



General Safety Rules and Emergency Procedures

Los Angeles Refinery Wilmington Operations (Wilmington Refinery & Sulfur Recovery Plant)

- 5 Pillars -

1. Process Safety
2. Personal Safety
3. Environmental Compliance
4. Fiduciary/Financial Responsibility
5. Employee Engagement

SUSPEND WORK OBLIGATION

Marathon employees and contractors,

While working at the Marathon Los Angeles Refinery, you should always comply with our Safe Work Practices.

You have the responsibility and the authority to suspend any work that does not comply with our safety practices without repercussion.

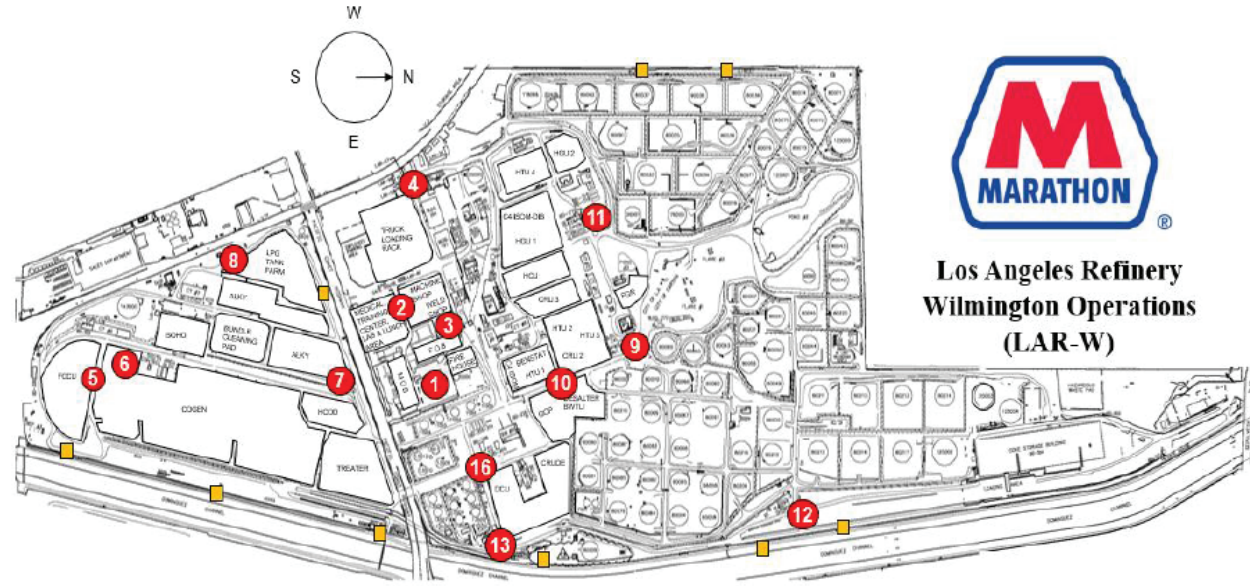
That is my commitment to you.

Brad Levi

Vice President, Los Angeles Refinery (310) 847-5209

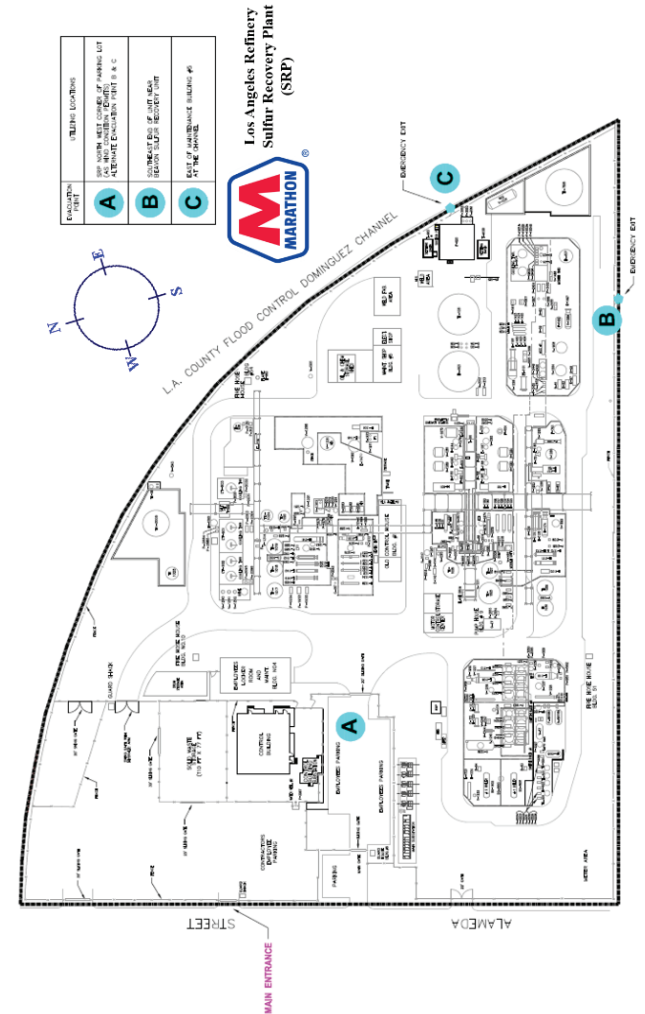
LIFE CRITICAL SAFETY RULES

- **Safe Work Permit:** Obtaining and working under a valid Safe Work Permit when one is required.
- **Fall Protection:** Protect themselves from a fall from elevated locations.
- **Confined Space Entry:** Entering a confined space only after receiving a valid Safe Work Permit and following all requirements of the Safe Work Permit while working in and around the confined space.
- **Energy Isolation:** Complying with the Refinery's Energy Isolation procedure (Lock Out/Tag Out) by ensuring that all energy sources have been identified, isolated, deenergized, and locked out and tagged when required prior to opening equipment or performing maintenance activities.
- **Hot Work:** Conducting Hot Work only after a Safe Work Permit has been completed, the area has been gas tested and all fire prevention requirements of the Safe Work Permit have been implemented.
- **Process Safety:** Never bypass critical process safety equipment without following the established procedure and obtaining the proper authorization.
- **Alky Unit Personal Protective Equipment:** Strict adherence to PPE requirements is required to prevent serious injuries and illnesses as a result of exposure to the acid catalysts used in alky units.
- **Electrical Safe Work Practices:** Strict adherence to Electrical Safety Program, PPE requirements, and required Work Permits when working on or operating energized electrical equipment.
- **Cranes and Lifting:** Comply with refinery crane and rigging safe work practices.



Primary Evacuation Point	Locations	Alternate Evacuation Points
1	Main Office Building (MOB), Field Office Building (FOB) / Control Room	2
2	Lab, Training Center, Health Services, Main Gate, Locker Rooms	1
3	Machine, Weld and ESI Shops, Garage, Storehouse, Truck Loading Rack	2
4	Contractor Office & Trailer Area	3
5	North of the FCCU	6
6	Cogen, BOHO, South Tank Farm, South Area Control Room, Maintenance Trailers, Bundle Cleaning Pad	5
7	ETD, Treater, Acid Rack, Tank Car Loading Rack	6

Primary Evacuation Point	Locations	Alternate Evacuation Points
8	Alky, LPO Tank Farm	6
9	North Area Tank Farm, Hazardous Waste Pad	10
10	BENSTAT, CRU 2, CRU 3, HTU 1, HTU 2, HTU 3	11
16	GCP, CRUDE, DCU	10
11	HGU 1, HGU 2, HTU 4, HCU, Flare Area	10
12	Coke Barn, Coke Belt	13
	Emergency Sliding Gate	



YOU NEED TO ATTEND THE LAR FACE 2 FACE ORIENTATION WITHIN 15 DAYS OF COMPLETING YOUR OSCA TRAINING

WILMINGTON REFINERY EMERGENCY REPORTING METHODS

Dial 6911 from any refinery phone or
(310) 522-6911 from any outside phone

Press and hold the orange
button on your radio

Radio Channel C-1 for
Refinery Shift Supervisor

**EMERGENCY
EVACUATION
ALARM**

North Area
8 short blasts

All Clear
1 long Blast

**EVACUATE
CROSS WIND**

**IDENTIFY PRIMARY &
SECONDARY ROUTES**

SULFUR RECOVERY PLANT OPERATIONS EMERGENCY REPORTING METHODS

Dial 6911 from any refinery phone or
(310) 522-6911 from any outside phone

Press and hold the orange
button on your radio

Radio Channel C-1 for
Refinery Shift Supervisor

**EMERGENCY
EVACUATION
ALARM**

Unit Specific
Beeping alarm
from Ops Shelter

All Clear
20 second
Continuous Blast

**EVACUATE
CROSS WIND**

**IDENTIFY PRIMARY &
SECONDARY ROUTES**

GENERAL INFORMATION

Insulation Banding	BLUE Asbestos	BLACK Non-Asbestos	Unknown Treat as Asbestos	Exposed DO NOT DISTURB	Report Exposed Insulation
	NFPA Diamond Color & Numbering	RED Fire Hazard	BLUE Health Hazard	YELLOW Reactivity	WHITE Specific Hazard
	- 0 - No Significant Hazard	- 1 - Slight Hazard	- 2 - Moderate Hazard	- 3 - High Hazard	- 4 - Extreme Hazard
WASTE DISPOSAL	Yellow Drum Common Trash	Green Drum Oily/Process Trash	Black & Silver Universal Waste	White Drum Asbestos	Black Drum Specific Waste

Reporting and Responding to an Emergency

- Remain calm and provide:
 - Your name
 - The nature of the emergency (fire, spill, injury, etc.)
 - Your location (unit, building, cross streets, area)
 - What specific material is involved, if you know
 - Wind direction, if you know
- Maintain communication with the person you are reporting the incident to until you are "released"
- Only attempt to extinguish an incipient fire if you can put it out with the use of one fire extinguisher.
- If there is a vapor release, evacuate the area in an upwind / crosswind direction

INJURY RESPONSE:

- DO NOT move the injured person, unless necessary
- Only personnel who are trained in CPR/First Aid may provide additional assistance
- Assure the injured person that help is on the way, and remain with them until help arrives

SPILL RESPONSE:

- Treat all spills as hazardous chemicals
- Avoid contact with the chemical and evacuate the area

EVACUATIONS:

- Remain calm
- Shutdown all work and equipment, if safe to do so
- Immediately go to the designated evacuation area and remain there until you have been accounted for and the all clear has been given
- Follow the direction of the Evacuation Marshal

ENTERING PROCESS UNITS:

1. Always check in with Operation before going into the unit
2. Always sign in and out of the unit, via the Unit Log
3. Non-Intrinsically safe mobile phones, open flint lighters, and strike anywhere matches are prohibited

ELEVATED WORK:

All work above 6' and within 6' of the leading edge requires the use of a safety harness with a lanyard (fall arrest system) while maintaining 100% tie off. **Except** work performed from approved scaffolding (green tagged) or permanent platforms that have a complete railing system (fall restraint system)

ROAD SAFETY:

1. The maximum speed limit is 15 MPH unless otherwise posted.
2. Seat belts are required for everyone in the vehicle
3. No personnel shall ride in the bed of a pickup truck, unless design by the manufacturer to do so.
4. Spotters are required for vehicles with obstructed rear and side visibility or within 10' of process equipment.
5. Do not stop in the middle of a roadway to talk.
6. Pedestrians have the right of way
7. Never leave a vehicle running, while unattended
8. Always leave your keys in the vehicle when you are not parked in a designated parking area (spot)
9. NEVER block fire or emergency equipment
10. Pull to the side of the road if emergency vehicles approach with lights flashing
11. Pull to the side of the road to answer the radio or your mobile device.

MINIMUM PPE:

1. Hard Hat
2. Safety Glasses meeting the ANSI Z87.1 standard
3. Fire Retardant Clothing (FRC) must be the outermost garment. Two-piece FRC must have the shirt tucked in
4. Protective toe footwear that meets the ASTM 2413 requirements, including a defined heel
5. Hearing protection while inside the process unit or where posted
6. Chemical goggles are required on your person
7. Personal H₂S monitors while in the process unit

TOOLS AND EQUIPMENT:

1. Never use defective or altered tools or equipment
 - Report or discard defective tools
2. Tools & equipment are to be used as intended
3. Ensure guards and handles are in place for protection
4. When working on equipment ensure it is isolated and de-energized per the LOTO procedure

HOUSEKEEPING:

Prevent slips, trips and falls by keeping you job site clean as you work by cleaning spills, trash and elevating cords and hoses, when possible.

PERSONAL RESPONSIBILITIES:

1. Immediately report all incidents (hazards, injuries, and near-misses).
2. Perform a pre-task assessment before each job (Job Safety Analysis) and discuss at the Toolbox Talk
3. Ensure Mutual Understanding has been achieved with Operations prior to starting the job
4. Protect yourself and other (regardless of company name) and always THINK SAFETY FIRST.



PROCESS SAFETY
OVERVIEW FACT SHEET

The purpose of this fact sheet is to summarize information regarding potential hazards resulting from unintentional release, spill, fire or explosion and, what you should be aware of and do in order to remain safe.

We need you to do your part to understand the hazards and know how to prevent upsets to the process.

This information is summarized, ask your Marathon contact, or any Fire, Safety, Health or Process Safety representative for more detailed information. You may also reference the Safety Data Sheets (SDS) regarding LAR Process Safety Program.

Remember, you work in and around “live” process units ... Marathon will do its part to keep the process from affecting you and “keep it in the pipes”- your part is to perform your job safely!

EMERGENCY ACTION PLAN
(summary)

- WILMINGTON & SRP:** Dial 6911 from any refinery telephone (310) 522-6911 from any outside phone to reach security or use the **orange** button on the Radio (hold 3 seconds) or 501/RSS can be reached at Radio channel C-1.
- Give your exact location, type of emergency (what's wrong) and what is needed.
- Stay on the phone until the operator has obtained all the information needed.
- Respond to the Fire alarms/ plant fire whistle, but **NEVER** wait for a whistle if something is wrong.
- Go to the muster point/ evacuation point for your work area and remain there until further instruction is given by a Marathon Representative.
- Only extinguish a fire if you are trained and authorized to do so.

Never wait for a whistle if something is wrong

Evacuate and report any fire, spill, release, or condition that is dangerous to life and health

PROCESS SAFETY FREQUENTLY
ASKED QUESTIONS:

Q: What is Process Safety?

A: Simply put: "KEEP IT IN THE PIPES"

Q: What's important to know about process safety?

A: The most important thing to be aware of is if the area in which you will be working has the potential for unintentional Fire, Explosion, Toxic Release and understand the Emergency Action Plan in case something does go wrong.

Q: How do I find more information?

- A: (1) Unit Process Safety Boards posted at the edge of each unit (see photo in section 4)
- (2) Safety Data Sheets (SDS)
- (3) Ask your Marathon contact (representative)
- (4) Access Marathon's Document Management System (DMS) for the Process Overview Manual
- (5) Always ask Operators about the unit when you review your work permit

Q: How do I know if I am doing the right things for Process Safety?

- A: When you know...
- (1) How the process hazards can affect you
- (2) How you can affect the process
- (3) You are taking time to follow all procedures and permit conditions already designed to keep you safe

WHAT YOU SHOULD DO

Review the information on the inside of this booklet and keep at least one copy with your work crew.

Find the Unit(s) you will be working in and discuss what Process Hazards you can encounter while working on that unit. Discuss with your work crew the potential to come into contact with product, temperature and pressures and any hazardous energy along with what id stated on the permit.

Always assume that a Unit is “Live” even if you think it is down. Talk about how your crew would escape in the event of an emergency and remember... you can affect the process

Never stand on, hang tool bags, put tools on or bump equipment - if it does happen, report it - please.

Even the smallest “hits” to equipment can cause a release or shut the process down.

Look for these signs



Area and Radio Contact Channel	Major Feeds in	Major Feeds Out, Additives, by products or waste streams	Temperatures Pressure Ranges	Potential Process Hazards
Alkylation Unit A - 8 Alky/LPG, CT-7	Propylene (from FCCU), Butylene (from DCU, FCCU) Isobutanes (from HCU), Sulfuric Acid (from Stock)	Propane Normal (N) Butane Alkylate, Ethane	30°F - 320°F Atmospheric to 350 psig	Asbestos, Caustic (NAOH), Electrical Hazards, High Pressure, Hydrocarbons-Intermediate, Hydrocarbons- Light, LPG, Mercaptan, Meroux, Radiation Sources (mobile), Steam, SO2, H2SO4, H2SO4 (spent)
CRU's A - 3 Bensat, C-4 ISOM, CRU-2, HTU- 1, HTU-2, HTU-3, CT-11	CRU-2 Light Reformate Light/Heavy Naphtha from various units, Hydrogen Gas, Normal Butane (NC4), Fresh Caustic, 1,1,1- Trichloroethane, Sour Naphtha Feedstock, Burner Oil Distillate, Light Atmospheric Gas Oil, Light Gas Oil, Intermediate Gas Oil, Wash Water	Bensat Product, Isobutane (IC4), C5 Stream, Sweet Spent Caustic, Propane/ Butane, Light Reformate, Hydrogen, Heavy Reformate, Gas (Propane), Liquid Petroleum Gas, High Octane Reformates, Stabilized Oil Products, Hydrogen-Rich Gas Mixture, Off-gas, Desulfurized Naphtha, Diesel Fuel, Jet Fuel, Naphtha, Sour Gas, Sour Water	Ambient to 980°F Atmospheric to 600 psig	Asbestos, Catalyst, Electrical Hazards, High Pressure, Hydrocarbons-Intermediate, Hydrocarbons-Light, H2, Lead Paint, Noise, PERC, Radiation Sources (mobile), Rotating Equipment, Steam, Temperature Extremes, DEA, H2S
Crude Processing Department (CPD) A - 5 BWTU, Crude, DCU, GCP, CT-8, CT-9	Desalter Brine, Crude, Naphtha Slurry, Slop Oil, Heavy Crude, Cold Reduced Crude, Slops, Sludge, Flare header fuel gas, Vapor recovery fuel gas, Refinery produced fuel gas, Coke, DCU Vacuum Tower Bottoms, Fractionator Tower Bottoms	Brine Water, Recovery Oil, Sludge, Butanes and Lighter products, Naphtha, BOD, Light Atmospheric Gas Oil, Heavy Atmospheric Gas Oil, Reduced Crude, Sour Water, Hydrogen, Methane, Ethane Mix, Fuel Gas, Propane/ Propylene, Butylene, Intermediate Gas Oil, Light Vacuum Gas Oil, Heavy Vacuum Gas Oil, Coke, Acid Gases, Clean Fuel Gas, Rich DEA, Coke	Ambient to 950°F Atmospheric to 500 psig	Asbestos, NH3, Caustic, CO, DEA, Electrical Hazards, High Pressure, Hydrocarbons-Heavy, Hydrocarbons- Intermediate, Hydrocarbons-Light, Coke, H2S, Sour Water, Lead Paint, Radiation Sources (mobile), Rotating Equipment, Steam, Temperature Extremes
Environmental Treating Department A - 7 ETD or High COD and Low COD	Stripped Refinery Process Water, Effluent from Oil/Water Separators	Effluent Oily Sludge	Ambient to 140°F Atmospheric to 70 psig	Asbestos, Caustic (NAOH), Electrical Hazards, High Pressure, H2O2, H2S, Lead Paint, Noise, Radiation Sources (mobile), Rotating Equipment, Sludge, Sour Water, Steam, H2SO4, H2SO4 (spent), Temperature Extremes
Fluid Catalytic Cracking A - 9 FCCU or CAT, CT-6	Desulfurized Gas Oil Vacuum Gas Oil Heavy Gas Oil Regenerated Catalyst	Fuel Gas, Propane/Propylene, Butane/Butylene, Light Naphtha, Heavy Naphtha, Light Cycle Gas Oil, Heavy Cycle Gas Oil, Spent Catalyst	Ambient to 1350°F Atmospheric to 300 psig	NH3, Asbestos, CO, Catalyst (silica), Caustic (NAOH), DEA, Electrical Hazards, High Pressure, Hydrocarbons-Heavy, Hydrocarbons-Intermediate, Hydrocarbons-Light, H2S, Lead Paint, Mercaptan, Noise, Radiation Sources (mobile), Rotating Equipment, Sour Water, Steam, Temp. Extremes
Hydrocracker A-4 CRU-3, HCU, CT-12	Gas Oil Feed Stock, LP Makeup Hydrogen, H2, Makeup, HP Makeup Hydrogen, H2, Makeup, Lean DEA, Wash Water, Low-Octane Naphtha, Heavy Hydrocracked Naphtha, 1,1,1- Trichlorethane	Diesel Fuel, Heavy Distillates, Heavy Naphtha, Light Naphtha, Unconverted Gas Oil, Butanes, Propane, Rich DEA, Sour Water, Jet, Gas (Propane), Liquid Petroleum Gas, Hydrogen, High Octane Reformates	Ambient to 800°F Atmospheric to 1750 psig	NH3, Asbestos, CS2, Catalyst, Catalyst (palladium), Electrical Hazards, High Pressure, Hydrocarbons-Intermediate, Hydrocarbons-Light, (H2), H2S, Steam, Temp. Extremes
Hydrogen Generation A-2 HGU-2, HTU-4, HGU-1, Flare, FGR, CT-13	Fuel Gas (Butanes and Lighter), Natural Gas, Recycled Hydrogen, Steam, Boiler Feed Water, Gas Oil, Hydrogen, Amine Treater to Refinery Produced Fuel Gas System, FCCU Sour Water Flash Drum, DCU Fractionator Accumulator	Hydrogen, Steam, Electricity, Purge Gas, Desulfurized Gas Oil (DGO), Naphtha, Diesel Fuel, Off-gas, Recovered Flare Gas, Sour Purge Water, Recovered Oil	Ambient to 1870°F Atmospheric to 1785 psig	Acetic Acid, NH3, Asbestos, CO, Carbon Water, Catalyt, Electrical Hazards, High Pressure, Hydrocarbons-Light, H2, H2S, Lead Paint, Noise, Radiation Sources (mobile), Rotating Equipment, Steam, Temperature Extremes, Sour Water
RP&S A-6 Receiving, Pumping and Shipping Department	Crude Oil, Slop Oil, Fuel Oil, Gas Oils, Naphtha, MTBE, Sour Water, Slop Water, Caustic, Finished Products, Unfinished Products	Regular, intermediate and Premium unleaded gasoline, Diesel, jet fuels, LPG Treated waste water	Ambient to 190°F Atmospheric to 4 in H2O (0.15 psi)	Asbestos, Caustic (NAOH), Electrical Hazards, High Pressure, Hydrocarbons-Heavy, Hydrocarbons- Intermediate, Hydrocarbons-Light, H2S, Lead Paint, LPG, Mercaptan, Noise, Radiation Sources (mobile), Rotating Equipment, Sour Water, Steam, H2SO4, H2SO4 (spent), Temperature Extremes
Steam, Power and Water A-7 COGEN, Boiler House (BOHO), Power and Water	Fuel Gas Well Water Metro Water Lime Oxygen Scavenger Neutralizing Amine Chelating Agent Dispersant Scale Control	Steam, Electricity, Lime Slurry Boiler Blowdown	Ambient to 500°F Atmospheric to 350 psig	Asbestos, Caustic (NAOH), Electrical Hazards, High Pressure, Hydrocarbons-Light, Lead Paint, Mercaptan, Noise, Radiation Sources (mobile), Rotating Equipment, Steam, Temperature Extremes
Sulfur Recovery Plant (SRP) A-10	Rich DEA Sour Water Rich MDEA Dilute Gas	Lean DEA Treated Wastewater Lean MDEA Sulfur	Ambient to 2800°F Atmospheric to 50 psig	NH3, Asbestos, Catalyst (activated alumina), Caustic (NAOH), DEA, Electrical Hazards, High Pressure, Hydrocarbons-Intermediate, H2S, Lead Paint, MDEA, Molten Sulfur, Noise, Radiation Sources (mobile), Rotating Equipment, Steam, SO2, H2SO4, H2SO4 (spent), Temperature Extremes
Other Process Safety Concerns at Carson	Hazardous Energy from Temperature Extremes, Pressure, Chemical Reactions, Stored Energy in Batteries, Radiation, Steam, Electrical Hazards & Static Electricity PS Dept Rev 3 Dec 5, 2017			