnel with mobility impairments shall be assisted to the nearest Area of Rescue Assistance and their location communicated to the Incident Commander.
- All personnel shall proceed directly to their designated Muster Station (posted on all facility maps) and check in with their Area Warden.
- NEVER re-enter an evacuated building or vessel until the all-clear is given by the Incident Commander or designee.

15.4.2 Muster Stations and Accountability

Work Area	Muster Station Location	Accountable Supervisor
Main Production / Ways Area	Employee Parking Lot — North Gate	Production Supervisor
Ship Repair Pier (Berths 1–4)	Pier Head — East End Assembly Area	Pier Supervisor
Floating Drydock	Shore-side Dock Office Parking Area	Drydock Master
Office/Admin Building	Front Parking Lot — Flagpole Area	Office Manager
Paint/Sandblast Shop	South Yard Open Area	Shop Foreman
Warehouse/Material	West Yard Gravel Area	Warehouse Supervisor

■ *NOTE: Accountability must be completed and reported to the Incident Commander within 10 minutes of evacuation order. Any unaccounted personnel shall be reported to the IC immediately — DO NOT assume they evacuated.*

15.5 Specific Emergency Scenarios

15.5.1 Fire Response

CHOPTECH follows the RACE acronym for fire response:

- **R – RESCUE:** Rescue anyone in immediate danger — only if it can be done safely.
- **A – ALARM:** Activate the nearest fire alarm pull station and call 911.
- **C – CONTAIN:** Close (do not lock) doors and hatches to confine the fire.
- **E – EVACUATE/EXTINGUISH:** Evacuate the area, OR if the fire is small, incipient stage, and you are trained — attempt extinguishment with appropriate extinguisher.

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■ **WARNING: Attempt fire extinguishment ONLY if: You have been trained; the fire is small and contained; you have a clear egress path; the extinguisher is the correct type. When in doubt — GET OUT.**

15.5.2 Medical Emergency

- Call 911 immediately for any life-threatening emergency. Provide location (facility address: 1324 McCloud Road, Chesapeake, VA 23320) and nature of injury.
- Dispatch a meeting person to the facility entrance to direct EMS.
- Provide first aid within your level of training. Do not move an injured person unless they are in immediate danger.
- AED units are located at: Main Office Entrance, Production Breakroom, Pier Head Building, and Drydock Control Shack.
- First Aid/CPR trained responders are listed on the Safety Board in each area. Current list maintained by Safety Dept.

15.5.3 Hazardous Material Spill Response

Spill Level	Response Protocol
Incipient (small, contained — no exposure)	Trained responder may control with supplied spill kit; contain and absorb; document on Spill Report Form CT-ENV-002
Moderate (spreading, unknown substance, or exposure occurred)	Evacuate 25-foot perimeter; activate alarm; call Safety Dept; do not attempt cleanup; contact Environmental Officer
Major (large release, vapor cloud, or near water)	Activate full evacuation; call 911 and NRC (800-424-8802); notify Environmental Officer; isolate area; await HAZMAT team

15.5.4 Severe Weather

CHOPTECH monitors National Weather Service alerts for Chesapeake. The following protocols apply:

- **Thunderstorm / Lightning:** Suspend all crane operations, marine railway operations, work on vessels at piers and drydock, and outdoor work. Personnel to shelter indoors or in vehicles. Resume only 30 minutes after last lightning or thunder.
- **Hurricane Watch (48 hrs):** Activate Hurricane Preparation Checklist. Secure loose materials. Review vessel mooring requirements with Harbor Master.
- **Hurricane Warning (36 hrs):** Begin vessel securing or relocation. Implement facility shutdown protocol. Essential personnel only.
- **Tornado Warning:** Immediate shelter-in-place in designated tornado shelters (interior rooms, away from windows). Do not evacuate to open areas.

15.6 Emergency Drills and Training

Drill Type	Frequency	Participants	Evaluation Criteria
Full Facility Evacuation Drill	Quarterly (minimum)	All personnel	Evacuation time, accountability, area warden performance
Fire Brigade Response Drill	Monthly	Fire Brigade members	Response time, extinguishment technique, communications

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Drill Type	Frequency	Participants	Evaluation Criteria
Man Overboard Drill	Quarterly (waterfront ops active)	Waterfront personnel + small boat crew	Visual, throw, communicate, recover sequence
Hazmat Spill Drill	Semi-annually	Environmental team + Safety Dept	Spill identification, containment, notification
Medical Emergency Drill	Annually	All first aid/CPR responders	Assessment, treatment, EMS coordination
Confined Space Rescue Drill	Annually	Confined space rescue team	Retrieval equipment, atmospheric monitoring, patient packaging

All drills shall be documented on Form CT-ERP-003 including: date, scenario, participants, observed deficiencies, corrective actions, and completion date of corrective actions. Drill records shall be retained for a minimum of 3 years.

15.7 Post-Emergency Procedures

- The Incident Commander shall authorize re-entry to affected areas only after hazards are controlled and the area is deemed safe.
- An After-Action Report (AAR) shall be completed within 48 hours for any emergency activation using Form CT-ERP-004.
- The AAR shall identify: timeline, resources deployed, what worked, gaps/deficiencies, and corrective actions with responsible parties and due dates.
- Major emergencies (fatality, serious injury, significant property damage, environmental release) shall trigger a formal incident investigation per Section 7 of this Safety Program.
- CHOPTECH's Employee Assistance Program (EAP) shall be activated following traumatic events. Contact HR for EAP referral information.

— END OF SECTIONS 11–15 —

Continue to Sections 16–20 for: Hazard Communication, PPE Program, Fall Protection, Crane & Rigging Safety, and Contractor Safety Management.

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SECTION 16

Hazard Communication (HazCom / GHS)

16.1 Purpose and Regulatory Basis

CHOPTECH's Hazard Communication Program (HazCom) ensures that all employees who may be exposed to hazardous chemicals receive the information and training needed to protect themselves. This program complies with OSHA 29 CFR 1910.1200, aligned with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). It applies to all CHOPTECH employees, contractors, and subcontractors working with or near hazardous chemicals at any CHOPTECH facility.

16.2 Written HazCom Program

CHOPTECH maintains a written Hazard Communication Program (CT-HC-001), available at every worksite and on the CHOPTECH Safety SharePoint. The Safety Manager is the designated HazCom Program Administrator responsible for program updates, SDS management, and enforcement.

16.3 Chemical Inventory

A complete chemical inventory (CT-HC-002) shall be maintained for each work area and updated whenever chemicals are added or removed. Required inventory fields include:

- Chemical product name and synonyms
- Manufacturer name and emergency contact
- GHS hazard classification(s)
- Location(s) of use or storage
- Associated SDS document number and revision date

> *NOTE: Before any new chemical enters a work area, the supervisor must obtain the SDS, update the inventory, brief affected employees, and notify the Safety Department. Procurement shall not purchase chemicals without a current SDS on file.*

16.4 Safety Data Sheets (SDS)

CHOPTECH maintains a current 16-section GHS SDS for every hazardous chemical. SDSs shall be accessible to all employees on all shifts without requesting supervisor access — via physical binders at each supervisor station and digitally on the CHOPTECH Safety Portal. 24-hour emergency SDS access: CHEMTREC 1-800-424-9300.

Sec.	Title	Key Content
1	Identification	Product name, manufacturer, emergency phone, recommended use
2	Hazard(s) Identification	GHS classification, signal word, hazard/precautionary statements, pictograms
3	Composition / Ingredients	Chemical identity, CAS numbers, concentrations
4	First-Aid Measures	Symptoms by exposure route; immediate treatment; medical referral guidance

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Sec.	Title	Key Content
5	Fire-Fighting Measures	Suitable agents, specific hazards, firefighter PPE
6	Accidental Release Measures	Spill containment, PPE, clean-up methods, disposal
7	Handling and Storage	Safe practices, incompatible materials, storage conditions
8	Exposure Controls / PPE	OSHA PELs, ACGIH TLVs, engineering controls, required PPE
9	Physical/Chemical Properties	Flash point, vapor pressure, flammability limits, solubility
10	Stability and Reactivity	Stability, hazardous reactions, conditions/materials to avoid
11	Toxicological Information	Acute/chronic effects, carcinogenicity, reproductive toxicity
12	Ecological Information	Aquatic toxicity, persistence, bioaccumulation
13	Disposal Considerations	Waste disposal methods, container disposal, regulations
14	Transport Information	DOT/IATA/IMDG classification, UN number, packing group
15	Regulatory Information	SARA, CERCLA, state-specific requirements
16	Other Information	Revision date, literature references

16.5 GHS Labeling Requirements

All containers of hazardous chemicals shall bear compliant GHS labels at all times — legible, in English, prominently displayed. Required elements:

Label Element	Requirement
Product Identifier	Chemical name or product number matching the SDS
Signal Word	DANGER or WARNING — one per label based on severity
Hazard Statements	Standardized phrases describing nature and degree of hazard
Precautionary Statements	Prevention, Response, Storage, and Disposal instructions
GHS Pictograms	Standardized red-bordered diamond symbols — see 16.5.1 below
Supplier Information	Manufacturer/importer name, address, and phone number

16.5.1 GHS Pictogram Reference

Pictogram	Hazard Category
Flame	Flammables, pyrophorics, self-heating substances
Flame Over Circle	Oxidizers — do not store near flammables
Exploding Bomb	Explosives, organic peroxides, self-reactive substances
Skull & Crossbones	Acute toxicity — fatal if swallowed, inhaled, or skin contact

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Pictogram	Hazard Category
Exclamation Mark	Irritants, skin/eye sensitizers, harmful substances (less severe)
Health Hazard	Carcinogens, mutagens, reproductive toxins, respiratory sensitizers
Corrosion	Skin/eye corrosion, corrosive to metals
Gas Cylinder	Gases under pressure — explosion risk if heated
Environment	Aquatic toxicity — hazard to aquatic organisms

WARNING: Unlabeled chemical containers are prohibited. Any unlabeled container found in the workplace shall be immediately removed from service and reported to the supervisor. Never use a chemical from an unlabeled container.

16.6 Employee Training

Training Type	Timing	Who	Content
Initial HazCom	Prior to first assignment	All employees	GHS system, SDS navigation, label reading, area-specific chemical hazards, PPE, emergency response
New Chemical	Before first use	Affected employees	Specific hazards, SDS review, required PPE, safe handling and disposal
Annual Refresher	Every 12 months	All employees	Program updates, incident review, area hazard changes
Supervisor Training	Before assuming role	Supervisors	All employee topics plus enforcement, SDS management, incident reporting

16.7 Contractor HazCom Coordination

Contractors shall provide current SDSs for all chemicals brought onto CHOPTECH property before work begins. CHOPTECH shall provide contractors with SDSs for hazardous chemicals they may encounter in their assigned work areas. SDS exchange shall be documented on the Contractor Safety Agreement (CT-CSM-003, Section 20).

SECTION 17 — Personal Protective Equipment (PPE)

17.1 Purpose and Scope

PPE is the last line of defense in the hierarchy of controls. CHOPTECH's PPE Program establishes requirements for hazard assessment, selection, issuance, training, use, maintenance, and replacement per OSHA 29 CFR 1910 Subpart I, OSHA 29 CFR 1915 Subpart I, and applicable ANSI/ISEA standards. Engineering and administrative controls shall always be evaluated before relying on PPE as the primary control.

17.2 Hazard Assessment and Certification

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A formal written hazard assessment shall be conducted for each work area and task type to determine necessary PPE. Assessments are performed by the area supervisor with the Safety Department using Form CT-PPE-001 and reviewed annually. OSHA 1910.132(d) requires written certification identifying the workplace evaluated, certifying person, and date.

17.3 Minimum PPE by Work Area

Work Area / Task	Required PPE
All Production Areas	Safety glasses (ANSI Z87.1), hard hat (ANSI Z89.1 Class E), safety-toe footwear (ASTM F2413), hi-vis vest/shirt (ANSI 107 Class 2)
Grinding / Chipping	Face shield over safety glasses, hearing protection (NRR ≥25), leather gloves, hard hat
Welding / Cutting	Auto-darkening welding helmet (shade per AWS F2.2), FR clothing, leather welding gloves, leather boots, hearing protection
Chemical Handling	Chemical splash goggles, face shield for pours, chemical-resistant gloves (per SDS Sec. 8), chemical-resistant apron
Abrasive Blasting	Supplied-air hood (NIOSH-approved), leather gloves, leather coveralls, metatarsal-guarded boots
Painting / Coating	Half-face respirator OV/P100 minimum; supplied air in confined spaces; chemical gloves; coveralls
Waterfront / Over Water	PFD (Type I or II); anti-slip footwear
Electrical Work (QEW)	Voltage-rated rubber gloves + leather protectors, arc-rated face shield, arc-rated clothing per NFPA 70E category
Noise Zones (>85 dBA)	Hearing protection NRR ≥25; double protection (plug + muff) above 100 dBA
Overhead Work Zones	Hard hat mandatory for ALL personnel in the area — no exceptions

17.4 Head Protection

Type/Class	Protection Level	CHOPTECH Status
Type I / Class E	Top impact + 20,000V electrical	CHOPTECH production standard — required for all production employees
Type II / Class E	Top & side impact + 20,000V	Preferred for high-risk and elevated-work areas
Class G	Top impact + 2,200V only	Not acceptable as CHOPTECH standard
Class C	Impact only — no electrical	Only for non-electrical environments; not standard at CHOPTECH

- Inspect before each use — cracks, dents, fraying suspension, UV degradation (chalky/faded shell).
- Replace after any significant impact even with no visible damage.
- Do not store in direct sunlight or vehicle rear windows — UV degrades the shell.
- Consult manufacturer before applying stickers, paint, or adhesives.

17.5 Eye and Face Protection

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Protection Type	Standard	When Required
Safety Glasses	ANSI Z87.1	All production areas — minimum baseline
Chemical Splash Goggles	ANSI Z87.1	Chemical handling, mixing, transfer, battery maintenance
Welding Helmet	AWS F2.2	Arc welding — shade selected per amperage and process
Face Shield	ANSI Z87.1	Grinding, chipping, chemical splash — worn OVER safety glasses
Arc Flash Face Shield	NFPA 70E rated	Energized electrical work — worn OVER safety glasses

17.6 Hearing Conservation

CHOPTECH's Hearing Conservation Program (CT-HC-004) applies to all employees regularly exposed to noise at or above 85 dBA TWA. Annual noise surveys and audiometric testing are conducted by the Safety Department.

Noise Level (8-hr TWA)	Requirement	Specification
< 85 dBA	None required	Voluntary use permitted
85 – 99 dBA	Single protection required	Plugs OR muffs — NRR ≥ 25
100 – 109 dBA	Double protection required	Ear plugs AND ear muffs simultaneously
> 110 dBA	Engineering controls + double protection	Evaluate noise reduction at source; limit exposure time

17.7 Respiratory Protection

CHOPTECH's Respiratory Protection Program (CT-RPP-001) complies with OSHA 29 CFR 1910.134. All respirator users must be medically evaluated, fit-tested annually (tight-fitting), and trained before use.

Respirator Type	Application	Key Requirement
Disposable N95	Nuisance dust, non-toxic particulates below OSHA PEL	Not for chemicals or oxygen-deficient atmospheres
Half-Face APR (OV/P100)	Organic vapors + particulates — painting, grinding	Change cartridges per schedule; replace immediately if odor detected
Full-Face APR (OV/P100)	Higher-concentration OV/particulate; eye protection included	Required for spray painting in enclosed spaces
Supplied-Air (SAR)	Abrasive blasting, high-concentration chemicals, oxygen deficiency	Grade D breathing air only; never use nitrogen
SCBA	IDLH atmospheres, emergency rescue	Rescue team only; annual operational check required

WARNING: No employee shall enter an oxygen-deficient or IDLH atmosphere using an air-purifying respirator. Supplied-air (SAR) or SCBA only in these environments — no exceptions.

17.8 PPE Issuance and Maintenance

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- CHOPTECH provides all required PPE at no cost to employees upon hire, when job changes require different PPE, or when existing PPE is worn or damaged.
- Damaged or defective PPE shall be removed from service immediately and replaced.
- Disposable PPE (N95s, chemical gloves) shall be discarded after each use.
- Reusable respirators shall be cleaned, inspected, and stored in a sealed bag after each use.
- Safety footwear, welding helmets, and arc flash PPE shall be inspected quarterly and documented on Form CT-PPE-002.

SECTION 18

Fall Protection

18.1 Purpose and Regulatory Basis

Falls are a leading cause of fatalities in shipyard environments. CHOPTECH's Fall Protection Program establishes requirements to protect all employees from fall hazards per OSHA 29 CFR 1910 Subpart D, OSHA 29 CFR 1926 Subpart M, OSHA 29 CFR 1915 Subpart E, and ANSI/ASSE Z359 (Fall Protection Code).

18.2 Fall Protection Triggers

Situation	Trigger Height	Required Control
Unprotected edges / floor openings	≥ 4 ft (general industry) / ≥ 6 ft (construction)	Guardrail, PFAS, or covers
Vessel decks and shipboard work	Any height with fall-to-lower-level risk	Guardrail or PFAS with adequate clearance
Scaffolding	≥ 10 ft (construction) / ≥ 4 ft near hazardous equipment	Guardrail + toeboard; PFAS during erection/dismantling
Aerial Work Platforms	Any operation	Full-body harness anchored to manufacturer-designated point
Ladders	While climbing; working at height with hands occupied	3-point contact; PFAS if hands must be free
Marine railway / drydock	Elevated position over dock floor or water	PFAS where guardrails not feasible; PFD when over water

18.3 Hierarchy of Fall Controls

- **Elimination** — Redesign the task to remove the fall hazard entirely (most preferred).
- **Passive Prevention — Guardrails** — Top rail 42±3 inches; mid-rail at 21 inches; toeboard where objects can fall.
- **Fall Restraint** — Prevents worker from reaching the fall hazard; lanyard anchored to rated anchorage.
- **Personal Fall Arrest System (PFAS)** — Full-body harness + lanyard/SRL + 5,000-lb anchorage.
- **Safety Nets** — Below work area to catch falling workers; clearance per OSHA 1926.502.
- **Warning Lines / Administrative** — Least preferred; only when all other methods are infeasible.

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18.4 Personal Fall Arrest System (PFAS)

Component	Standard	Key Requirement
Full-Body Harness	ANSI Z359.1	Dorsal D-ring centered between shoulder blades; leg straps snug; inspect before each use
Shock-Absorbing Lanyard	ANSI Z359.1	6-ft maximum; limits arrest force to 1,800 lbs; verify clearance before use
Self-Retracting Lifeline (SRL)	ANSI Z359.14	Preferred — constant tension; significantly reduced clearance vs. fixed lanyard
Anchorage Point	ANSI Z359.2	Minimum 5,000 lbs per attached worker OR PE-designed for twice maximum arrest force
Snap Hook / Carabiner	ANSI Z359.1	Locking gate; rated ≥ 5,000 lbs; compatible with anchorage — no cross-loading

WARNING: Never attach a PFAS lanyard to a guardrail. Guardrails are not designed as PFAS anchorages and will fail under arrest forces, creating a fatal secondary fall hazard.

18.4.1 Fall Clearance Calculation

Total minimum clearance below the anchorage for a 6-ft shock-absorbing lanyard: free-fall (6 ft) + deceleration (3.5 ft) + worker height (~6 ft) + safety factor (1 ft) = approximately 16.5 feet. SRLs have significantly reduced clearance requirements — consult manufacturer data sheet before each use.

18.5 Guardrail Systems

- Top rail: 42 inches ± 3 inches above the walking/working surface.
- Mid-rail: midway between top rail and surface (approximately 21 inches).
- Toeboard: minimum 3.5 inches high when falling objects are a hazard below.
- Strength: top rail withstands 200 lbs outward or downward at any point.
- Openings shall not allow a 19-inch diameter sphere to pass through.
- Gates shall be self-closing and self-latching.
- Temporary guardrails on vessels shall be secured to prevent displacement.

18.6 Scaffolding

All scaffolding shall be erected, modified, and dismantled only by Competent Persons trained per OSHA 1926.454. A daily inspection by a Competent Person is required before each shift.

Requirement	Standard
Erection / Dismantling	Trained scaffold erectors only; PFAS required above 6 feet during erection/dismantling
Capacity	Scaffolds support 4x maximum intended load; never overload
Planking	Full-thickness scaffold plank or engineered decking; secured against displacement
Access	Ladders, stair towers, or integral scaffold ladder — never climb cross-bracing

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Requirement	Standard
Guardrails	Required on all open sides ≥ 10 ft; ≥ 4 ft when adjacent to hazardous equipment
Tag System	Green = approved. Yellow = restricted (see tag). Red = out of service — do not use.

18.7 Ladder Safety

- Only Type IA (300 lb) or Type I (250 lb) industrial-grade ladders — consumer-grade (Type III) prohibited.
- Inspect before each use; immediately remove from service if damaged.
- Never use top two rungs of a stepladder or top three rungs of extension ladder as a standing position.
- Extension ladders shall extend ≥ 3 feet above the landing point and be tied off at the top.
- Set at 4:1 angle (1 foot out for every 4 feet of height).
- Maintain three-point contact (two hands and one foot, or two feet and one hand) while climbing.
- Do not position in front of doors that open toward the ladder unless door is blocked or locked.

SECTION 19

Crane & Rigging Safety

19.1 Purpose and Regulatory Basis

Crane and rigging operations are among the highest-consequence activities at CHOPTECH. A single rigging failure can cause multiple fatalities and severe property damage. This program complies with OSHA 29 CFR 1910.179, OSHA 29 CFR 1915.116, ASME B30 series, and ASME P30.1 (Planning for Load Handling Activities).

19.2 Qualifications

19.2.1 Crane Operators

- Mobile crane operators shall hold current NCCCO certification specific to the crane type and capacity operated.
- Overhead/gantry crane operators shall be trained and evaluated by CHOPTECH's qualified trainer, documented on Form CT-CR-001.
- Qualification is crane-specific — authorization on one type does not extend to another.
- Medical fitness is required; any condition or medication affecting safe operation must be disclosed to the Safety Manager.

19.2.2 Riggers and Signal Persons

- All riggers shall be qualified — trained to recognize hazards, select and inspect rigging, and perform lifts correctly.
- Signal persons shall be qualified in ASME B30 hand signals and radio procedures before directing any crane load.
- Lift Supervisors for critical/complex lifts shall hold CHOPTECH Lift Supervisor qualification.
- Training records renewed every 5 years or following any incident.

19.3 Lift Classification and Planning

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Lift Type	Criteria	Required Documentation
Routine	< 75% of rated capacity; single crane; no unusual hazards	Standard Pre-Lift Checklist CT-CR-002 — operator and Lift Supervisor
Critical	≥ 75% rated capacity; tandem crane; personnel hoisting; loads over energized lines	Written Critical Lift Plan CT-CR-003 — reviewed and approved by Safety Manager and Engineering
Engineered	> 90% rated capacity; novel rigging; custom load attachment	PE-stamped lift plan; mandatory pre-lift meeting; Safety Manager present during lift

19.3.1 Pre-Lift Checklist — Required Verification

- Load weight verified and documented — never estimate.
- Crane rated capacity confirmed for specific radius and boom angle at pick point.
- All rigging hardware inspected and rated capacity confirmed.
- Pick and set points identified, marked, and communicated to all team members.
- Entire swing path cleared of personnel and obstructions.
- Overhead clearances verified — power lines, piping, structures, other cranes.
- Ground conditions assessed for mobile cranes — outrigger pads sized and placed.
- Tag lines attached and of sufficient length — never allow load to swing free.
- One designated signal person confirmed; communication method confirmed.
- Pre-lift safety briefing conducted with all team members — documented on CT-CR-002.

19.4 Rigging Hardware

Hardware Type	Standard	Key Inspection Requirements
Wire Rope Slings	ASME B30.9	Remove: 10 broken wires per lay, 5 in 1 strand, kinking, crushing, heat damage, corrosion pitting
Chain Slings	ASME B30.9	Grade 80 or 100 alloy only. Remove: >15% stretch, nicks, gouges, weld repairs
Synthetic Web Slings	ASME B30.9	Remove: cuts, holes, acid/caustic burns, melting, >10% stitching damaged
Shackles	ASME B30.26	Alloy screw-pin or bolt-type; WLL visible; pin fully inserted and moused
Hooks	ASME B30.10	Safety latch required; remove if throat opens >15% of original; any twist or cracks
Eyebolts	ASME B30.26	Shoulder eyebolts only for angular loads; apply manufacturer derating factors
Spreader Bars	ASME B30.20	Engineered; WLL marked; inspected before each use

19.5 Crane Inspections

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Inspection	Frequency / Who	Scope
Pre-Shift	Before each shift — operator	Controls, brakes, limit switches, hooks, wire rope, safety devices — CT-CR-004
Monthly	Monthly — qualified inspector	All pre-shift items plus structural components, sheaves, drums, electrical
Annual	Annual — third-party certified	Complete inspection per ASME B30; load test if modified; certificate on file
Post-Incident	Immediately after any incident	Before return to service; all findings and repairs documented

19.6 Exclusion Zones

WARNING: No personnel shall stand, walk, or work under a suspended load — ever. No operational urgency justifies placing people under a suspended load. This rule has zero exceptions.

- Minimum exclusion zone of 1.5x load radius — barricaded before any lift begins.
- Exclusion zone maintained for entire lift: pick, swing, and set.
- Tag line handlers shall position themselves beside — never under — the load.
- Cranes shall not be left with loads suspended and unattended.

19.7 Personnel Hoisting

Personnel hoisting is permitted only when conventional means are more hazardous or infeasible, per OSHA 1926.1431. All personnel hoisting operations require:

- Trial lift at maximum intended load before personnel are hoisted.
- Proof test of platform to 125% of intended load.
- Crane rated capacity at least 5x maximum intended platform load.
- Continuous crane operator presence at controls throughout.
- All occupants in full-body harnesses attached to platform — not the crane.
- Qualified signal person present at all times.
- Written Safety Manager authorization for each personnel hoisting operation.

SECTION 20

Contractor Safety Management

20.1 Purpose and Scope

CHOPTECH regularly engages contractors for vessel repair, facility maintenance, specialized coatings, electrical work, rigging, and equipment installation. This section establishes CHOPTECH's Contractor Safety Management Program to ensure contractors and subcontractors work safely and in compliance with all applicable regulations and CHOPTECH standards. This program applies to all contractors, subcontractors, and their employees at any CHOPTECH facility.

20.2 Contractor Pre-Qualification

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All contractors must complete CHOPTECH Pre-Qualification (CT-CSM-001) before contract award. The Safety Manager reviews and approves pre-qualification status. Non-qualifying contractors may not be awarded contracts until deficiencies are corrected.

Pre-Qualification Element	CHOPTECH Standard
OSHA 300 Log (3 years)	TRIR ≤ 3.0; DART ≤ 2.0; no fatalities in past 3 years
Experience Modification Rate (EMR)	EMR ≤ 1.0 preferred; ≥ 1.25 requires Safety Manager waiver
Written Safety Program	Addresses all hazards relevant to contracted scope; reviewed by CHOPTECH Safety Dept
Insurance Certificates	GL, Workers Comp, Auto at CHOPTECH minimum limits; CHOPTECH as additional insured
OSHA Citations (3 years)	No Willful or Repeat citations; Serious citations reviewed individually
Supervisor Qualifications	Documented safety training for all on-site supervisors
Substance Abuse Program	Written policy; pre-employment and reasonable-suspicion testing minimum

20.3 Contractor Safety Orientation

All contractor employees shall complete CHOPTECH Contractor Safety Orientation before beginning any work. Orientation is conducted by CHOPTECH Safety Department and covers:

- Emergency alarm patterns, muster stations, and evacuation routes
- Emergency contacts and location of first aid stations and AED units
- CHOPTECH permit systems: confined space, hot work, lockout/tagout, electrical
- Site-specific hazards relevant to the contractor's scope
- CHOPTECH drug-free workplace policy — contractors subject to the same policy
- Incident reporting — all incidents, injuries, near-misses, and property damage reported to CHOPTECH Safety within 1 hour
- Stop Work Authority — all contractor employees have the right and responsibility to stop unsafe work
- PPE requirements for the assigned work area and tasks
- Visitor/escort requirements for non-badged personnel

> *NOTE: Orientation must be documented on CT-CSM-002 with each employee's signature. No contractor employee accesses the work site without documented orientation on file with the CHOPTECH Safety Department.*

20.4 Contractor Safety Agreement

The contractor's authorized representative signs the CHOPTECH Contractor Safety Agreement (CT-CSM-003) before work begins, establishing:

- Compliance with all applicable OSHA regulations and CHOPTECH standards — whichever is more stringent.
- Submission of a site-specific JHA for all non-routine tasks prior to beginning work.
- Provision of current SDSs for all chemicals brought onto CHOPTECH property.
- CHOPTECH's right to stop work for safety violations without contract penalty.

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- Immediate reporting of all incidents, injuries, near-misses, and property damage.
- Contractor employees subject to CHOPTECH's drug-free workplace policy including reasonable-suspicion testing.
- Attendance at CHOPTECH-requested safety meetings and inspections.
- Correction of identified deficiencies within specified timeframes.

20.5 Ongoing Oversight

- Assigned CHOPTECH Project Manager or Foreman conducts daily safety walk-throughs of contractor work areas.
- CHOPTECH Safety Department conducts unannounced audits at minimum weekly for active projects.
- Findings documented on CT-CSM-004 and communicated to contractor supervisor immediately.
- Imminent danger conditions require immediate work stoppage — Safety Manager has full authority.
- Contractor safety performance tracked on monthly scorecard and reviewed at project close-out.

20.5.1 Contractor Performance Metrics

Metric	Frequency	Target	Action Threshold
TRIR	Monthly	< 3.0 (target < 1.5)	Review at monthly meeting; corrective action if exceeded
DART Rate	Monthly	< 2.0	Investigation required for all DART cases
Near-Miss Rate	Monthly	≥ 2 per 100 workers	Low rate may indicate underreporting
Audit Score	Weekly	≥ 85%	Below 75% triggers formal corrective action within 48 hours
PPE Compliance	Weekly	≥ 98%	Below 95% triggers immediate re-briefing
Permit Compliance	Continuous	100%	Any violation triggers stop-work review

20.6 Stop Work Authority and Contractor Removal

WARNING: Any CHOPTECH employee — including the most junior craft worker — has the right and responsibility to stop work they believe is unsafe. A contractor that retaliates against any worker for exercising Stop Work Authority will be immediately removed and banned from future work at CHOPTECH.

Violation / Condition	CHOPTECH Response
Imminent Danger Condition	Immediate removal; work stoppage; Safety Manager notification; investigation before return to service
Willful OSHA Violation	Immediate removal; contract review; may result in termination
Three audit scores < 75% in one month	Written corrective action plan; 48-hour re-audit; failure to improve = contract suspension
Fatality or Serious Injury	Immediate work stoppage; OSHA notification; joint investigation; Safety Manager clearance to resume
Positive Drug/Alcohol Test	Immediate removal of affected employee; contractor certifies remaining workers substance-free

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Violation / Condition	CHOPTECH Response
Repeated PPE Non-Compliance	Formal warning; second occurrence — contractor supervisor removed from site

20.7 Post-Project Performance Review

At project close-out, CHOPTECH completes a Contractor Performance Review (CT-CSM-005) covering safety performance, audit history, incident record, and cooperation with CHOPTECH safety requirements. This review is filed in the contractor's pre-qualification record and considered in future contract award decisions. Contractors with poor safety ratings may be disqualified from future work at CHOPTECH.

— END OF SECTIONS 16–20 —

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SECTION 21

Lockout / Tagout (LOTO)

21.1 Purpose and Regulatory Basis

Unexpected energization, startup, or release of stored energy during servicing and maintenance operations causes severe injuries and fatalities every year. CHOPTECH's Lockout/Tagout (LOTO) Program controls hazardous energy in compliance with OSHA 29 CFR 1910.147 (Control of Hazardous Energy), OSHA 29 CFR 1915.89 (Shipyard Employment — Control of Hazardous Energy), and NFPA 70E for electrical energy. This program applies to all employees who service, maintain, or repair machinery and equipment where unexpected energization or release of stored energy could occur.

21.2 Definitions

Term	Definition
Hazardous Energy	Any electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or gravitational energy that could cause injury if released unexpectedly
Lockout	Placing a lockout device on an energy-isolating device in the OFF/SAFE position to prevent energization
Tagout	Attaching a warning tag to an energy-isolating device to warn against operation — used ONLY when equipment design does not permit locking out
Energy-Isolating Device	Any mechanical device that prevents energy transmission — circuit breakers, disconnect switches, block valves, blanking flanges
Authorized Employee	An employee who locks out or tags out machines/equipment to perform servicing or maintenance
Affected Employee	An employee whose job requires operating or using equipment being locked out, or who works in an area where LOTO is being performed
Lockout/Tagout Device	A standardized device (lock, tag, or blank) used to isolate an energy source and prevent operation
Zero Energy State	Condition in which all energy sources have been isolated and all stored energy has been released, restrained, or dissipated
Group Lockout	Procedure used when multiple authorized employees work on the same equipment — each employee applies their personal lock

21.3 Energy Control Procedures

21.3.1 Machine-Specific LOTO Procedures

CHOPTECH shall maintain a written, machine-specific Energy Control Procedure (ECP) for every piece of equipment covered under this program. Each ECP (Form CT-LOTO-001) shall be posted on or immediately adjacent to the equipment and shall include:

- Scope, purpose, and rules for use of the procedure
- Steps for shutting down and isolating the equipment
- Location and type of all energy-isolating devices

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- Type and magnitude of energy to be controlled
- Steps for releasing, restraining, or dissipating stored energy
- Steps for verifying zero energy state before work begins
- Steps for restoring energy after servicing is complete

21.3.2 The Eight-Step LOTO Sequence

Step	Action Required
1 — Notify	Notify all affected employees that LOTO will be applied and explain the reason and expected duration.
2 — Identify	Identify ALL energy sources feeding the equipment — electrical, pneumatic, hydraulic, mechanical, thermal, chemical, gravitational.
3 — Shut Down	Use the normal stopping procedure to shut down the equipment safely.
4 — Isolate	Open, close, or otherwise actuate all energy-isolating devices to the SAFE/OFF position.
5 — Apply LOTO	Apply personal lockout device(s) and/or tagout device(s) to each energy-isolating device. Each authorized employee applies their own personal lock.
6 — Release Stored Energy	Relieve, disconnect, restrain, or otherwise render safe all potentially hazardous stored or residual energy — bleed pneumatic lines, discharge capacitors, block raised loads, drain/cool pressurized systems.
7 — Verify Zero Energy	Attempt to start the equipment using normal controls to verify it cannot be energized. Use test instruments to verify electrical isolation. Check for residual pressure/heat.
8 — Perform Work	Authorized employee performs servicing/maintenance work in the zero energy state.

21.4 LOTO Hardware Requirements

Hardware Item	Specification / Requirement
Personal Padlocks	Individually keyed — only one key per lock; never master-keyed for general access; color-coded by trade/department; engraved with employee ID
Lockout Tags	Standardized CHOPTECH danger tag (CT-LOTO-002); includes employee name, date, contact, and reason; never removed by anyone other than the applying employee
Hasps	Multi-lock hasps allowing up to 6 locks for group lockout; required when more than one worker services the same equipment
Lockout Blocks / Pins	Used to block valves, cylinders, and stored-energy devices in the safe position; rated for the energy being controlled
Electrical Lockout Devices	Circuit breaker lockouts, plug lockouts, disconnect lockouts — size-matched to the specific device being isolated
Valve Lockout Devices	Ball valve, gate valve, and plug valve lockout devices — size-appropriate; used with personal padlock
Pneumatic/Hydraulic Blinds	Inserted between flanges to positively prevent flow — used in addition to valve lockout for positive isolation

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Hardware Item	Specification / Requirement
LOTO Station	Centrally located LOTO hardware station in each production area — stocked and audited monthly by the Safety Department

WARNING: No employee shall remove another employee's personal lock or tag. Only the employee who applied the lock may remove it. Emergency removal requires Safety Manager and supervisor authorization — documented on CT-LOTO-003 — and the applying employee must be contacted before removal whenever possible.

21.5 Group Lockout Procedures

When multiple authorized employees work on the same equipment, the following group LOTO procedure shall be followed:

- A designated Primary Authorized Employee performs steps 1–6 (shutdown, isolation, and stored energy release) and applies the first lock to a group hasp.
- Each additional authorized employee applies their own personal lock to the group hasp before beginning work — verifying zero energy independently.
- Each employee removes their personal lock only when their portion of the work is complete and they have cleared the area.
- The Primary Authorized Employee removes the first lock only after all other employee locks have been removed.
- If work spans multiple shifts, the outgoing shift employee removes their lock only after the incoming shift employee has applied their own lock (lock exchange procedure).

21.6 Tagout-Only Procedures

Tagout alone is permitted ONLY when the equipment is designed such that it cannot be locked out. Written justification shall be on file with the Safety Department. When tagout only is used:

- Additional protective measures shall be taken to provide a level of safety equivalent to lockout — removing isolating circuit elements, blocking a controlling switch, opening an extra disconnecting device, or removing a valve handle.
- Tags shall be securely attached and positioned so they are immediately obvious to anyone who might attempt to operate the equipment.
- Tags shall state: 'DANGER — DO NOT OPERATE — Equipment Isolated for Maintenance' with the employee's name and contact information.
- Tagout shall never be used where lockout is feasible.

21.7 Contractor LOTO Coordination

When outside contractors perform servicing on CHOPTECH equipment, CHOPTECH shall coordinate with the contractor to ensure both parties understand and comply with LOTO requirements. CHOPTECH shall inform contractors of CHOPTECH's LOTO program requirements, and contractors shall inform CHOPTECH of their LOTO program. Both programs shall be followed simultaneously, with both CHOPTECH and contractor employees applying locks to a group hasp.

21.8 Training and Periodic Inspections

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Training / Audit Type	Timing	Content / Scope
Authorized Employee	Before initial assignment and when new equipment or hazards are introduced	LOTO procedure steps, energy types, hardware use, zero energy verification, group lockout
Affected Employee	Before initial assignment; when LOTO procedures are updated	Recognition of LOTO application, prohibition on operating locked-out equipment
Annual LOTO Audit	Each ECP audited annually by Safety Dept — documented on CT-LOTO-004	Verify procedure is current, hardware is available, employees are following the procedure correctly
Retraining	Whenever audit reveals deficiencies; when new energy hazards are introduced	Full re-certification for authorized employees with documented assessment

SECTION 22

Incident Investigation & Reporting

22.1 Purpose and Scope

Every incident — whether or not an injury results — contains information that can prevent a future, potentially more serious event. CHOPTECH's Incident Investigation and Reporting Program ensures that all incidents are reported promptly, investigated thoroughly, root causes are identified, and effective corrective actions are implemented and tracked to completion. This program applies to all CHOPTECH employees, contractors, and visitors at all CHOPTECH facilities.

22.2 Incident Classification

Classification	Definition	Required Action
Fatality	Work-related death of any employee or contractor on CHOPTECH property	OSHA notification within 8 hours; full investigation; senior leadership notification immediately
Hospitalization	Inpatient admission to hospital (not observation) for work-related injury/illness	OSHA notification within 24 hours; full investigation within 24 hours
Recordable Injury	OSHA-recordable injury/illness: medical treatment beyond first aid, lost days, restricted duty, or diagnosis by licensed healthcare professional	Recorded on OSHA 300 log; full investigation within 48 hours
First Aid Only	Injury/illness requiring first aid treatment only — no medical treatment beyond first aid	Documented on First Aid Log (CT-II-001); supervisor review; no OSHA 300 entry
Near Miss	An event that could have resulted in injury, illness, or property damage but did not	Full investigation within 24 hours; reported to Safety Dept immediately

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Classification	Definition	Required Action
Property Damage	Damage to equipment, facilities, or vessels — regardless of dollar amount	Investigated by supervisor and Safety Dept; documented on CT-II-002
Environmental Release	Release of hazardous material to air, water, or soil in reportable quantities	Immediate notification per Section 15 emergency procedures; environmental investigation

22.3 Immediate Reporting Requirements

All incidents shall be reported immediately — before the end of the shift in which they occur. No employee shall be discouraged, penalized, or retaliated against for reporting an incident, injury, near miss, or unsafe condition. Retaliation for reporting is a serious violation subject to termination.

- Employee reports to immediate supervisor verbally as soon as safely possible.
- Supervisor contacts the Safety Department immediately — Safety Hotline: ext. 0-SAFE (0-7233).
- Supervisor preserves the incident scene — nothing is moved, cleaned, or altered until authorized by the Safety Manager.
- For fatalities and hospitalizations: Safety Manager contacts OSHA within required timeframes (8 hours/24 hours).
- Employee seeks medical attention as needed — CHOPTECH's designated occupational health clinic for non-emergency treatment.
- Employee completes Employee Incident Report (CT-II-003) before end of shift.

22.4 Investigation Process

22.4.1 Investigation Team

The investigation team composition shall be scaled to incident severity:

Incident Level	Investigation Team	Timeline
First Aid / Near Miss	Immediate supervisor + Safety Representative	Within 24 hours
Recordable Injury / Property Damage	Supervisor + Safety Manager + affected employee's peer	Within 48 hours
Hospitalization / Serious Injury	Safety Manager + Operations Director + Engineering + HR	Within 24 hours; interim report within 48 hours
Fatality / Catastrophic	CEO + Safety Manager + Legal + external investigator as required	Immediately; OSHA investigation cooperation

22.4.2 Root Cause Analysis — The 5-Why Method

CHOPTECH uses a structured root cause analysis process for all recordable injuries, hospitalizations, and significant near misses. The 5-Why method requires the investigation team to ask 'Why did this happen?' repeatedly until the true root cause is identified — typically 3 to 5 levels deep. Root causes typically fall into these categories:

- **Engineering/Design failures** — equipment design did not prevent or protect against the hazard
- **Administrative/Procedural failures** — procedure was absent, inadequate, or not followed
- **Training failures** — employee lacked knowledge or skill to perform the task safely

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- **Supervision failures** — hazardous condition or unsafe behavior was not identified or corrected
- **Cultural/Behavioral factors** — workplace culture tolerated risk-taking or did not reinforce safe behavior

> *NOTE: Investigations shall identify root causes — not just immediate causes. 'Employee failed to wear PPE' is an immediate cause. Why didn't the employee wear PPE? Was it available? Was it the right type? Was the hazard communicated? Was PPE use enforced? These are the questions that lead to effective corrective actions.*

22.4.3 Investigation Report Requirements

All investigations shall be documented on the CHOPTECH Incident Investigation Report (CT-II-004) and include:

- Date, time, location, and description of the incident
- Names and job titles of injured persons, witnesses, and investigators
- Description of task being performed at time of incident
- Immediate cause(s) — the direct actions or conditions that led to the incident
- Root cause(s) — underlying systemic failures identified through 5-Why or equivalent analysis
- Corrective actions — specific, measurable actions with responsible party and due date for each
- Short-term (interim) controls implemented immediately to prevent recurrence
- Long-term (permanent) controls to address root causes
- Effectiveness review date — date at which corrective actions will be verified as effective

22.5 Corrective Action Tracking

All corrective actions identified during investigations shall be entered into CHOPTECH's Corrective Action Tracking System (CT-II-005) and monitored to completion. The Safety Manager reviews open corrective actions weekly and reports status to Operations Director monthly. No corrective action shall be closed without verification that the action was implemented and is effective.

22.6 OSHA Recordkeeping

Record	Requirement	Retention
OSHA Form 300 — Log	Record all recordable work-related injuries/illnesses within 7 calendar days of receiving information	Maintained by Safety Dept; retained 5 years
OSHA Form 300A — Summary	Annual summary of all recordable cases; posted Feb 1 – Apr 30 each year	Signed by highest-ranking company official; retained 5 years
OSHA Form 301 — Incident Report	Completed for each recordable case within 7 calendar days	Retained 5 years; provided to employees on request
OSHA 8-Hour Report	Fatality or in-patient hospitalization	Phone report to OSHA within 8 hours: 1-800-321-OSHA
OSHA 24-Hour Report	Amputation, loss of eye, inpatient hospitalization	Phone report to OSHA within 24 hours: 1-800-321-OSHA

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22.7 Lessons Learned Communication

Within 5 business days of completing a significant incident investigation, the Safety Manager shall issue a Lessons Learned bulletin (CT-II-006) to all relevant departments and post it on the CHOPTECH Safety Board. Lessons Learned shall be reviewed at the next scheduled safety meeting and incorporated into applicable training materials and procedures within 30 days.

SECTION 23

Drug & Alcohol Program

23.1 Purpose and Policy Statement

CHOPTECH is committed to maintaining a safe, drug-free workplace. The use, possession, sale, distribution, or being under the influence of alcohol or controlled substances while on CHOPTECH property, in CHOPTECH vehicles, or performing CHOPTECH work is strictly prohibited. This program applies to all CHOPTECH employees, contractors, and subcontractors. CHOPTECH's Drug and Alcohol Program complies with the Drug-Free Workplace Act of 1988, DOT 49 CFR Part 40, and applicable Virginia state law.

23.2 Prohibited Conduct

- Reporting to work or performing work while under the influence of alcohol, illegal drugs, or any substance that impairs judgment, coordination, or performance.
- Possessing, using, selling, distributing, or soliciting illegal drugs or drug paraphernalia on CHOPTECH property or in CHOPTECH vehicles.
- Possessing or consuming alcohol on CHOPTECH property during working hours or while on call.
- Using prescription or over-the-counter medications that impair work performance without notifying the supervisor (see Section 23.6).
- Refusing to submit to a required drug or alcohol test.
- Adulterating, substituting, or tampering with a drug or alcohol test specimen — constitutes a positive test result.

23.3 Testing Program

Test Type	When Triggered	Key Requirement
Pre-Employment	All candidates for safety-sensitive positions before starting work	Negative result required before first day of work in safety-sensitive role
Reasonable Suspicion	Any employee when a trained supervisor observes specific, contemporaneous, articulable signs of impairment	Supervisor documents observations on CT-DA-001; employee removed from duty immediately; tested within 2 hours for alcohol, 32 hours for drugs
Post-Incident	All employees involved in a reportable incident or near miss involving injury or property damage	Tested as soon as practicable — within 2 hours for alcohol, 32 hours for drugs
Random	Unannounced; statistically random selection from safety-sensitive pool	Minimum 50% of safety-sensitive workforce tested annually; selected employees tested immediately upon notification

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Test Type	When Triggered	Key Requirement
Return-to-Duty	Following a positive test or policy violation, before returning to safety-sensitive work	Negative result required; follow-up testing program per SAP recommendation
Follow-Up	Unannounced testing following return-to-duty	Minimum 6 tests in first 12 months following return; may continue up to 60 months

23.4 Substances Tested

CHOPTECH's drug testing panel includes the following substance categories in accordance with DOT 49 CFR Part 40 and CHOPTECH policy:

- Marijuana (THC) — including medical marijuana; positive result is a policy violation regardless of state law or prescription
- Cocaine and cocaine metabolites
- Amphetamines and methamphetamines (including MDMA)
- Opiates — codeine, morphine, heroin, hydrocodone, hydromorphone, oxycodone, oxymorphone
- Phencyclidine (PCP)
- Alcohol (breath alcohol testing) — BAC of 0.02 or greater is a violation for safety-sensitive work

23.5 Consequences of Violations

Situation	Consequence
First Positive Test or Refusal	Immediately removed from safety-sensitive duty; referred to Substance Abuse Professional (SAP); subject to disciplinary action up to termination depending on circumstances
Second Positive Test	Termination of employment — no exceptions
Refusal to Test	Treated as a positive test result — same consequences as first positive
Confirmed Positive with SAP Referral and Completion	May return to safety-sensitive duty after: SAP evaluation, completion of recommended treatment, negative return-to-duty test, and follow-up testing program
Contractor Positive Test	Contractor employee immediately removed from CHOPTECH property; contractor notified; CHOPTECH may require all contractor employees retested

23.6 Prescription and Over-the-Counter Medications

Employees taking prescription or OTC medications that may impair their ability to safely perform their job shall notify their supervisor before beginning work. The supervisor shall consult with the Safety Manager and Occupational Health to determine if temporary job reassignment, restricted duty, or other accommodation is appropriate. Employees are not required to disclose the specific medication or medical condition — only that the medication may affect their ability to safely perform safety-sensitive tasks.

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NOTE: Legally prescribed medications used in accordance with the prescribing physician's instructions are not a violation of this policy unless they impair job performance or the employee fails to disclose potential impairment to their supervisor.

23.7 Employee Assistance Program (EAP)

CHOPTECH recognizes substance abuse as a health issue and encourages employees to voluntarily seek assistance before their condition results in a policy violation or workplace incident. Employees who voluntarily seek help through the Employee Assistance Program (EAP) before being notified of a test or investigation will be provided with access to counseling and treatment resources without automatic disciplinary action. EAP services are confidential. Contact HR for EAP referral: (757) 555-0100 ext. 200.

SECTION 24

Heat & Cold Stress

24.1 Purpose and Scope

CHOPTECH's shipyard operations expose workers to outdoor and confined space environments across a wide range of temperatures and humidity levels throughout the year. Heat illness and cold stress are preventable conditions that can become life-threatening without prompt recognition and response. This section establishes CHOPTECH's Heat and Cold Stress Prevention Program per OSHA General Duty Clause, OSHA Heat Illness Prevention guidance, NIOSH Criteria for a Recommended Standard (Heat/Cold Stress), and applicable Virginia OSHA requirements.

24.2 Heat Illness Prevention

24.2.1 Heat Illness Recognition

Condition	Symptoms	Response
Heat Cramps	Painful muscle cramps — usually legs or abdomen; heavy sweating; normal body temperature	Move to cool area; rest; drink water with electrolytes; stretch affected muscles; monitor for worsening
Heat Syncope	Fainting or near-fainting; pale, moist skin; weak pulse; occurs from standing or rising quickly in heat	Lie victim flat; elevate legs; move to cool area; hydrate; contact medical aid if doesn't recover quickly
Heat Exhaustion	Heavy sweating; cool, pale, clammy skin; weakness; nausea; headache; fast, weak pulse; possible fainting	Move to cool area immediately; loosen clothing; apply cool wet cloths; hydrate if conscious; call EMS if symptoms are severe
Heat Stroke	High body temperature (>103°F); hot, red, dry or damp skin; rapid, strong pulse; confusion or loss of consciousness	CALL 911 IMMEDIATELY — this is a medical emergency. Cool the victim rapidly by any means available while awaiting EMS.

WARNING: Heat Stroke is a life-threatening emergency. If a worker is confused, unresponsive, or has hot skin with no sweating — call 911 immediately and begin cooling at once. Do not wait to see if symptoms improve.

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24.2.2 Heat Index Action Levels

Heat Index	Alert Level	Required Controls
< 91°F (Lower Risk)	Green	Normal precautions — water, rest, shade available; educate new/returning workers
91–103°F (Moderate Risk)	Yellow	Water every 15 minutes; shade rest breaks; buddy system; watch for early symptoms; acclimatize new workers
103–115°F (High Risk)	Orange	Mandatory rest breaks (minimum 15 min per hour); active cooling measures; limit outdoor work; daily safety briefings; emergency response ready
> 115°F (Very High / Extreme)	Red	Consider rescheduling outdoor work to cooler hours; mandatory cooling vests; engineering controls; Safety Manager authorization required to continue work

24.2.3 Heat Illness Prevention Controls

- Water: Provide cool drinking water (50–60°F) at all outdoor work sites — one quart per worker per hour during high heat. Workers shall drink water every 15–20 minutes.
- Rest: Provide shaded or air-conditioned rest areas. Mandatory rest breaks during high heat index conditions.
- Shade: Shade shall be available within a reasonable distance of all outdoor work areas during warm months.
- Acclimatization: New employees and those returning from extended absence shall follow the OSHA acclimatization schedule — 20% of normal shift on Day 1, increasing by 20% each subsequent day.
- Buddy System: Workers shall monitor each other for signs of heat illness during moderate and high risk conditions.
- Engineering Controls: Where feasible — air conditioning, fans, misting systems, cooling vests, and scheduling heavy work during cooler parts of the day.
- Training: Annual heat illness training for all outdoor workers and supervisors before the warm season.

24.3 Cold Stress Prevention

24.3.1 Cold Stress Recognition

Condition	Symptoms	First Response
Hypothermia (Mild)	Shivering; mental confusion; slurred speech; fumbling hands; drowsiness	Move to warm area; remove wet clothing; warm the body core (not extremities first); warm beverages if conscious
Hypothermia (Severe)	No shivering; stiff muscles; very slow breathing; weak pulse; unconsciousness	CALL 911 — handle gently (cardiac arrest risk); keep horizontal; insulate; do NOT rub extremities
Frostbite	Numbness; tingling; white/grayish-yellow skin; hard/waxy texture — ears, nose, cheeks, fingers, toes	Move to warm area; do NOT rub frostbitten area; do NOT walk on frostbitten feet; get medical care; rewarm only if no risk of refreezing
Trench Foot	Redness; swelling; numbness; blisters from prolonged exposure to wet cold (above freezing)	Remove wet footwear; dry and rewarm gradually; elevate feet; seek medical attention

24.3.2 Wind Chill Action Levels

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Wind Chill Temperature	Risk Level	Required Controls
Above 32°F	Low risk	Standard cold weather work practices; layered clothing
16°F to 32°F	Moderate risk	Protective clothing required; warm break area; limit time outdoors; buddy system
-17°F to 15°F	High risk	Heavy insulated clothing; mandatory warm-up breaks every hour; limit outdoor exposure; Safety Manager review
Below -17°F (Wind Chill)	Danger — Very High Risk	Non-essential outdoor work suspended; emergency outdoor work: maximum 10-min exposure with 45-min warm-up; two-person rule always

24.3.3 Cold Stress Prevention Controls

- Layered Clothing: Base layer (moisture-wicking), insulating layer (fleece/wool), outer shell (wind/waterproof). Ensure hands, feet, and head are protected.
- Warm Break Areas: Heated break areas shall be available within reasonable proximity to all cold outdoor work areas.
- Warm Beverages: Warm non-alcoholic beverages shall be provided during cold weather work — never alcohol (causes vasodilation and accelerates heat loss).
- Buddy System: Workers monitor each other for signs of cold stress — particularly confusion, slurred speech, or excessive shivering.
- Dry Conditions: Wet clothing dramatically accelerates heat loss — workers shall have access to dry clothing and footwear.
- Training: Annual cold stress training before the cold season for all outdoor workers and supervisors.

SECTION 25

Safety Training & Competency Management

25.1 Purpose and Philosophy

Training is the foundation of CHOPTECH's safety culture. A technically compliant safety program is ineffective without employees who understand hazards, know the controls, and are motivated to work safely. CHOPTECH's Safety Training and Competency Management Program ensures that all employees receive job-appropriate safety training, that competency is verified — not just attendance — and that training records are maintained to support regulatory compliance, audit readiness, and continuous improvement.

25.2 Training Program Structure

25.2.1 Training Tiers

Tier	Who	When	Content
Tier 1 — New Employee Orientation	All new employees (including transfers)	Before first day in work area	General safety policies, emergency procedures, LOTO, HazCom, PPE, incident reporting, Stop Work Authority, site rules
Tier 2 — Position-Specific Training	All employees	Before performing new job tasks	Task-specific hazards, controls, permits, equipment operation, applicable sections of this Safety Program

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Tier	Who	When	Content
Tier 3 — Annual Refresher Training	All employees	Annually (by anniversary date or fixed schedule)	Regulatory-required refreshers: HazCom, LOTO, confined space awareness, heat/cold stress, emergency procedures
Tier 4 — Specialized / Certification Training	Designated roles only	Before performing specialized tasks; renewal per regulation	Confined space entry/rescue, LOTO authorized, crane operator, rigger, scaffold erector, respiratory protection, NCCCO, HAZWOPER, First Aid/CPR
Tier 5 — Supervisor Safety Leadership	All supervisors and leads	Before assuming supervisory responsibility; annually	Hazard recognition and correction, incident investigation, LOTO supervisor role, coaching safe behavior, legal responsibilities

25.3 Training Delivery Methods

CHOPTECH uses multiple delivery methods to ensure training is effective, engaging, and appropriate for the audience and subject matter:

Method	Best Used For	Requirements
Classroom Instruction	New employee orientation, regulatory compliance training, policy-heavy topics	Instructor-led; question and answer; documented attendance and comprehension check
Toolbox Talks	Ongoing safety awareness, pre-task hazard review, lessons learned	15–20 minute supervisor-led discussions at start of shift; documented on CT-TR-001
Hands-On / Practical Training	LOTO, confined space entry, crane operation, rigging, PFAS use, respirator use	Demonstrated competency with equipment; evaluated and signed off by qualified trainer
On-the-Job Training (OJT)	Position-specific tasks, equipment operation	Structured checklist (CT-TR-002); experienced employee mentor; competency sign-off
Computer-Based Training (CBT)	Regulatory refreshers, HazCom, bloodborne pathogens, general awareness	Completed on CHOPTECH Learning Management System; auto-records completion and score
Drills and Exercises	Emergency response, fire, confined space rescue, man overboard, evacuation	Evaluated against performance standards; findings documented and corrective actions tracked

25.4 Regulatory Training Requirements Matrix

The following matrix summarizes key OSHA-required training for CHOPTECH operations. This is not exhaustive — supervisors shall consult the Safety Department for complete position-specific training requirements.

Training Topic	Who	Initial Timing	Refresher
Hazard Communication (HazCom)	All employees	Before first potential exposure; when new hazards introduced	Annual

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Training Topic	Who	Initial Timing	Refresher
Lockout / Tagout — Authorized	Authorized employees	Before performing LOTO	When deficiency observed or new equipment introduced
Lockout / Tagout — Affected	Affected employees	Before first assignment in LOTO area	When deficiency observed
Confined Space Entry	Entrants, attendants, supervisors, rescue	Before performing role	Annually
Personal Fall Arrest Systems	All users of PFAS	Before first use	When equipment changes or deficiency identified
Respiratory Protection	All respirator users	Before first use; annually	When deficiency observed or new hazards identified
Hearing Conservation	All employees in HCP	Before first exposure; annually	Annually
Electrical Safety (NFPA 70E)	Qualified electrical workers	Before working on energized systems	When new hazards or regulatory changes
Crane Operation	Operators	Before operating each crane type	NCCCO recertification per schedule
Rigging	Qualified riggers	Before performing rigging	Every 5 years or following incident
Emergency Response — Awareness	All employees	New employee orientation	Annually via drills
First Aid / CPR / AED	Designated responders	Before assignment as responder	Every 2 years (CPR/AED annually)
Scaffold Erection	Scaffold erectors	Before erecting scaffolds	When deficiency observed or new equipment
HAZWOPER (24 or 40-hr)	Emergency response team members	Before response duties	8-hour annual refresher

25.5 Competency Verification

CHOPTECH distinguishes between training attendance and demonstrated competency. Attendance alone does not constitute qualification for safety-critical tasks. Competency shall be verified through:

- Written or oral knowledge assessment (minimum passing score: 80%) for regulatory and policy training.
- Practical demonstration observed and evaluated by a qualified trainer for hands-on tasks (LOTO, PFAS, rigging, respirator donning/doffing, crane operation).
- Field observation by supervisor within 30 days of initial training to verify on-the-job application.
- Annual competency audits for safety-critical roles — confined space supervisors, crane operators, qualified electrical workers, and rescue team members.
- Immediate retraining and re-evaluation when deficiencies are observed — regardless of time since initial training.

25.6 Training Records Management

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All safety training shall be documented and records maintained per the following requirements:

Element	Requirement
Training Record Elements	Employee name and ID; training topic; delivery method; trainer name and qualification; date; location; assessment score or competency sign-off
Record Storage	CHOPTECH Learning Management System (LMS) for CBT and orientation; Safety Department training files for hands-on and specialized certifications
Retention Period	During employment plus 5 years; OSHA-required training records per applicable regulation (e.g., LOTO: life of employment; respiratory: duration of employment + 30 years for medical)
Employee Access	Employees may request copies of their own training records; provided within 5 business days
Audit Readiness	Training records shall be retrievable within 1 hour for any OSHA inspection; Safety Manager maintains compliance calendar for all required training due dates

25.7 Safety Meeting Requirements

Meeting Type	Frequency	Participants	Chair	Purpose / Documentation
Toolbox Talk	Weekly minimum (daily recommended during active production)	All employees in work area	Supervisor	Safety topic, task hazards, lessons learned, near-miss review — CT-TR-001
Departmental Safety Meeting	Monthly	All department employees	Dept. Manager + Safety Rep	KPI review, incident trends, program updates, employee feedback
CHOPTECH Safety Committee	Monthly	Cross-functional representatives + Safety Manager	Safety Manager	Program review, audit findings, corrective action status, regulatory updates
Leadership Safety Review	Quarterly	Department heads, Safety Manager, General Manager	General Manager	Lagging and leading indicators, culture assessment, resource allocation
All-Hands Safety Stand-Down	Annually (minimum); following any fatality or serious incident	All CHOPTECH employees and contractors	Safety Manager + General Manager	Culture reinforcement, major initiative launch, serious incident review

— END OF SECTIONS 21–25 —

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SECTION 26

Bloodborne Pathogens & First Aid

26.1 Purpose and Regulatory Basis

CHOPTECH's Bloodborne Pathogens and First Aid Program protects employees who may be exposed to blood or other potentially infectious materials (OPIM) during their work, and ensures that adequate first aid resources and trained responders are available at all facilities. This program complies with OSHA 29 CFR 1910.1030 (Bloodborne Pathogens Standard) and OSHA 29 CFR 1910.151 (Medical Services and First Aid).

26.2 Exposure Determination

Job Classification	Exposure Category
First Aid Responders / Safety Personnel	Direct — all tasks involve potential exposure
Supervisors and Foremen	Potential — may render emergency first aid before responders arrive
Security Personnel	Potential — may respond to injury scenes before first aid responders
All Other Employees	Incidental — covered by Universal Precautions training

26.3 Universal Precautions

All blood and OPIM shall be treated as infectious regardless of the perceived health status of the source. Universal Precautions shall be observed whenever there is potential contact with blood, body fluids, or OPIM.

- Wear nitrile gloves before any contact with blood or OPIM — available at all first aid stations.
- Wear face shield or safety glasses and mask if splash or spray is possible.
- Wash hands thoroughly immediately after any potential exposure, even if gloves were worn.
- Place sharps in puncture-resistant, labeled sharps containers — never in regular trash.
- Clean and disinfect all contaminated surfaces with an EPA-registered disinfectant (10% bleach minimum).
- Contaminated PPE and materials placed in labeled biohazard bags and disposed of per regulated waste procedures.

26.4 First Aid Program

26.4.1 First Aid Station Locations and Staffing

Work Area	Station Location	Staffing Requirement
Main Production / Ways Area	Building 1 Supervisor Office; Building 3 Break Room	Min. 2 trained first aiders per shift
Ship Repair Pier	Pier Head Building — First Aid Room	Min. 1 trained first aider per shift
Floating Drydock	Drydock Control Shack	Min. 1 trained first aider per shift
Office / Admin Building	Reception Area — First Aid Cabinet	Min. 1 trained first aider on site

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Work Area	Station Location	Staffing Requirement
Paint / Sandblast Shop	Shop Supervisor Office	Min. 1 trained first aider per shift
Warehouse / Material	Warehouse Office	Min. 1 trained first aider per shift

26.4.2 Required First Aid Station Contents

- Adhesive bandages — assorted sizes
- Sterile gauze pads (4x4) and rolls
- Elastic bandages (2-inch and 4-inch)
- Medical-grade adhesive tape
- Nitrile exam gloves — multiple sizes
- CPR face shield / pocket mask
- Trauma dressings and pressure bandages
- Burn gel and non-stick burn dressings
- Eye wash station (plumbed or portable 16 oz minimum within 10 seconds of hazard)
- Tourniquet (CAT or SOFTT-W type) — at least one per station
- Hemostatic gauze (QuikClot or equivalent)
- Instant cold packs
- Biohazard bags and sharps container
- Incident report forms (CT-II-003)

> *NOTE: First aid stations shall be inspected monthly by the area supervisor and restocked within 24 hours of use. Inspection documented on CT-FA-001.*

26.5 AED Program

One AED unit is located at the Main Office Entrance and shall be accessible to all personnel at all times. The AED shall be inspected monthly — battery and pad expiration dates verified — and documented on CT-FA-002. All designated first aid responders shall be trained in AED use as part of their CPR/AED certification.

26.6 Post-Exposure Procedures

Any employee experiencing a potential bloodborne pathogen exposure (needlestick, splash to mucous membranes, or contact with broken skin) shall:

- Immediately wash the affected area with soap and water (cuts) or flush with water for 15 minutes (eyes/mucous membranes).
- Report the exposure to their supervisor immediately — before end of shift.
- Supervisor completes Exposure Incident Report CT-BBP-001 and escorts employee to occupational health clinic within 2 hours.
- Post-exposure evaluation, testing, and prophylaxis provided at no cost to the employee.
- Employee health information remains confidential.

26.7 Training and Acknowledgment

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All employees with occupational exposure receive bloodborne pathogen training at initial assignment and annually thereafter, documented on Form CT-BBP-002.

Section 26 — Employee Training Acknowledgment

_____	_____	_____
Employee Printed Name	**Employee Signature**	**Date**
_____	_____	_____
Supervisor Printed Name	**Supervisor Signature**	**Date**

SECTION 27

Ergonomics & Musculoskeletal Health

27.1 Purpose and Scope

Musculoskeletal disorders (MSDs) — back injuries, strains, sprains, tendinitis, and carpal tunnel syndrome — are among the most common and costly workplace injuries in shipyard environments. CHOPTECH's Ergonomics Program identifies and controls ergonomic risk factors to prevent MSDs, reduce lost workday cases, and improve productivity. It applies to all employees in production, maintenance, and office roles.

27.2 Ergonomic Risk Factors

Risk Factor	Shipyard Examples
Force	High exertion to lift, push, pull, or grip — heavy lifts, tight fasteners, manual hammering
Repetition	Same motion performed repeatedly with little variation — assembly, grinding, painting
Awkward Posture	Bent, twisted, or overhead positions — confined space, undervessel welding, bilge work
Static Posture	Holding the same position for extended periods — sustained overhead work
Contact Stress	Resting body parts on hard or sharp edges — kneeling on steel decks
Vibration	Hand-arm vibration from grinders and chipping hammers; whole-body vibration from vehicles

27.3 Control Hierarchy

- **Engineering Controls (Preferred):** Hoists, lift tables, vacuum lifters, adjustable platforms, anti-fatigue mats, pneumatic torque tools.
- **Work Practice Controls:** Job rotation, team lifts, proper body mechanics, micro-break schedules.
- **Administrative Controls:** Scheduling heavy tasks when workers are rested; limiting continuous high-risk task duration.
- **PPE:** Anti-vibration gloves, knee pads — least preferred and not substitutes for engineering controls.

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27.4 Safe Lifting Guidelines

Step	Technique
Plan the lift	Check weight, balance, sharp edges. Clear the path. Know where the load is going.
Position feet	Shoulder-width apart; one foot slightly forward for stability.
Get close to the load	Minimize horizontal distance — the farther the load, the greater the spinal stress.
Bend knees — not back	Lower with knees and hips; keep back straight; head up.
Firm grip	Use full palm, not fingertips. Use handles or lifting straps where available.
Lift with legs	Straighten legs while keeping back straight — let leg muscles do the work.
No twisting while carrying	Turn whole body by moving feet — never twist the spine under load.
Set down safely	Bend knees again to lower. Keep fingers clear before releasing.

NOTE: Team lifts shall be used for loads exceeding 50 lbs or when a single person cannot safely control the load. One designated team leader calls all movements.

27.5 Early Symptom Reporting

Employees shall report MSD symptoms — aching, stiffness, tingling, numbness, or discomfort associated with work tasks — to their supervisor before end of shift. Early reporting leads to early intervention and prevents acute injuries from becoming chronic conditions.

WARNING: Retaliating against an employee for reporting ergonomic symptoms or requesting an evaluation is a serious violation subject to disciplinary action up to termination.

27.6 Ergonomic Evaluation and Acknowledgment

Any employee may request an ergonomic evaluation by contacting the Safety Department. Evaluations completed within 10 business days. Results documented on CT-ERGO-001 and reviewed with the employee and supervisor.

Section 27 — Ergonomic Evaluation Acknowledgment

_____	_____	_____
Employee Printed Name	**Employee Signature**	**Date**
_____	_____	_____
Safety Evaluator Name	**Evaluator Signature**	**Date**
_____	_____	_____
Supervisor Printed Name	**Supervisor Signature**	**Date**

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SECTION 28

Environmental Compliance

28.1 Purpose and Regulatory Framework

CHOPTECH is committed to operating in full compliance with all applicable federal, state, and local environmental regulations. This section covers air emissions, stormwater, hazardous waste, spill prevention, and regulated materials management per the Clean Water Act, Clean Air Act, RCRA, EPCRA, and MARPOL.

28.2 Environmental Roles

Role	Environmental Responsibility
Environmental Coordinator	Primary regulatory contact; maintains permits; manages hazardous waste; coordinates inspections; files required reports
Safety Manager	Environmental compliance integration with safety program; spill response coordination; employee training
Production Supervisors	Day-to-day compliance; spill prevention; waste segregation oversight; employee environmental briefings
All Employees	Follow procedures; report spills immediately; segregate waste correctly; participate in training

28.3 Air Emissions

CHOPTECH holds Virginia Air Permit No. VA-AIR-CHOP-001. All painting, coating, and blasting operations shall remain within permitted parameters — approved coatings, VOC limits, and work practice standards. Abrasive blasting shall use containment to prevent particulate emissions beyond the facility boundary.

28.4 Stormwater Management

CHOPTECH operates under a VPDES Multi-Sector General Permit. Key requirements:

- Stormwater Pollution Prevention Plan (SWPPP — CT-ENV-001) maintained current and implemented at all times.
- All outdoor chemical and material storage covered or contained to prevent stormwater contamination.
- Fueling operations conducted over containment or with absorbent mats — drip pans mandatory.
- Pier, drydock, and marine railway drains controlled during coating or blasting operations.
- Quarterly visual stormwater inspections — documented on CT-ENV-002.
- Annual SWPPP review and update within 30 days of any significant operational change.

28.5 Hazardous Waste Management

CHOPTECH operates as a Large Quantity Generator (LQG) under RCRA. All hazardous waste managed in compliance with 40 CFR Parts 260-270 and Virginia regulations.

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Waste Stream	Management Requirement
Spent Solvents / Paint Waste	Satellite accumulation (max 55 gal); transferred to 90-day storage weekly; licensed disposal quarterly
Abrasive Blast Media	TCLP-tested; if hazardous — containerized, labeled, manifested, licensed disposal
Used Oil	Segregated; closed labeled containers; recycled through licensed used oil recycler — never discharged
Batteries (Lead-Acid)	Upright in secondary containment; returned to supplier or licensed battery recycler
Fluorescent Lamps	Universal waste program; labeled storage; licensed recycler
Oily Rags / Bilge Water	Labeled containers; manifested disposal — never discharged to stormwater or sewer

28.6 Spill Prevention (SPCC)

CHOPTECH maintains a Spill Prevention, Control, and Countermeasure Plan (CT-ENV-003) per 40 CFR Part 112. Secondary containment at 110% of largest tank volume is required for all aboveground oil storage ≥ 55 gallons. All oil transfers shall be attended. Spill response materials pre-positioned at all oil storage and transfer areas.

28.7 Environmental Incident Reporting

- Employee immediately reports to supervisor and Environmental Coordinator.
- Environmental Coordinator evaluates reportability — quantity, substance, receiving medium.
- If reportable: National Response Center 1-800-424-8802 within required timeframe.
- Virginia DEQ Emergency Response 1-800-468-8892 for releases to state waters.
- USCG Sector Hampton Roads (VHF-FM Ch 16 or 757-668-5555) for releases to navigable waters.
- Document all notifications and response actions on CT-ENV-005.

Section 28 — Environmental Compliance Briefing Acknowledgment

_____	_____	_____
Employee Printed Name	**Employee Signature**	**Date**
_____	_____	_____
Supervisor Printed Name	**Supervisor Signature**	**Date**

SECTION 29

Safety Inspections & Audits

29.1 Purpose and Scope

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Proactive identification and correction of hazards before they cause injuries is a cornerstone of CHOPTECH's safety management system. This section establishes a structured, multi-level inspection and audit program that verifies compliance, identifies trends, and drives continuous improvement.

29.2 Inspection Schedule

Type	Who	Frequency	Scope	Documentation
Daily Walk-Through	Production supervisors	Every active shift	Housekeeping, PPE, equipment, permits	CT-INS-001 — retained 90 days
Weekly Formal Inspection	Safety Rep + Supervisor	Weekly	Each production area and active vessel	CT-INS-002 — retained 1 year
Monthly Comprehensive Audit	Safety Manager + Dept. Manager	Monthly	Full facility — all program sections	CT-INS-003 — retained 3 years
Quarterly Management Walk	General Manager + Safety Manager	Quarterly	Random production areas	CT-INS-004 — retained 3 years
Annual Program Audit	Safety Manager + external auditor	Annually	Full Safety Management System	CT-INS-005 — retained 5 years

29.3 Finding Classification and Response Times

Finding Class	Definition	Required Response
Critical — Imminent Danger	Immediate risk of death or serious injury	STOP WORK immediately; correct before resuming; Safety Manager notified within 1 hour
Serious	Likely to cause injury; regulatory violation	Corrected within 24 hours; interim controls implemented immediately
Moderate	Could contribute to incident; procedural gap	Corrected within 7 calendar days
Minor	Housekeeping or low-injury-potential issue	Corrected within 30 calendar days
Observation	Improvement opportunity — not a violation	No mandatory timeline; noted for consideration

29.4 Corrective Action Tracking

All findings shall be entered into the Corrective Action Tracking System (CT-II-005) within 24 hours. The Safety Manager reviews open items weekly and reports status to Operations Director monthly. Corrective actions are not closed until the Safety Manager physically verifies the correction in the field.

29.5 Employee Hazard Reporting

Every employee has the right and responsibility to report unsafe conditions without fear of retaliation. Hazard reports may be submitted verbally to any supervisor, in writing on CT-INS-006, anonymously via Safety Suggestion Boxes at main entrance and production breakroom, or by phone to the Safety Hotline: ext. 0-SAFE (0-7233). All reports receive a written

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response within 5 business days.

Section 29 — Weekly Inspection Sign-Off

_____	_____	_____
Inspector Printed Name	**Inspector Signature**	**Date**
_____	_____	_____
Area Supervisor Printed Name	**Supervisor Signature**	**Date**
_____	_____	_____
Safety Manager Review	**Safety Manager Signature**	**Date**

SECTION 30

Safety Program Administration & Continuous Improvement

30.1 Purpose

A safety program is a living system — it must be actively managed, regularly evaluated, and continuously improved to remain effective. This section establishes the administrative framework governing CHOPTECH's entire Safety Management System: document control, performance measurement, management review, and the safety culture strategy that ties every other section together.

30.2 Document Control

Element	Document	Owner	Frequency	Description
Master Document List	CT-ADM-001	Safety Manager	Quarterly	All controlled safety documents with current revision and review date
Section Reviews	Each CT-SMS -SEC##	Section owner + Safety Manager	Annually	Every section reviewed for accuracy and regulatory currency
Revision Triggers	N/A	Safety Manager	As needed	Regulatory change, incident, audit finding, new process or equipment
Record Retention	CT-ADM-003	Safety Manager / HR	Ongoing	Minimum 5 years for safety records; OSHA-specific requirements vary by standard

30.3 Safety Performance Metrics

30.3.1 Lagging Indicators

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Metric	Formula	Period	Target
TRIR	(Recordable cases x 200,000) / Hours worked	Monthly / Annual	< 2.0 industry; CHOPTECH target < 1.0
DART Rate	(DART cases x 200,000) / Hours worked	Monthly / Annual	CHOPTECH target < 0.75
LTIFR	(Lost time injuries x 1,000,000) / Hours worked	Monthly / Annual	CHOPTECH target < 0.5
Severity Rate	(Lost workdays x 200,000) / Hours worked	Annual	Tracks average severity of lost time injuries

30.3.2 Leading Indicators

Leading Indicator	Definition	Target
Near-Miss Reporting Rate	Near misses per 100 employees per month	Target: ≥ 3 — low rate signals underreporting
Inspection Completion Rate	% of scheduled inspections completed on time	Target: 100%
Corrective Action Closure Rate	% of findings closed by due date	Target: ≥ 95%
Training Compliance Rate	% of employees current on all required training	Target: 100%
PPE Compliance Rate	% in correct PPE during unannounced observations	Target: ≥ 98%
Stop Work Activations	Number of Stop Work interventions per month	Tracked — increasing trend = positive culture
Hazard Reports Submitted	Employee hazard reports per 100 employees per month	Target: ≥ 2

30.4 Management Review

CHOPTECH's General Manager and senior leadership shall conduct a formal Safety Management System Review quarterly, evaluating: performance against all indicators, open corrective actions, audit results, regulatory changes, resource adequacy, training program effectiveness, and safety culture assessment. Outcomes documented on CT-ADM-004 and communicated to all department heads within 5 business days.

30.5 Safety Objectives and Annual Authorization

CHOPTECH establishes annual SMART safety objectives and targets as part of the business planning process. Objectives are reviewed quarterly and updated annually. The General Manager authorizes the annual safety objectives below.

Annual Safety Objectives — Authorization

Safety Manager Printed Name	Safety Manager Signature	Date
_____	_____	_____

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_____	_____	_____
General Manager Printed Name	**General Manager Signature**	**Date**

30.6 Safety Culture

Regulations define the floor — not the ceiling — of safety performance. CHOPTECH's goal is a genuine safety culture in which every employee owns safety as a personal and professional value.

- **Leadership Visibility:** Senior leaders conduct regular walk-throughs, engage employees on safety, and model safe behavior.
- **Psychological Safety:** Every employee reports hazards, near misses, and concerns without fear of blame or retaliation.
- **Stop Work Authority:** Any employee stopping unsafe work is immediately supported and recognized.
- **Learning Orientation:** Incidents are treated as learning opportunities — root causes are fixed, not concealed.
- **Employee Engagement:** Employees actively participate in inspections, JHAs, toolbox talks, and safety committees.
- **Recognition:** Safe behaviors are recognized and celebrated — not just corrective actions for unsafe ones.

30.7 Program Approval

This Comprehensive Safety Program — Sections 11 through 30 — has been reviewed, approved, and adopted as the official Safety Management System of CHOPTECH Shipyard. This program supersedes all previous safety policies and procedures. It shall be reviewed in its entirety annually and updated as required by regulatory changes, incident findings, audit results, or operational changes.

CHOPTECH Comprehensive Safety Program — Executive Approval		
_____	_____	_____
Safety Manager Printed Name	**Safety Manager Signature**	**Date**
_____	_____	_____
Operations Director Printed Name	**Operations Director Signature**	**Date**
_____	_____	_____
General Manager Printed Name	**General Manager Signature**	**Date**

— END OF CHOPTECH COMPREHENSIVE SAFETY PROGRAM —

Sections 11 through 30 | Safety Management System | CHOPTECH Shipyard | April 2026

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SECTION 31

Emergency Contact Directory

31.1 Purpose and Instructions

This Emergency Contact Directory provides all personnel at CHOPTECH Shipyard with immediate access to critical emergency, regulatory, utility, and support contacts. This directory shall be posted at all of the following locations: Dock Office, Safety Shack, Control Room, Bridge, Main Entrance Bulletin Board, and each First Aid Station. All supervisors shall maintain a laminated copy in their work area at all times.

For all life-threatening emergencies — fire, medical, police, or hazmat — CALL 911 FIRST. All other contacts are secondary and shall be used to coordinate response, notifications, and follow-up.

IN CASE OF EMERGENCY — CALL 911

31.2 Immediate Emergency Services — Chesapeake

Agency / Service	Phone Number	Type / Notes
Chesapeake Fire / Police / EMS	911	PRIMARY EMERGENCY — Fire, medical, police, hazmat response
Chesapeake Non-Emergency Dispatch (Fire / Police shared)	757-382-6161	Non-emergency police, fire, or medical coordination
Chesapeake Fire Department (Admin / General Inquiries)	757-382-6297	Fire prevention, codes, station coordination
Chesapeake Police Department (Administrative)	757-382-6556	Police non-emergency and administrative inquiries

31.3 United States Coast Guard (USCG) — Maritime

The USCG is the primary federal authority for maritime emergencies, search and rescue, vessel incidents, and maritime law enforcement. CHOPTECH personnel shall be familiar with VHF Channel 16 procedures.

Agency / Channel	Contact	Type / Notes
USCG Sector Virginia (Hampton Roads) 24-Hour Command Center	877-722-5727	Emergency hotline — search & rescue, vessel incidents, maritime law enforcement
USCG VHF Distress & Calling	VHF Channel 16 (156.8 MHz)	Primary maritime distress frequency. Procedure: "MAYDAY, MAYDAY, MAYDAY — This is [Vessel Name]" (repeat 3x). State position, nature of emergency, number of persons. Switch to Channel 22A if directed.
USCG National Response Center (NRC)	800-424-8802	Oil/chemical spills, hazmat releases, maritime security incidents — federal coordination with EPA/USCG

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VHF MAYDAY PROTOCOL — CHANNEL 16

"MAYDAY, MAYDAY, MAYDAY — This is CHOPTECH [Vessel Name], CHOPTECH [Vessel Name], CHOPTECH [Vessel Name]." State: (1) Position / location (2) Nature of emergency (3) Number of persons aboard (4) Vessel description (5) Any other relevant information. Switch to Channel 22A after initial contact if directed by USCG.

31.4 Environmental & Spill Response

Agency	Phone Number	Type / Notes
National Response Center (NRC) Oil / Chemical Spills	800-424-8802	Mandatory federal reporting for any oil/chemical release to water, land, or air
Virginia DEQ — Pollution Response / Emergency Operations Center	804-750-8845	Significant pollution incidents (air, land, water) — coordinate with 911
Virginia DEQ — Tidewater Regional Office (General / Follow-Up)	757-518-2000	Non-emergency environmental permitting and coordination (Chesapeake region)

31.5 Medical & Poison Control

Facility / Service	Phone Number	Notes
Chesapeake Regional Medical Center Emergency Department (24/7)	757-312-6200	Nearest hospital ER. Call 911 for transport — do not self-transport serious injuries.
Virginia Poison Center (24/7)	800-222-1222 or 804-828-9123	Poison exposures, chemical ingestion, inhalation — free expert medical advice available immediately

31.6 State & Regional Support

Agency	Phone Number	Type / Notes
Virginia State Police Chesapeake Area 47 Office	757-424-6788	State law enforcement, traffic control, major incident support
Chesapeake Office of Emergency Management	757-382-6161	Non-emergency coordination, planning, large-scale incident support

31.7 Public Utilities & Infrastructure

Utility / Agency	Phone Number	Type / Notes
Chesapeake Public Utilities Water / Sewer Emergency (After Hours)	757-382-3550	Water main breaks, sewer backups, flooding emergencies
Chesapeake Public Utilities Main / Business Hours	757-382-6352	Non-emergency utility issues and general inquiries

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Dominion Virginia Power Power Outages / Downed Lines	866-366-4357	Electrical emergencies, outages, downed power lines — evacuate area first
Virginia Natural Gas Gas Leaks / Odors / Emergencies	877-572-3342	EVACUATE IMMEDIATELY if gas odor detected — then call from outside the area
Miss Utility (VA 811) Before Digging / Excavation	811 or 800-552-7001	Mark underground utilities before any digging or excavation — critical for shipyard groundwork

31.8 City & General Support Contacts

Agency / Service	Phone Number	Type / Notes
Chesapeake Customer Contact Center General City Services	757-382-2489	Non-emergency city inquiries and general service requests
Chesapeake Public Utilities Customer Service (Daytime)	757-382-6352	Daytime water and sewer billing or service questions

31.9 Posting & Distribution Requirements

- Laminate and post this directory at: Dock Office, Safety Shack, Control Room, Bridge, Main Entrance Bulletin Board, and all First Aid Stations.
- Include in all vessel and yard Emergency Action Plans.
- Add VHF MAYDAY protocol card adjacent to all VHF radios on site.
- For any spill reaching water — notify USCG/NRC (800-424-8802) and 911 simultaneously.
- Train all personnel on VHF MAYDAY procedure during annual Emergency Response training (Section 15).
- Review and update this directory annually — verify all numbers are current before January 1 each year.

SECTION 32

Property Access & Gate Control

32.1 Purpose and Scope

This section establishes procedures for accessing and exiting CHOPTECH Shipyard at 1324 McCloud Road, Chesapeake, VA 23320. It covers standard keypad operation, remote gate control, emergency manual override, KNOX BOX contents and access, and emergency contact information for property access issues. All employees, contractors, and visitors must follow these procedures at all times.

32.2 Gate System Overview

CHOPTECH's main entrance is secured by a motorized sliding gate. The gate is controlled by two fixed keypads and a handheld remote controller. In the event of a power failure or mechanical failure, a manual emergency override system is available at the gate.

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KEYPAD 1 — ENTRY	KEYPAD 2 — EXIT
Located OUTSIDE the property at the main entrance gate — on the LEFT side as you approach from McCloud Road.	Located INSIDE the property at the fire extinguisher station — RIGHT side when entering, LEFT side when facing the exit.
Used to ENTER the property.	**Used to EXIT the property.**

32.3 Standard Keypad Entry Procedure

32.3.1 Entering the Property (Keypad 1 — Outside)

STEP	ACTION
1	Approach the keypad located outside at the main entrance gate on the LEFT side as you enter the property.
2	Press the **"PIN"** button on the keypad.
3	Enter the **6-digit PIN number**. (PIN is distributed to authorized personnel only — do not share with unauthorized individuals.)
4	Press the **"ENTER"** button to confirm.
5	The motorized gate will begin sliding open. Wait for the gate to fully open before proceeding.
6	Drive or walk through the gate. Do not tailgate — each vehicle/person must authenticate individually.

32.3.2 Exiting the Property (Keypad 2 — Inside)

STEP	ACTION
1	Approach the keypad located INSIDE the property at the fire extinguisher station — on the RIGHT side when entering the property, on the LEFT side when facing the exit.
2	Press the **"PIN"** button on the keypad.
3	Enter the **6-digit PIN number**.
4	Press the **"ENTER"** button to confirm.
5	The motorized gate will slide open. Wait for the gate to fully open before proceeding.

32.4 Emergency Gate Override — Manual Operation

WARNING: The emergency override is for use ONLY when the motorized gate cannot be operated by keypad or remote due to power failure, mechanical failure, or emergency evacuation. Do not use the emergency key for routine access.

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In the event the gate cannot be operated electronically, a manual override system is available using the emergency key stored at the fire extinguisher station:

STEP	EMERGENCY OVERRIDE PROCEDURE
1	Locate the fire extinguisher station inside the property — on the RIGHT side when entering, on the LEFT side when facing the exit.
2	Retrieve the **Emergency Key** stored inside the fire extinguisher box, located UNDER the fire extinguisher.
3	Use the emergency key to unlock the **emergency release mechanism** on the gate opener.
4	Once the release is unlocked, the gate can be **manually slid open or closed** by hand.
5	After emergency use, notify the Property Access Emergency Contact immediately: **Bruce Shunkwiler — 757-560-9346**.
6	Return the emergency key to the fire extinguisher box and re-secure the box.

32.5 KNOX BOX — Emergency Services Access

CHOPTECH maintains a KNOX BOX at the entrance of the property near the mailbox at 1324 McCloud Road, Chesapeake, VA 23320. The KNOX BOX provides the Chesapeake Fire Department with 24/7 secured access to critical facility information and gate access in the event of an emergency when CHOPTECH personnel are not present.

> *NOTE: The Chesapeake Fire Department has met with CHOPTECH on-site and is familiar with the property layout, KNOX BOX location, and its contents. This coordination is part of CHOPTECH's pre-incident planning with local emergency services.*

32.5.1 KNOX BOX Contents

Item	Description
Site Evacuation Plan	Complete CHOPTECH facility evacuation plan showing all exit routes, muster stations, and emergency assembly areas.
Property Layout Map	Detailed site map showing all buildings, vessels, work areas, waterfront access points, and emergency equipment locations.
Hazardous Materials Locations	Map and inventory identifying all hazardous material storage locations and fuel storage areas on the property.
Fuel Storage Locations	Specific identification of all fuel tanks, fuel types, quantities, and containment systems on the property.
Gate Remote Controller	Handheld remote controller for the motorized entrance gate, allowing emergency services immediate access to the property.
Keypad Instructions	Printed instructions for operating the stationary entrance keypad, including PIN access procedure for emergency responders.

32.5.2 KNOX BOX Maintenance

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- KNOX BOX contents shall be reviewed and updated whenever site layout, hazmat storage locations, evacuation plans, or gate access procedures change.
- Annual review of all KNOX BOX contents shall be conducted by the Safety Manager each January.
- Any update to the remote controller or PIN shall be reflected in the KNOX BOX immediately.
- Coordinate with Chesapeake Fire Department (757-382-6297) whenever significant changes are made to KNOX BOX contents or facility layout.

32.6 Property Access Emergency Contact

PROPERTY ACCESS EMERGENCY CONTACT

Bruce Shunkwiler

757-560-9346

Contact for: Gate malfunctions | Lost or compromised PIN | Emergency key use | After-hours property access issues

32.7 Access Control Policy

- The CHOPTECH gate PIN shall be provided only to authorized employees, contractors, and approved personnel. PINs shall not be shared with unauthorized individuals.
- If a PIN is believed to be compromised, notify Bruce Shunkwiler (757-560-9346) immediately for PIN reset.
- Visitors and non-badged personnel must be escorted through the gate by an authorized CHOPTECH employee.
- Never allow tailgating — each vehicle or person must authenticate individually using the keypad or remote.
- The emergency key located at the fire extinguisher station is for emergency use only. Its use must be reported to the Property Access Emergency Contact immediately.
- Gate malfunctions shall be reported to Bruce Shunkwiler (757-560-9346) and the Safety Department (ext. 0-SAFE) immediately.
- Do not attempt to force or bypass the gate — contact the emergency contact for assistance.

— END OF SECTIONS 31–32 —

CHOPTECH Comprehensive Safety Program | 1324 McCloud Road, Chesapeake, VA 23320 | January 2026

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SECTION 33

Respiratory Protection Program

33.1 Purpose and Regulatory Basis

This Written Respiratory Protection Program is established in compliance with OSHA 29 CFR 1910.134, which requires employers to establish and implement procedures for the proper selection, use, maintenance, and care of respirators when engineering and administrative controls are not feasible or do not provide sufficient protection. This program applies to all CHOPTECH employees required to wear respirators as part of their job duties. The Safety Manager is the designated Respiratory Protection Program Administrator.

33.2 Applicability — Who Is Covered

This program covers all employees whose job tasks expose them to airborne contaminants at or above OSHA action levels or PELs, including:

- Abrasive blasters — silica, lead, and heavy metal dust exposures
- Painters and coating applicators — organic vapor and isocyanate exposures
- Welders — welding fume, metal oxides, ozone, and nitrogen oxide exposures
- Confined space entrants — oxygen deficiency and toxic gas exposures
- Employees working with hazardous chemicals — per SDS Section 8 requirements
- Emergency response team members — IDLH atmosphere response

> *NOTE: Employees who voluntarily choose to wear respirators when not required by OSHA or CHOPTECH must also comply with Appendix D of 29 CFR 1910.134, which requires that CHOPTECH ensure voluntary use does not create a hazard.*

33.3 Medical Evaluation — Required Before Fit Test or Use

No employee may be fit-tested or required to use a tight-fitting respirator until they have received a medical evaluation from a Physician or Other Licensed Health Care Professional (PLHCP) and been determined medically able to wear a respirator. Medical evaluations are provided at no cost to employees.

- Employee completes OSHA Respirator Medical Evaluation Questionnaire (Appendix C to 1910.134) — Form CT-RPP-MED-001.
- Questionnaire is submitted confidentially to the CHOPTECH-designated PLHCP.
- PLHCP provides written medical opinion — cleared, cleared with restrictions, or not cleared.
- Employees with conditions including COPD, severe asthma, cardiovascular disease, or claustrophobia may require additional evaluation.
- Medical re-evaluation is required when: employee reports signs or symptoms, PLHCP or supervisor recommends re-evaluation, program changes increase physiological burden, or information from inspection/accident program indicates need.
- Medical records are confidential — the Safety Department receives only the clearance determination, not the underlying medical information.

33.4 Respirator Selection

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Respirator selection shall be based on the hazards present, the concentration of the contaminant, the Assigned Protection Factor (APF) required, and the work requirements. The Safety Manager selects respirators using the following criteria:

Hazard Scenario	Respirator Type (APF)	Key Requirements
Nuisance dust — below OSHA PEL	Disposable N95 (APF 10)	NIOSH-approved; change when breathing resistance increases or soiled
Organic vapors below IDLH	Half-face APR with OV cartridges (APF 10)	Air-purifying; cartridge change schedule required — see 33.6
OV + particulates below IDLH	Half-face APR with OV/P100 combination (APF 10)	Painting, grinding with chemical exposure; most common shipyard use
High-concentration OV or eye irritants	Full-face APR with OV/P100 (APF 50)	Required for spray painting in enclosed spaces
Abrasive blasting — silica/lead/heavy metals	Supplied-Air Respirator — Type CE abrasive blasting hood (APF 1000)	Grade D breathing air required; NIOSH-approved for blasting
Confined space — oxygen deficiency or IDLH	SCBA or Supplied-Air with escape SCBA (APF 10,000)	Air-purifying respirators PROHIBITED in IDLH or O2-deficient atmospheres
Emergency rescue — IDLH	SCBA — pressure-demand, NIOSH-approved (APF 10,000)	Rescue team members only; annual operational check required

33.5 Fit Testing

All employees required to wear tight-fitting respirators (any respirator with a facepiece that forms a seal with the face) shall be fit-tested before initial use, whenever a different respirator facepiece is used, and annually thereafter.

- Qualitative fit testing (QLFT) using saccharin or Bitrex solution is acceptable for half-face APRs used in atmospheres not immediately dangerous to life or health (IDLH).
- Quantitative fit testing (QNFT) is required for full-face APRs and all SCBA.
- Fit testing shall be conducted using the same make, model, style, and size of respirator the employee will use.
- Employees who have had significant changes in facial features (weight gain/loss, facial scarring, dental changes) shall be re-tested.
- Fit test records (Form CT-RPP-FIT-001) shall be retained for the duration of employment plus 1 year.
- Employees with beards or facial hair that prevents a proper seal shall not be assigned tight-fitting respirators — supplied-air hoods are an alternative.

33.6 Cartridge Change Schedule

Air-purifying respirator cartridges shall be changed on a schedule determined by the Safety Manager using OSHA's End-of-Service-Life Indicator (ESLI) requirements or a documented cartridge change schedule based on:

- Manufacturer's recommendations for the specific cartridge and contaminant
- Concentration of the contaminant and expected exposure duration
- Work rate (light, moderate, heavy) which affects breathing volume
- Temperature and humidity which affect cartridge saturation rates
- CHOPTECH default schedule: OV cartridges changed at end of each shift when used for painting or chemical work — never reused after 8 hours of use or if odor is detected inside the facepiece

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WARNING: Never rely on odor detection alone to determine cartridge end-of-service-life. Many hazardous substances cannot be detected by smell at dangerous concentrations. Follow the established change schedule without exception.

33.7 Respirator Use Procedures

- Inspect the respirator before each use — check facepiece, valves, headbands, cartridges, and connections for damage.
- Perform a user seal check (positive or negative pressure check) each time the respirator is donned.
- Leave the respirator-required area immediately if: breathing becomes difficult, dizziness or nausea occurs, the respirator is damaged, or contaminant odor/taste is detected.
- Respirators shall not be removed in contaminated atmospheres for any reason.
- Do not share respirators between employees.
- Disposable respirators (N95s) shall be discarded after each shift or when damaged, soiled, or breathing resistance increases significantly.

33.8 Cleaning, Maintenance, and Storage

- Reusable respirators shall be cleaned and disinfected after each use using CHOPTECH-approved cleaning procedures (Form CT-RPP-CLEAN-001).
- Respirators shall be stored in a clean, sealed bag or container away from contaminated areas, extreme temperatures, and direct sunlight.
- Damaged respirators shall be removed from service immediately and tagged 'OUT OF SERVICE' until repaired or replaced.
- Only NIOSH-approved replacement parts from the original manufacturer shall be used for repairs.
- SCBAs shall be inspected monthly and after each use — documented on CT-RPP-SCBA-001.

33.9 Training Requirements

All respirator users shall receive training before initial use and annually thereafter. Training shall be documented on Form CT-RPP-TRAIN-001 and cover:

- Why the respirator is necessary and how improper fit, use, or maintenance can compromise protection
- Limitations and capabilities of the respirator
- Effective use in emergency situations, including leaving the respirator area
- How to inspect, put on, remove, and check the seal
- Procedures for maintenance and storage
- Medical signs and symptoms that may limit or prevent effective use
- General requirements of 29 CFR 1910.134

33.10 Program Evaluation

The Safety Manager shall conduct an annual evaluation of the Respiratory Protection Program to ensure it remains effective. This evaluation shall include consultation with employees who use respirators, review of injury and illness records, review of air monitoring data, and assessment of whether engineering controls can reduce or eliminate the need for respiratory protection. Findings documented on CT-RPP-EVAL-001.

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Section 33 — Respiratory Protection Program — Annual Review Authorization

_____	_____	_____
Safety Manager Printed Name	**Safety Manager Signature**	**Date**
_____	_____	_____
General Manager Printed Name	**General Manager Signature**	**Date**

SECTION 34

Hearing Conservation Program

34.1 Purpose and Regulatory Basis

This Written Hearing Conservation Program is established in compliance with OSHA 29 CFR 1910.95 (Occupational Noise Exposure). Noise-induced hearing loss is permanent and irreversible — there is no medical treatment that can restore hearing once it has been damaged by occupational noise exposure. This program applies to all CHOPTECH employees whose noise exposure equals or exceeds 85 dBA as an 8-hour time-weighted average (TWA).

34.2 Noise Monitoring

CHOPTECH shall conduct noise exposure monitoring to identify employees whose exposure equals or exceeds the 85 dBA action level. Monitoring shall be conducted:

- At initial program implementation and whenever a change in production process, equipment, or controls may result in increased noise exposure.
- Using NIOSH-approved sound level meters and noise dosimeters calibrated before and after each use.
- With results documented on Form CT-HCP-MON-001 and retained for 2 years.
- Affected employees shall be notified of monitoring results within 5 business days of completion.

Exposure Level	Classification	Required Action
< 85 dBA (TWA)	Below Action Level	No program requirements; voluntary hearing protection available
85 – 90 dBA (TWA)	Action Level — HCP Enrollment Required	Enroll in HCP; baseline audiogram; annual audiogram; hearing protection available; annual training
90 – 100 dBA (TWA)	Permissible Exposure Limit — Controls Required	Engineering/administrative controls required; hearing protection mandatory; all HCP requirements
> 100 dBA (TWA)	Serious Hazard	Engineering controls priority; double protection (plug + muff) mandatory; exposure duration limits; Safety Manager review
> 115 dBA (any duration)	Maximum Limit — No Exposure Without Controls	Immediate engineering controls; work may not continue without controls in place

34.3 Audiometric Testing

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CHOPTECH shall provide audiometric testing at no cost to all employees enrolled in the Hearing Conservation Program. Testing shall be conducted by or under the supervision of a licensed audiologist, otolaryngologist, or physician.

- Baseline audiogram: conducted within 6 months of first enrollment in the HCP. Employee shall not be exposed to occupational noise for 14 hours prior to the baseline test.
- Annual audiogram: conducted within 1 year of the baseline and annually thereafter.
- Comparison audiogram: each annual audiogram is compared to the baseline to detect Standard Threshold Shifts (STS).
- Standard Threshold Shift (STS): an average shift of 10 dB or more at 2,000, 3,000, and 4,000 Hz in either ear.
- When an STS is identified: retest within 30 days; if confirmed, refitting of hearing protection required; referral for medical evaluation if STS is accompanied by symptoms; OSHA 300 log entry if STS is work-related and meets recording criteria.
- Audiometric test records shall be retained for the duration of employment.

34.4 Hearing Protection Devices

CHOPTECH shall make hearing protection devices (HPDs) available at no cost to all employees exposed at or above the 85 dBA action level. Employees shall be provided a variety of suitable HPDs and allowed to select their preferred type.

HPD Type	Noise Reduction Rating	When Required	Key Requirement
Foam Earplugs (disposable)	NRR 29–33 dB	85–99 dBA TWA	Single use only — discard after each shift
Formable Earplugs (reusable)	NRR 25–29 dB	85–99 dBA TWA	Clean after each use; replace when deteriorated
Earmuffs	NRR 25–30 dB	85–99 dBA TWA	Inspect before each use; replace cushions when worn
Double Protection (plug + muff)	Effective NRR 36+ dB	100 dBA TWA and above	Required for all exposures above 100 dBA TWA
Custom-Molded Earplugs	NRR per manufacturer	As indicated	Individually fitted; retest after significant weight change

34.5 Training Requirements

All employees enrolled in the Hearing Conservation Program shall receive training at the time of initial enrollment and annually thereafter. Training is documented on Form CT-HCP-TRAIN-001 and covers:

- Effects of noise on hearing — how noise causes permanent hearing loss
- Purpose of audiometric testing and an explanation of test procedures
- Purpose of hearing protectors and the advantages, disadvantages, and attenuation of various types
- Instructions on selection, fitting, use, and care of hearing protectors
- Employee rights to access noise exposure monitoring results and audiometric test records

34.6 Recordkeeping

- Noise exposure measurement records: retained 2 years.
- Audiometric test records: retained for duration of affected employee's employment.
- Hearing Conservation Program training records: retained 3 years.
- All records available to employees, former employees, and their representatives on request.

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Section 34 — Hearing Conservation Program — Annual Review

_____	_____	_____
Safety Manager Printed Name	**Safety Manager Signature**	**Date**
_____	_____	_____
Program Administrator	**Signature**	**Date**

SECTION 35

Medical Surveillance Program

35.1 Purpose and Regulatory Basis

Medical surveillance is a systematic, ongoing collection, analysis, and interpretation of health data on groups of workers with potential exposure to occupational hazards. CHOPTECH's Medical Surveillance Program provides early detection of occupational disease, protects workers from further harm, and fulfills mandatory regulatory requirements under multiple OSHA standards applicable to shipyard operations. All medical surveillance is provided at no cost to employees and is conducted during working hours or at a reasonable time and place.

35.2 Regulatory Requirements Triggering Medical Surveillance

Hazard	Regulation	Medical Surveillance Requirement
Noise Exposure ≥ 85 dBA TWA	29 CFR 1910.95	Audiometric testing — baseline, annual, and follow-up. See Section 34.
Respiratory Hazards requiring respirator use	29 CFR 1910.134	Medical evaluation questionnaire before fit test; PLHCP determination of fitness to wear respirator. See Section 33.
Lead Exposure ≥ Action Level (30 µg/m³)	29 CFR 1910.1025	Blood lead monitoring; biological monitoring; medical removal protection if BLL ≥ 50 µg/dL
Asbestos Exposure ≥ Action Level	29 CFR 1910.1001	Medical exams: chest X-ray, pulmonary function test, medical history — at initial assignment and periodically
Hexavalent Chromium ≥ Action Level	29 CFR 1910.1026	Medical surveillance when exposed at or above action level for 30+ days/year; skin and respiratory evaluation
Welding Fumes — Manganese	NIOSH/ACGIH TLV	Neurological evaluation when exposure exceeds TLV; medical monitoring annually for high-exposure welders
Isocyanates (painting)	OSHA/NIOSH guidance	Baseline pulmonary function; annual monitoring; immediate evaluation if sensitization symptoms develop
Bloodborne Pathogens	29 CFR 1910.1030	Post-exposure evaluation and follow-up. See Section 36.
Hazardous Waste Operations	29 CFR 1910.120	Medical exam before assignment; annual exam; exit exam; exam after emergency incident

35.3 Medical Surveillance Administration

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35.3.1 Designated Medical Provider

CHOPTECH designates a licensed occupational medicine physician or clinic as the primary medical surveillance provider. The Safety Manager maintains the current provider agreement and ensures the provider has access to relevant industrial hygiene data, job descriptions, and exposure information necessary to conduct meaningful medical surveillance.

35.3.2 Employee Notification and Scheduling

- The Safety Manager maintains a medical surveillance calendar tracking each enrolled employee's examination schedule.
- Employees are notified at least 30 days in advance of scheduled examinations.
- Examinations are conducted during normal working hours whenever possible; employees are compensated for time spent in required medical examinations.
- Transportation to and from the medical provider is arranged by CHOPTECH when the provider is not on-site.
- Employees who refuse required medical surveillance shall be notified in writing that their refusal may affect their eligibility to work in positions with the relevant exposure.

35.3.3 Medical Records and Confidentiality

- All medical records are maintained in strict confidence per OSHA 29 CFR 1910.1020 (Access to Employee Exposure and Medical Records).
- Medical records are retained for the duration of employment plus 30 years.
- Employees have the right to access their own medical records upon written request — provided within 15 working days.
- CHOPTECH receives only the PLHCP's written opinion regarding fitness for duty and any recommended restrictions — not the underlying medical information.
- Medical records shall not be disclosed to supervisors, coworkers, or other parties without the employee's written consent, except as required by law.

35.4 Medical Removal Protection

For certain OSHA standards (notably lead — 29 CFR 1910.1025), medical removal protection (MRP) is required when an employee's biological monitoring results exceed specified levels. When MRP is triggered:

- The employee is removed from the exposure and placed in a position with lower or no exposure.
- The employee retains their earnings, seniority, and other employment rights for the duration of medical removal.
- The employee is returned to their former position when monitoring indicates their exposure-related health indicators have returned to acceptable levels.
- MRP provisions and return-to-work criteria are standard-specific — consult the Safety Manager for the applicable standard.

Section 35 — Medical Surveillance Program — Annual Review		
_____	_____	_____
Safety Manager Printed Name	**Safety Manager Signature**	**Date**
_____	_____	_____
Medical Provider (PLHCP)	**Signature**	**Date**

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SECTION 36

Written Exposure Control Plan — Bloodborne Pathogens

36.1 Purpose and Regulatory Basis

This Written Exposure Control Plan (ECP) is required by OSHA 29 CFR 1910.1030 (Bloodborne Pathogens Standard) and constitutes CHOPTECH's formal commitment to eliminate or minimize employee exposure to bloodborne pathogens (BBP) and other potentially infectious materials (OPIM). This ECP is reviewed and updated annually and whenever new or modified tasks or procedures affect occupational exposure. This document is available to all employees at the Safety Department and on the CHOPTECH Safety SharePoint.

Bloodborne pathogens are microorganisms present in human blood that can cause disease. The pathogens of primary concern in the workplace are Human Immunodeficiency Virus (HIV), Hepatitis B Virus (HBV), and Hepatitis C Virus (HCV).

36.2 Exposure Determination

CHOPTECH has determined that the following job classifications involve occupational exposure to blood or OPIM:

Job Classification	Exposure Determination
First Aid Responders / Safety Personnel	Direct — all tasks in this role involve potential exposure to blood and OPIM
Supervisors and Foremen	Potential — may be required to render emergency first aid prior to arrival of trained responders
Security Personnel	Potential — may respond to injury scenes before first aid responders arrive
All Other Employees	Incidental — not normally exposed; trained in Universal Precautions

NOTE: This exposure determination was made without regard to the use of personal protective equipment, as required by 29 CFR 1910.1030(c)(2)(i).

36.3 Methods of Implementation and Control

36.3.1 Universal Precautions

CHOPTECH requires all employees to observe Universal Precautions at all times. All blood and OPIM shall be treated as if infectious regardless of the perceived health status of the source individual. Universal Precautions include:

- Wearing appropriate PPE (nitrile gloves, face shield, mask) whenever contact with blood or OPIM is anticipated.
- Washing hands and other skin immediately after contact with blood or OPIM and after removing gloves.
- Never recapping needles by hand — use a one-handed scoop technique or mechanical device.
- Never bending, breaking, or removing contaminated needles from disposable syringes by hand.
- Placing all sharps in puncture-resistant, labeled, leak-proof sharps containers.
- Placing all waste contaminated with blood or OPIM in labeled biohazard bags for regulated waste disposal.

36.3.2 Engineering and Work Practice Controls

- Sharps containers: puncture-resistant, leak-proof, labeled with the biohazard symbol, and located at the point of use.

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- Handwashing facilities: accessible to all employees at worksite. When handwashing facilities are not immediately available, antiseptic hand cleanser and clean cloth/paper towels shall be provided.
- All procedures involving blood or OPIM shall be performed in a manner that minimizes splashing, spraying, spattering, and generation of droplets.
- Contaminated surfaces shall be decontaminated with an appropriate disinfectant (10% bleach solution or EPA-registered hospital disinfectant) immediately or as soon as feasible after contact with blood or OPIM.
- Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses is prohibited in work areas where exposure to bloodborne pathogens is reasonably likely.

36.3.3 Personal Protective Equipment

CHOPTECH provides appropriate PPE at no cost to employees with occupational exposure. PPE shall be used when occupational exposure remains after implementation of engineering and work practice controls.

PPE Item	When Required
Nitrile Exam Gloves	Any contact with blood, OPIM, mucous membranes, or non-intact skin; handling contaminated items
Face Shield + Mask	Procedures with risk of splash or spray to face (eyes, nose, mouth)
Protective Eyewear	When face shield is not worn and splash risk exists
Fluid-Resistant Gown / Apron	Procedures with risk of soiling clothing with blood or OPIM
Resuscitation Devices	CPR — pocket mask or bag-valve mask; never perform mouth-to-mouth without barrier

36.4 Hepatitis B Vaccination

CHOPTECH shall make Hepatitis B vaccination available to all employees with occupational exposure at no cost, after training, and within 10 working days of initial assignment. The vaccination is offered after the employee has received required BBP training. Vaccination is voluntary — employees may decline by signing the OSHA-required declination statement (CT-BBP-DEC-001).

- Employees who initially decline the vaccine may receive it at a later date if they remain in occupationally exposed positions.
- If a routine booster is recommended by the USPH Service, it shall be provided at no cost.
- Employees who have previously received the HBV vaccine series shall provide written documentation — vaccination is not repeated.
- Post-vaccination antibody testing is offered to all employees who receive the vaccine.

36.5 Post-Exposure Evaluation and Follow-Up

Following a report of an exposure incident (needlestick, cut, splash to mucous membranes, or contact with broken skin), CHOPTECH shall immediately make available a confidential medical evaluation and follow-up including:

- Documentation of the route of exposure and the circumstances under which the exposure occurred.
- Identification and documentation of the source individual, if possible, and if consent is obtained, testing of the source for HIV, HCV, and HBV.
- Collection and testing of the exposed employee's blood for HIV/HCV/HBV status (with consent).

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- Post-exposure prophylaxis (PEP), when medically indicated, following current US Public Health Service recommendations.
- Counseling and evaluation of reported illnesses.
- PLHCP's written opinion provided to CHOPTECH within 15 days of completion of evaluation, stating whether the employee has been informed of the results and any medical conditions resulting from exposure that require further evaluation or treatment.

36.6 Hazard Communication — Labels and Signs

- Biohazard labels (orange or orange-red with the biohazard symbol) shall be affixed to all containers of regulated waste, refrigerators/freezers containing blood or OPIM, and other containers used to store or transport blood or OPIM.
- Red bags or red containers may be substituted for biohazard labels on waste containers.
- Biohazard labels shall be fluorescent orange or orange-red, with the biohazard symbol and the word BIOHAZARD in a contrasting color.
- Labels shall be affixed as close as feasible to the container and in a manner that prevents loss or unintentional removal.

36.7 Training

All employees with occupational exposure shall receive BBP training at the time of initial assignment to tasks where occupational exposure may occur, and annually thereafter. Training shall be provided during working hours at no cost. Training records (Form CT-BBP-TRAIN-001) shall include date, content summary, trainer name, and employee signatures. Retained for 3 years.

36.8 Recordkeeping

- Medical records: maintained confidentially for each employee with occupational exposure for the duration of employment plus 30 years (29 CFR 1910.1020).
- Training records: date, content or summary of training session, names and qualifications of persons conducting the training, names and job titles of all persons attending — retained 3 years.
- Sharps injury log: maintained as required for recording percutaneous injuries from contaminated sharps — retained 5 years.
- All records provided to employees, former employees, and their representatives on request within 15 working days.

36.9 Annual Review and Update

This Exposure Control Plan shall be reviewed and updated at least annually and whenever new or modified tasks or procedures affect occupational exposure, and to reflect new or revised employee positions with occupational exposure. The annual review shall solicit input from non-managerial employees who are responsible for direct patient care or exposure-related tasks.

Section 36 — Exposure Control Plan — Annual Review Authorization

_____	_____	_____
Safety Manager Printed Name	**Safety Manager Signature**	**Date**
_____	_____	_____
General Manager Printed Name	**General Manager Signature**	**Date**

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— END OF CHOPTECH COMPREHENSIVE SAFETY PROGRAM — SECTIONS 1 THROUGH 36 —

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SECTION 37

Safety Data Sheets (SDS) Program

37.1 Purpose and Regulatory Basis

Safety Data Sheets (SDS) are the primary source of detailed hazard and safety information for every hazardous chemical used at CHOPTECH Shipyard. This section establishes CHOPTECH's SDS Program in compliance with OSHA 29 CFR 1910.1200 (Hazard Communication Standard — HazCom / GHS), which mandates that employers maintain and provide employee access to SDS for all hazardous chemicals present in the workplace. The SDS Program is a critical component of CHOPTECH's overall Hazard Communication Program (Section 16) and employee right-to-know obligations.

37.2 What Is a Safety Data Sheet?

A Safety Data Sheet is a standardized document, formatted in accordance with the Globally Harmonized System (GHS) of Classification and Labelling of Chemicals, that provides comprehensive information about a hazardous chemical. Every SDS contains 16 standardized sections covering the chemical's identity, hazards, composition, safe handling, emergency response, physical and chemical properties, toxicology, regulatory status, and disposal requirements.

SDS documents are the first resource employees should consult when working with a chemical they are unfamiliar with, when a spill or exposure occurs, when selecting appropriate PPE, or when determining safe storage and disposal requirements. Reading and understanding SDS information is a condition of employment for all CHOPTECH personnel who work with or near hazardous chemicals.

37.3 CHOPTECH SDS Binder Location

SDS BINDER LOCATION

The CHOPTECH Master SDS Binder is mounted on the wall to the LEFT of the front door of the CHOPTECH Office at 1324 McCloud Road, Chesapeake, VA 23320.

This binder is accessible to ALL employees and contractors at ALL times during working hours without requesting permission from a supervisor.

In addition to the physical binder, SDS documents are also accessible digitally through the CHOPTECH Safety SharePoint on any networked workstation or device. For 24-hour emergency chemical information, CHEMTREC is available at 1-800-424-9300 at no cost.

37.4 SDS Binder Organization and Maintenance

- The Master SDS Binder is organized alphabetically by chemical product name and indexed for rapid retrieval.
- A printed chemical index is maintained at the front of the binder listing all chemicals and their page location.
- The Safety Manager is responsible for maintaining the SDS binder — adding new SDS documents within 24 hours of a new chemical being introduced to the workplace.
- SDS documents shall be the most current version available from the manufacturer — checked annually and whenever the manufacturer issues a revision.

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- Outdated SDS documents shall be archived (not discarded) and the current version filed in the active binder.
- Area supervisors shall notify the Safety Manager immediately when a new chemical product is brought onto CHOPTECH property by any employee, contractor, or vendor.

37.5 How to Read and Use an SDS

SDS Section	What to Look For and Why It Matters
Section 1 — Identification	Product name, manufacturer, emergency phone, intended use. Verify you have the right product.
Section 2 — Hazard Identification	GHS classification, signal word (DANGER/WARNING), hazard statements, pictograms. Read this first.
Section 4 — First Aid Measures	What to do if swallowed, inhaled, or skin/eye contact occurs. Post near work area for emergency reference.
Section 5 — Fire Fighting	Suitable extinguishing agents and special fire hazards. Know this before working with flammable chemicals.
Section 6 — Accidental Release	Spill containment, PPE for cleanup, disposal. Follow exactly in the event of a release.
Section 7 — Handling & Storage	Safe handling practices and storage requirements including temperature, segregation, and incompatibles.
Section 8 — Exposure Controls / PPE	OSHA PELs, ACGIH TLVs, and required PPE. This tells you exactly what protective equipment to wear.
Section 14 — Transport	DOT hazard class, UN number, and shipping requirements. Required for any off-site transport.

37.6 Employee Rights Regarding SDS Access

Under OSHA 29 CFR 1910.1200, every CHOPTECH employee has the following rights regarding SDS access — and CHOPTECH is legally required to honor them:

- The right to access SDS for any chemical in the workplace during their work shift — without having to ask permission and without delay.
- The right to receive information about the hazards of chemicals they work with or near.
- The right to receive training on how to read and use SDS information.
- The right to request a copy of any SDS — provided within a reasonable time.
- The right to contact OSHA if SDS access is denied or restricted.

WARNING: No supervisor or manager may restrict, delay, or deny an employee's access to an SDS for any reason. Doing so is a violation of OSHA 29 CFR 1910.1200 and CHOPTECH policy, and is subject to immediate disciplinary action.

37.7 Training Requirements

All employees who may be exposed to hazardous chemicals shall receive SDS training as part of initial HazCom orientation (Section 16) and annually thereafter. Training shall cover: the purpose and structure of SDS documents, how to locate the SDS binder, how to find a specific chemical's SDS, how to interpret key sections (especially Sections 2, 4, 6, 7, 8), and how

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to use SDS information to select appropriate PPE and respond to exposures or spills. Training documented on Form CT-SDS-TRAIN-001.

Section 37 — SDS Program Acknowledgment

_____	_____	_____
Employee Printed Name	**Employee Signature**	**Date**
_____	_____	_____
Supervisor Printed Name	**Supervisor Signature**	**Date**

SECTION 38

Fuel Storage, Waste Oil, Propane & Yard Housekeeping

38.1 Purpose and Regulatory Basis

The storage and handling of flammable and combustible liquids, compressed gases, and waste materials at CHOPTECH Shipyard presents significant fire, explosion, environmental, and safety hazards. This section establishes CHOPTECH's requirements for the safe storage, handling, labeling, and management of fuel, waste oil, and propane, and defines the yard housekeeping standards required to maintain a safe, professional, and compliant facility. This section is maintained in compliance with OSHA 29 CFR 1910.106 (Flammable Liquids), OSHA 29 CFR 1910.110 (Storage and Handling of Liquefied Petroleum Gases), NFPA 30 (Flammable and Combustible Liquids Code), NFPA 58 (LP-Gas Code), EPA 40 CFR Part 112 (SPCC), and Virginia DEQ regulations.

38.2 Fuel Storage

38.2.1 Diesel Fuel — 500-Gallon Aboveground Storage Tank

- CHOPTECH maintains one (1) 500-gallon aboveground diesel fuel storage tank on the property.
- The tank is a listed and labeled aboveground storage tank (AST) compliant with applicable UL or equivalent standards.
- The tank is equipped with: overfill protection, a liquid-level gauge, a spill containment basin capable of holding 110% of tank capacity (per SPCC requirements), and a lockable fill cap.
- Monthly visual inspection of the tank, fittings, hoses, and secondary containment shall be conducted by the Environmental Coordinator and documented on CT-ENV-004.
- Diesel fuel transfers shall be attended at all times — the fueling point shall never be left unattended during a fuel transfer operation.
- A spill kit (absorbent pads, boom, and an empty drum) shall be staged within 25 feet of the diesel tank at all times.
- The tank area shall be clearly marked with: DIESEL FUEL — FLAMMABLE — NO SMOKING — NO OPEN FLAMES signage visible from all approach directions.

38.2.2 Gasoline — 50-Gallon Storage

WARNING: Gasoline is a Class IB flammable liquid with an extremely low flash point. It is significantly more hazardous than diesel. Gasoline vapors are invisible, heavier than air, and can travel long distances to an ignition source.

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- Gasoline shall be stored in a UL-listed, red-colored safety storage container or tank specifically designed and rated for gasoline storage.
- Gasoline storage containers shall be kept closed and sealed when not in active use.
- Gasoline shall be stored in a designated, ventilated area away from ignition sources, heat sources, and incompatible materials.
- Gasoline shall not be used as a cleaning solvent, degreaser, or for any purpose other than its intended use as motor fuel.
- No more than 50 gallons of gasoline may be stored outside an approved flammable storage building or cabinet.
- Bonding and grounding procedures shall be followed during transfer from bulk containers to prevent static ignition.
- The gasoline storage area shall be posted with NO SMOKING — NO OPEN FLAMES — FLAMMABLE LIQUID signage.

38.3 Waste Oil Storage — 200-Gallon

- CHOPTECH maintains a designated waste oil storage area with a capacity of up to 200 gallons.
- Waste oil shall be stored in clearly labeled, closed, leak-proof containers marked: WASTE OIL — DO NOT MIX WITH OTHER MATERIALS.
- Waste oil shall never be mixed with solvents, halogenated compounds, gasoline, or other hazardous waste — mixing can render the waste non-recyclable and subject to hazardous waste disposal requirements.
- The waste oil storage area shall have secondary containment capable of holding 110% of the largest container volume.
- Waste oil shall be collected and recycled or disposed of by a licensed waste oil recycler — never discharged to drains, ground, or waterways.
- Waste oil accumulation records shall be maintained by the Environmental Coordinator (CT-ENV-WO-001).
- The waste oil storage area shall be inspected weekly for leaks, container integrity, and secondary containment condition.

38.4 Propane — Storage and Handling

38.4.1 General Propane Requirements

Liquefied petroleum gas (propane) is a flammable gas that, when released, can form explosive mixtures with air. CHOPTECH's propane program complies with NFPA 58 and OSHA 29 CFR 1910.110.

- Propane cylinders shall be stored outdoors in an upright position in a designated, secured propane storage area.
- The storage area shall be located at least 10 feet from building openings, combustible materials, and ignition sources.
- The propane storage area shall be enclosed with a lockable cage or chain link fence to prevent unauthorized access.
- Propane storage areas shall be posted with: PROPANE — FLAMMABLE GAS — NO SMOKING — NO OPEN FLAMES signage on all sides visible from approach.

38.4.2 Full Cylinder Storage

- Full propane cylinders shall be stored in the designated full cylinder area — clearly marked FULL.
- Full cylinders shall be stored with protective caps in place over the valve.
- Full cylinders shall not be stored near heat sources, electrical panels, or in enclosed spaces.
- Maximum storage quantities shall comply with NFPA 58 limits for the storage area configuration.
- Full cylinders shall be secured upright to prevent tipping — use cylinder racks, chains, or brackets.

38.4.3 Empty Cylinder Storage

- Empty cylinders shall be stored separately from full cylinders in a clearly marked EMPTY area.
- Cylinders are never truly empty — they contain residual propane vapor and shall be treated as FLAMMABLE at all times.

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- Empty cylinders shall have the valve closed and protective valve cap installed.
- Empty cylinders shall be stored upright and secured against tipping.
- Empty cylinders shall be returned to the supplier for refill or disposal — never attempt to refill cylinders on-site.

38.4.4 Propane Handling

- Only trained, authorized employees may connect or disconnect propane cylinders from equipment.
- Cylinders shall be transported on approved cylinder carts — never rolled, dragged, or dropped.
- If a propane leak is suspected (odor of gas), immediately: evacuate the area, do not operate any electrical switches or ignition sources, call 911 and Virginia Natural Gas Emergency (877-572-3342) from outside the area.
- Propane equipment shall be inspected before each use for leaks, damaged hoses, and regulator condition.

38.5 No Smoking and No Open Flames Policy

WARNING: SMOKING AND OPEN FLAMES ARE STRICTLY PROHIBITED in all fuel storage areas, waste oil storage areas, propane storage areas, vessel work areas, painting and blasting areas, and any area where flammable or combustible materials are present. Violation is a Category 1 safety violation subject to immediate termination.

Area	Required Signage	Placement Requirement
All fuel storage areas (diesel, gasoline)	NO SMOKING — NO OPEN FLAMES — FLAMMABLE LIQUID	Posted on all sides — minimum 2 signs per area
Waste oil storage area	NO SMOKING — WASTE OIL STORAGE — COMBUSTIBLE	Posted at entry point
Propane storage area	NO SMOKING — NO OPEN FLAMES — FLAMMABLE GAS — PROPANE	Posted on all sides of cage/enclosure
Active vessel work areas	NO SMOKING — HOT WORK PERMIT REQUIRED	Posted at vessel access points
All production areas	NO SMOKING — DESIGNATED SMOKING AREAS ONLY	Posted at area perimeters
General facility	SMOKING IN DESIGNATED AREAS ONLY	Posted at facility entrance and office door

Smoking is permitted ONLY in the designated outdoor smoking area. The designated smoking area shall be located a minimum of 25 feet from any building entrance, fuel storage, flammable materials, or vessel work area. Smoking materials shall be fully extinguished and disposed of in a provided ashtray receptacle — never discarded on the ground.

38.6 Yard Site Housekeeping Standards

CHOPTECH Shipyard is committed to maintaining a clean, organized, and professional facility at all times. Yard housekeeping is not simply an aesthetic standard — it is a safety and compliance requirement. A clean, organized yard reduces fire hazards, prevents trips and falls, facilitates emergency response, demonstrates regulatory compliance, and reflects the professionalism and pride of the CHOPTECH team.

38.6.1 General Housekeeping Requirements

- All work areas shall be cleaned at the end of each shift — tools returned to storage, debris removed, and walking surfaces cleared.

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- Walkways, aisle ways, emergency exits, fire extinguisher access points, and electrical panel areas shall be kept clear and unobstructed at all times — minimum 36-inch clearance.
- Combustible waste materials (oily rags, wood scraps, packing materials, cardboard) shall be placed in designated covered metal waste containers — never left on the ground or near heat sources.
- Oily rags and solvent-soaked materials shall be placed in UL-listed self-closing metal safety cans designated for oily waste — emptied daily.
- Scrap metal, removed vessel components, and construction debris shall be segregated and placed in designated scrap/debris areas — not left where they create trip, fall, or fire hazards.
- Spills of any fluid (fuel, oil, hydraulic fluid, bilge water) shall be cleaned up immediately using appropriate absorbents — not left for the next shift.
- All containers, drums, and storage vessels shall be labeled with their contents at all times — no unlabeled containers permitted.
- Tools and equipment not in active use shall be returned to their designated storage locations — not left in work areas, on vessels, or on walkways.

38.6.2 Yard Organization Standards

- Materials and equipment shall be stored in designated, organized areas — not scattered throughout the yard.
- Stacked materials shall be stable and secured to prevent toppling — maximum stacking heights per material type shall be observed.
- Vehicle and equipment access lanes shall be maintained clear at all times — minimum 12-foot width for fire apparatus access.
- The area around the fire hydrant (left side of property, across the railroad tracks, near Eagle Transport) shall be kept clear of all obstructions — minimum 15-foot clearance on all sides.
- All signage (safety signs, storage area markings, directional signs) shall be maintained legible, upright, and unobstructed.
- Vegetation, grass, and brush within 10 feet of fuel storage areas and buildings shall be maintained trimmed and clear of dry combustible material.

38.6.3 Housekeeping Inspection and Accountability

- Supervisors shall conduct a daily housekeeping walk-through of their assigned area at the start and end of each shift.
- The Safety Representative shall include housekeeping in all weekly formal inspections (CT-INS-002).
- Housekeeping deficiencies identified during inspection shall be corrected before the end of the current shift whenever possible.
- Persistent or repeated housekeeping violations by an employee shall be addressed through the disciplinary process (Section 9).
- CHOPTECH's housekeeping standards apply equally to all employees, contractors, and subcontractors — contractors who fail to maintain housekeeping standards in their work areas are subject to corrective action per Section 20.

Section 38 — Fuel Storage & Housekeeping Acknowledgment

Employee Printed Name	Employee Signature	Date
_____	_____	_____
Supervisor Printed Name	**Supervisor Signature**	**Date**
_____	_____	_____

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SECTION 39

Emergency Evacuation, Fire Extinguishers, Muster Area & Site Information

39.1 Purpose and Regulatory Basis

This section establishes CHOPTECH Shipyard's Emergency Evacuation Plan, fire extinguisher program, muster area procedures, and critical site emergency information in compliance with OSHA 29 CFR 1910.38 (Emergency Action Plans), OSHA 29 CFR 1910.157 (Portable Fire Extinguishers), NFPA 10 (Standard for Portable Fire Extinguishers), and the Virginia Statewide Fire Prevention Code. All CHOPTECH employees, contractors, and visitors shall be familiar with the evacuation procedures and emergency site information in this section.

39.2 Emergency Evacuation Procedures

39.2.1 Evacuation Triggers

A full facility evacuation shall be initiated immediately upon any of the following:

- Activation of the CHOPTECH fire alarm system (continuous horn or PA announcement directing evacuation)
- Discovery of fire, smoke, or burning odor anywhere on the property
- Gas leak — natural gas, propane, or fuel vapor — detected or suspected
- Hazardous material spill or release creating an atmospheric hazard
- Structural collapse or imminent structural failure
- Direction from the Incident Commander, Safety Manager, or any supervisor
- Direction from Chesapeake Fire Department or other emergency responders

39.2.2 Evacuation Steps — All Personnel

Step	Action	Instruction
1	STOP WORK	Immediately stop all work activities. Shut down equipment safely if possible without creating additional hazard.
2	ALERT OTHERS	Alert all nearby personnel verbally — 'EVACUATE NOW.' Do not assume everyone has heard the alarm.
3	EVACUATE	Proceed immediately to the nearest safe exit route. Do not run. Do not use vehicles to evacuate unless directed.
4	LEAVE BELONGINGS	Do not stop to collect personal belongings. No item is worth delaying evacuation.
5	ASSIST OTHERS	Assist any person with a mobility impairment to evacuate. If unable to evacuate a person, leave them in a safe location and report their location to emergency responders immediately.
6	PROCEED TO MUSTER AREA	Proceed directly to the CHOPTECH Muster Area — at the MAIN GATE at the FRONT OF THE PROPERTY on McCloud Road.
7	REPORT TO SUPERVISOR	Check in with your supervisor or area warden at the muster area. Do not leave the muster area without supervisor authorization.
8	DO NOT RE-ENTER	Never re-enter the facility until the Incident Commander or Chesapeake Fire Department gives the all-clear. No exceptions.

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39.3 MUSTER AREA

PRIMARY MUSTER AREA

MAIN GATE — FRONT OF PROPERTY 1324 McCloud Road, Chesapeake, VA 23320

ALL personnel shall assemble at the main gate at the front of the property immediately upon evacuation. Remain at the muster area until accounted for and released by the Incident Commander.

39.3.1 Accountability at the Muster Area

- Each supervisor shall immediately begin accounting for all personnel in their area upon arriving at the muster area.
- Accountability shall be completed and reported to the Incident Commander within 10 minutes of the evacuation order.
- Any person unaccounted for shall be reported to the Incident Commander immediately — do NOT re-enter the building to search. Report the missing person's last known location to emergency responders.
- Contractors shall maintain their own accountability and report headcount to the CHOPTECH Incident Commander.
- Visitors shall be accounted for by the CHOPTECH employee who was escorting them.

39.4 Fire Extinguisher Program

39.4.1 Fire Extinguisher Stations

CHOPTECH maintains **14 fire extinguisher stations** distributed throughout the facility in compliance with OSHA 29 CFR 1910.157 and NFPA 10. Stations are positioned to ensure no employee is ever more than 75 feet of travel distance from a fire extinguisher in any production, office, storage, or dock area.

EMPLOYEE REQUIREMENT — KNOW YOUR NEAREST STATION

Every CHOPTECH employee shall know the location of the two nearest fire extinguisher stations to their primary work area. Station locations are posted on the Fire Extinguisher Station Map displayed at every safety board and at the CHOPTECH Office. A site map showing all 14 stations will be posted at all safety stations upon completion. New employees shall be walked through station locations during onboarding (Section 10). Questions about station locations should be directed to your supervisor or the Safety Department.

All 14 fire extinguisher stations shall be maintained in compliance with the following requirements:

Requirement	Standard
Station Identification	Each station is numbered FE-001 through FE-014 and marked with a red station sign visible from a minimum of 50 feet in all directions.
Clearance Requirement	A minimum 36-inch clearance shall be maintained around every extinguisher at all times. No materials, equipment, or vehicles shall obstruct access.

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Requirement	Standard
Fuel Storage Area	The station serving the fuel storage area (diesel, gasoline) shall be rated BC or ABC minimum — 20 lb capacity — positioned upwind of the storage area.
Dock / Waterfront	Stations serving the dock and Elizabeth River waterfront area are positioned at the pier head and dock access point — rated ABC — suitable for marine environment.
Hot Work Sites	A dedicated portable extinguisher shall be staged at every active hot work site per the Hot Work Permit (Section 12) — in addition to the 14 permanent stations.
Vehicle / Vessel Access	Stations are positioned so that fire apparatus and response personnel have unobstructed access from all approach directions.

NOTE: Refer to Section 40 for water safety, throw ring station locations, and water rescue procedures for the Elizabeth River dock area.

39.4.2 Fire Extinguisher Inspection and Maintenance

- Monthly visual inspection by area supervisor — check: seal intact, pin in place, pressure gauge in green zone, no physical damage, inspection tag current. Document on CT-FA-EXT-001.
- Annual maintenance inspection by a licensed fire equipment service contractor — documented on the extinguisher tag.
- Hydrostatic testing per NFPA 10 schedule — every 6 years for dry chemical; every 12 years for CO2.
- Any extinguisher that has been discharged (even partially), shows physical damage, or has a broken seal shall be removed from service immediately and replaced.
- Replacement extinguishers shall be in place within 24 hours of any extinguisher being removed from service.

39.4.3 How to Use a Fire Extinguisher — PASS Technique

Step	Action
P — PULL	Pull the safety pin from the handle. This breaks the tamper seal.
A — AIM	Aim the nozzle or horn at the BASE of the fire — not the flames.
S — SQUEEZE	Squeeze the handle to discharge the extinguishing agent.
S — SWEEP	Sweep the nozzle side to side at the base of the fire until extinguished.

WARNING: Only attempt to extinguish a fire if: you are trained; the fire is small and contained to one object; the alarm has been activated; you have a clear escape path behind you; and the fire has not spread to the ceiling. When in doubt — GET OUT and let Chesapeake Fire Department handle it.

39.5 KNOX BOX — Emergency Access Information

CHOPTECH maintains a KNOX BOX at the entrance of the property near the mailbox at 1324 McCloud Road, Chesapeake, VA 23320. The Chesapeake Fire Department has met with CHOPTECH on-site and is familiar with the property layout and KNOX BOX location. The KNOX BOX provides emergency responders with immediate access to the property and critical facility information when CHOPTECH personnel are not present.

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KNOX BOX Contents	Description
Site Evacuation Plan	Complete facility evacuation plan showing all exit routes, muster station location, and emergency assembly area
Property Layout Map	Detailed site map showing all buildings, vessels, work areas, fuel storage locations, fire extinguisher locations, and waterfront access points
Hazardous Materials Map	Location of all hazardous material storage: diesel tank, gasoline storage, waste oil, propane cylinders, and SDS binder location
Fuel Storage Locations	Specific identification of 500-gallon diesel tank, 50-gallon gasoline storage, 200-gallon waste oil, and propane cylinder storage areas
Gate Remote Controller	Handheld remote controller for the motorized entrance gate allowing emergency services immediate access
Keypad Instructions	Printed instructions for operating the entrance keypad including emergency access procedure
Emergency Contacts	CHOPTECH emergency contact list including property access contact: Bruce Shunkwiler 757-560-9346

KNOX BOX contents shall be reviewed and updated annually (each January) and immediately whenever facility layout, hazmat storage locations, evacuation plans, or access procedures change. Coordinate updates with Chesapeake Fire Department (757-382-6297).

39.6 Fire Hydrant Location

FIRE HYDRANT LOCATION

Left side of the property — across the railroad tracks adjacent to EAGLE TRANSPORT

This hydrant is the primary water supply for Chesapeake Fire Department operations at CHOPTECH Shipyard. The area surrounding this hydrant shall be kept clear of all obstructions — minimum 15-foot clearance on all sides — at all times. Access routes to this hydrant from McCloud Road shall never be blocked by parked vehicles, equipment, or materials.

- Chesapeake Fire Department has been briefed on the hydrant location as part of pre-incident planning for CHOPTECH Shipyard.
- The hydrant location is documented on the property layout map maintained in the KNOX BOX.
- Vehicle and equipment parking shall never block the access route to the hydrant from McCloud Road.
- If the hydrant is damaged, obstructed, or appears non-functional, notify Chesapeake Fire Department (757-382-6297) and the Safety Manager immediately.

39.7 Emergency Evacuation Training and Drills

- All new employees shall receive evacuation training during initial orientation (Section 10) — including muster area location, evacuation routes, and fire extinguisher locations.
- A full facility evacuation drill shall be conducted quarterly — unannounced whenever possible.

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- Drill results shall be documented on CT-ERP-003 including: time to full evacuation, accountability completion time, any issues identified, and corrective actions.
- Annual fire extinguisher hands-on training shall be provided to all employees — including PASS technique and fire class identification.
- Chesapeake Fire Department shall be invited to participate in CHOPTECH's annual emergency drill and site familiarization walk at least once per year.

39.8 Post-Emergency Procedures

- No one shall re-enter the facility following an evacuation until the Incident Commander — in coordination with Chesapeake Fire Department — issues a formal all-clear.
- Following any actual emergency activation (not a drill), a post-incident review shall be conducted within 48 hours.
- Any fire extinguisher that was discharged during an emergency shall be removed from service, refilled or replaced, and returned to service before the next shift.
- All post-emergency findings, lessons learned, and corrective actions shall be documented and tracked to completion per Section 22 (Incident Investigation).

Section 39 — Emergency Evacuation Acknowledgment

_____	_____	_____
Employee Printed Name	**Employee Signature**	**Date**
_____	_____	_____
Supervisor Printed Name	**Supervisor Signature**	**Date**

— END OF CHOPTECH COMPREHENSIVE SAFETY PROGRAM — SECTIONS 1 THROUGH 39 —

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SECTION 40

Water Safety, Throw Ring Stations & Water Rescue — Elizabeth River Dock

WATER EMERGENCY — IMMEDIATE ACTIONS

CALL 911 | VHF CHANNEL 16 | USCG 877-722-5727 | DO NOT ENTER THE WATER YOURSELF

40.1 Purpose and Regulatory Basis

CHOPTECH Shipyard operates a working waterfront facility on the Elizabeth River. The proximity of employees, contractors, and visitors to open water creates the potential for man overboard and drowning emergencies. This section establishes CHOPTECH's Water Safety Program in compliance with OSHA 29 CFR 1915.85 (Shipyard Employment — Life Saving Equipment), U.S. Coast Guard regulations, and NFPA standards applicable to marine and waterfront operations. Every employee who works at or near the dock, pier, or Elizabeth River waterfront shall be trained in the procedures contained in this section before beginning waterfront work assignments.

40.2 Water Hazard Recognition

The Elizabeth River waterfront at CHOPTECH presents the following hazards that every employee shall recognize and respect:

- **Drowning risk:** The Elizabeth River is a working waterway with strong tidal currents, boat traffic, and variable water depth. A person in the water can lose consciousness and drown in under 2 minutes depending on water temperature.
- **Cold water shock:** Even in warmer months, river water temperatures can trigger cold water shock — causing involuntary gasping, hyperventilation, cardiac arrest, and rapid incapacitation regardless of swimming ability.
- **Current and tidal flow:** Tidal currents in the Elizabeth River can be strong and unpredictable — a person in the water may be carried rapidly away from the dock and point of entry.
- **Vessel traffic:** Active vessel traffic on the Elizabeth River creates collision risk for any person in the water. A person overboard is extremely difficult to see from a vessel underway.
- **Entanglement hazards:** Mooring lines, anchor chains, and underwater obstructions create entanglement risks for anyone who enters the water.
- **Low visibility:** Night operations, fog, and river turbidity can make a person in the water nearly impossible to see from the dock or from a vessel.

40.3 Throw Ring Stations — Location and Requirements

CHOPTECH maintains **two (2) water throw ring stations** at the dock on the Elizabeth River. These stations provide the primary life-saving equipment for water rescue operations and shall be maintained in a state of constant readiness.

THROW RING STATION 1	THROW RING STATION 2
Elizabeth River Dock — Primary Position Mounted at the main dock head / pier entry point, clearly visible and accessible from the dock approach.	Elizabeth River Dock — Secondary Position Mounted further along the dock / working pier, positioned to provide coverage for the full length of the waterfront work area.

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40.3.1 Throw Ring Station Requirements

- Each throw ring station shall contain: one (1) USCG-approved Type IV throwable life ring (minimum 24-inch diameter), a minimum 60 feet of polypropylene throw line (bright orange or yellow) attached to the ring, and a mounting bracket or hook that allows instant retrieval without tools or unfastening.
- Throw rings shall be USCG-approved and marked with the CHOPTECH facility name.
- Both stations shall be marked with a clearly visible WHITE RING / BLUE BACKGROUND life preserver symbol sign, illuminated or reflective for night visibility.
- Throw ring stations shall be inspected monthly — ring condition, line condition, line attachment, and mounting integrity. Documented on CT-WS-001.
- Any throw ring or line that is worn, frayed, damaged, or has been deployed in a rescue shall be replaced immediately before the station is returned to service.
- Nothing shall be stored on, hung from, or placed in front of a throw ring station. The station shall be accessible within 3 seconds by any person at the dock.
- Throw rings shall not be removed from their stations except for training or actual rescue use — and shall be immediately returned and inspected after either use.
- Throw ring station locations shall be identified on the CHOPTECH facility site map and in the KNOX BOX property layout.

> *NOTE: Throw ring stations are for THROWING TO A PERSON IN THE WATER — not for entering the water yourself. See Section 40.5 for complete rescue procedures. Also refer to Section 14 (Marine & Waterfront Safety) and Section 39 (Emergency Evacuation & Site Information) for related waterfront procedures.*

40.4 Personal Flotation Device (PFD) Requirements

In compliance with OSHA 29 CFR 1915.85 and USCG regulations, CHOPTECH requires the following PFD usage at the waterfront:

Work Scenario	PFD Requirement	Additional Requirement
Working over or immediately adjacent to open water (within 6 feet of unguarded edge)	USCG-approved Type I, II, or III PFD — worn and fastened at all times	No exceptions — STOP WORK if PFD is not available
Working on vessels — underway or moored in open water	USCG-approved Type I or II PFD — worn and fastened	Applies to all personnel aboard any vessel not in drydock
Working on dock with guardrails in place	PFD available and immediately accessible	PFD must be within arm's reach; must be worn if any guardrail is removed
Crane or rigging operations over water	USCG-approved Type I or II PFD — all personnel in load path area	Applies to riggers, flagmen, and any personnel under or near the load
Night or reduced visibility waterfront work	USCG-approved PFD with retroreflective tape — worn and fastened	Additional lighting required per Section 14

40.5 Water Rescue Procedures — Man Overboard

MAN OVERBOARD — STEP-BY-STEP RESPONSE

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1 SHOUT	SHOUT 'MAN OVERBOARD' immediately and continuously to alert all nearby personnel. Point at the person in the water and keep pointing — do not take your eyes off them.
2 THROW	Immediately retrieve the nearest throw ring and throw it to the person in the water. Aim to land the ring beyond the person so they can grab the line. If the person is unconscious or not grabbing, throw the ring directly to them. Do NOT throw the ring without holding the end of the line.
3 CALL 911	Call 911 immediately — state: 'MAN OVERBOARD at CHOPTECH Shipyard dock, 1324 McCloud Road, Chesapeake, VA — person in the Elizabeth River.' Give your name and callback number. Stay on the line.
4 VHF CH 16	Transmit on VHF Channel 16: 'MAYDAY MAYDAY MAYDAY — This is CHOPTECH Shipyard, CHOPTECH Shipyard, CHOPTECH Shipyard — person in the water at our dock on the Elizabeth River, Chesapeake, Virginia — [number of persons] — over.' USCG Sector Virginia: 877-722-5727 if radio unavailable.
5 KEEP SIGHT	One person must maintain continuous visual contact with the person in the water at all times — point continuously. Never lose sight of them. If they go under, mark the exact location and report it immediately to responders.
6 DO NOT ENTER WATER	DO NOT enter the water to attempt a swimming rescue unless you are a trained water rescuer with proper equipment. Untrained water entry kills rescuers. Use throw rings, lines, poles, and available flotation devices from the dock. Wait for USCG and Chesapeake Fire Department water rescue teams.
7 CLEAR THE DOCK	Keep bystanders back from the dock edge — crowding the edge risks additional persons falling in and impedes the rescue. Assign one person to keep the area clear and direct emergency responders to the location when they arrive.
8 GUIDE RESPONDERS	Assign a person to meet emergency responders at the main gate (1324 McCloud Road) and guide them directly to the rescue location. Provide the KNOX BOX location to responders if gate access is needed. Keep the access route to the dock clear of all vehicles and equipment immediately upon calling 911.
9 CONTINUE RESCUE	Continue throwing lines and flotation devices. If a boat or vessel is available and personnel are trained in its operation, it may be used for rescue — approach the person from downwind/downcurrent. Do not run over the person with the vessel.
10 POST-RESCUE	Once the person is out of the water: call for medical assistance — do not assume they are uninjured. Cold water submersion can cause delayed complications including secondary drowning. Ensure transport to Chesapeake Regional Medical Center ER (757-312-6200) or by EMS. Complete incident report CT-II-001 immediately.

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WARNING: THE GREATEST RISK IN A WATER RESCUE IS A SECOND VICTIM. More rescuers die attempting untrained swimming rescues than the original victim. THROW — DO NOT GO. Use the throw ring. Call 911. Wait for trained water rescue personnel. Your job is to keep the person in sight and guide help to them.

40.6 How to Use a Throw Ring — Technique

Every employee who works at the CHOPTECH waterfront shall be able to deploy a throw ring quickly and accurately. Practice this during annual water safety training:

Step	Technique
1 — Retrieve	Grab the throw ring from the station mount. Ensure the line is free and not tangled. Hold the bitter end of the line firmly in your non-throwing hand.
2 — Shout	Shout 'HEADS UP!' or 'RING COMING!' to alert the person in the water. Make eye contact if possible.
3 — Aim	Face the person in the water. Aim to throw the ring 5–10 feet BEYOND the person — so they can grab the line as you pull it back toward them.
4 — Throw	Use an underhand throw for accuracy — swing the ring back and release in a smooth arc toward the target. Do not release the end of the line.
5 — Retrieve	Once the ring lands near the person, pull the line in slowly and steadily — encouraging the person to grab the ring or line. Do not jerk the line.
6 — Secure	Once the person has the ring, pull them toward the dock hand over hand. Get help from other personnel to haul them out — do not lean dangerously over the edge.
7 — Assist Out	Use a ladder, line, or extended pole to help the person climb out. If they cannot climb, keep them afloat and supported until emergency responders arrive.

40.7 Emergency Contacts — Water Rescue

Contact	Number / Channel	Purpose
911 — Chesapeake Fire & EMS	PRIMARY — Call immediately for any person in the water	Available 24/7
USCG Sector Virginia — 24-Hr Command	877-722-5727	Search & rescue authority on navigable waters
VHF Channel 16 (156.8 MHz)	MAYDAY protocol — see Section 31	Primary maritime distress frequency
Chesapeake Regional Medical Center ER	757-312-6200	Nearest emergency room — transport all water rescue victims
CHOPTECH Safety Hotline	757-630-9022	Internal notification — call after 911
Bruce Shunkwiler — Property Access	757-560-9346	Gate access for emergency responders if needed

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40.8 What NOT To Do in a Water Emergency

The following actions shall never be taken during a water emergency at CHOPTECH:

- **Do NOT enter the water** unless you are a trained water rescuer with proper equipment — untrained water entry frequently results in two victims instead of one.
- **Do NOT throw a throw ring without holding the line** — the ring becomes useless if it floats away from the person.
- **Do NOT delay calling 911** — call first, then assist. Seconds matter in a drowning emergency.
- **Do NOT crowd the dock edge** — bystanders at the edge risk additional falls into the water and block access for rescue equipment and responders.
- **Do NOT assume the person can swim** — even strong swimmers become incapacitated rapidly in cold water due to cold shock and muscle failure.
- **Do NOT leave the scene** — maintain visual contact with the person in the water until professional responders arrive and take over.
- **Do NOT operate a vessel over the person** — propeller strikes are fatal. Approach downwind and downcurrent, engine off, coasting to the person.
- **Do NOT leave a rescued person unattended** — secondary drowning (dry drowning) can occur hours after a water submersion event. All water rescue victims shall be evaluated by EMS.

40.9 Post-Incident Requirements

- All water rescue incidents — including near-misses where a person nearly fell or fell into the water without injury — shall be reported immediately to the Safety Manager.
- An incident investigation (Section 22) shall be initiated within 24 hours of any man overboard event, regardless of outcome.
- Any throw ring that was deployed shall be inspected and replaced before the station is returned to service.
- The OSHA 300 log shall be updated as required if the incident results in a recordable injury or illness.
- If a fatality or hospitalization results from a water emergency, OSHA shall be notified within 8 hours (fatality) or 24 hours (hospitalization) per 29 CFR 1904.39.
- Lessons learned from any water incident shall be incorporated into the next employee water safety training session.

40.10 Training Requirements

All employees assigned to waterfront work areas — dock, pier, Elizabeth River waterfront, and any vessel alongside — shall complete the following training:

Training	Frequency	Content
Initial Water Safety Orientation	Before first waterfront work assignment	Walk-through of throw ring stations; demonstration of throw technique; review of Section 40 procedures; PFD fitting and donning; emergency contact review
Annual Water Safety Refresher	Annually — January	Full review of man overboard procedures; hands-on throw ring practice; review of any incidents from prior year; PFD inspection training
VHF Mayday Procedure Training	Annually with Emergency Response training (Section 15)	Mayday call format and procedure; radio operation; Channel 16 protocol

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Training	Frequency	Content
Fire Extinguisher Training	Annually — all employees	PASS technique; extinguisher types; station locations (all 14 stations); when to fight vs. when to evacuate

All water safety training shall be documented on Form CT-WS-TRAIN-001 and retained in the employee's training record for the duration of employment. Training records are subject to review during OSHA inspections and insurance audits.

Section 40 — Water Safety & Water Rescue Training Acknowledgment

_____	_____	_____
Employee Printed Name	**Employee Signature**	**Date**
_____	_____	_____
Supervisor Printed Name	**Supervisor Signature**	**Date**
_____	_____	_____
Safety Manager Review	**Safety Manager Signature**	**Date**

— END OF CHOPTECH COMPREHENSIVE SAFETY PROGRAM — SECTIONS 1 THROUGH 40 —

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