
HEALTH AND SAFETY PROCEDURE 203 – Hot Work

1.0 PURPOSE

Westlake, Plaquemine Operations (Westlake) is committed to providing a safe and healthy work environment and protecting all persons working in our facilities from uncontrolled hazards in the workplace. Westlake recognizes the potential for fire from hot work activities. This document provides requirements for managing the risk of flammable and/or combustible ignition while performing hot work.

2.0 SCOPE

This procedure applies to all employees who operate, conduct maintenance and/or provide services for Westlake's processes. This procedure does not void the requirements of any other Westlake's site procedure.

3.0 DEFINITIONS

- 3.1 **Affected Employee** - Employees impacted by the performance of permitted work, which may include hot work
- 3.2 **Authorized employee** - Employees trained and authorized to perform permitted work in the plant
- 3.3 **Captain of the Port (COTP)** - The Coast Guard Officer, under the command of a District Commander, so designated by the Commandant for the purpose of giving immediate direction to Coast Guard law enforcement activities within an assigned area.
- 3.4 **Class 1 Hazardous Locations** - Flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.
 - 3.4.1 **Division I** - Ignitable concentrations of flammable gases or vapors may exist under normal operating conditions, exist frequently due to repair, maintenance operations, leakage or be released as a result of breakdown or faulty operation of equipment and simultaneous failure of electrical equipment.
 - 3.4.2 **Division II** - Locations where flammable gases and liquids are handled, processed, or used but will normally be protected by mechanical ventilation or a closed

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

system in which they can only escape in the event of an accidental breakdown, rupture, or abnormal operation, locations adjacent to Division I areas where flammables may occasionally exist unless prevented by clean air ventilation and effective safeguards.

- 3.5 **Class 2 Hazardous Locations-** Combustible dust is or may be present.
- 3.5.1 **Division I** - Locations where combustible dust is or may be suspended in the air under normal conditions in quantities sufficient enough to cause explosions or ignitable mixtures, where mechanical failure or abnormal operation of machinery may produce such explosions or ignitable mixtures, or where combustible dust of an electrically conductive nature may be present.
- 3.5.2 **Division II** - Locations where combustible dust will not normally be suspended in the air in quantities sufficient to produce explosions or ignitable mixtures, dust accumulation, will normally be insufficient to interfere with the normal operation of electrical equipment, combustible dust may be suspended in the air as a result of infrequent malfunctioning or handling of process equipment
- 3.6 **Combustible dust** - a particulate solid that will violently burn when suspended in air over a range of concentrations, regardless of particle size or shape. Note: any "material that will burn in air" in a solid form can be explosive when in a finely divided form as a powder or dust.
- 3.7 **Combustible Material** - Capable of reacting with oxygen and burning if ignited. Examples include oil, paper, various chemical products, wood, plastic, and textile fibers such as carpet and cardboard.
- 3.8 **Designated Hot Work Area** - A permanent or temporary non-hazardous location designed or approved for hot work operations without a hot work permit. Examples: Maintenance shops, fab areas, and others as approved by HSE.

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

- 3.9 **Equipment Owner** - The person assigned to an area/department that normally controls and operates the equipment.
- 3.10 **Fire Watch** – A person assigned to a hot work project whose sole responsibility is the safety of the open flame hot work activity. This individual must be trained in the use of a portable fire extinguisher.
- 3.11 **Fire Safe** – An area where all combustible or flammable materials have been removed from the immediate area (greater than 35 feet) where hot work operations are being conducted.
- 3.12 **Flammable Atmosphere** - A mixture of dangerous substances with air, under atmospheric conditions, in the form of gases, vapors, mist or dust which are ignitable, and after ignition has occurred, combustion spreads to the entire unburned mixture.
- 3.13 **Hot Tap** - The technique of attaching a welded branch fitting to piping or equipment as it remains in service and then creating an opening in that piping or equipment by drilling or cutting a portion of the piping or equipment within the attached fitting. Hot Tapping, by definition, involves hot work on equipment that is "in service" (see HSP-201 Hot Tap).
- 3.14 **Hot Work**- Any operation that can produce a spark, arc, flame, or sufficient heat hot enough to cause the ignition of ordinary combustible materials, combustible dust, flammable gasses, or vapors.
 - 3.14.1 **Open Flame Hot Work** – Open flame hot work consists of any operation that can produce a spark, arc, or flame hot enough to cause an ignition. Examples of hot work include but are not limited to, welding & cutting, burning, resistance welding, soldering, brazing, torch-applied roofing, grinding, abrasive wheel cutting, servicing of electrical equipment capable of producing sparks or other operations that are capable of initiating fires or explosions. All open flame hot work will require continuous atmospheric monitoring except in Permanent Designated Areas as defined in Section 5.5 of this procedure.
 - 3.14.2 **Non-Flame Hot Work** – Use of electrical equipment, pneumatic tools, internal combustion engines, or any other work that is likely to produce sufficient heat or internal spark capable of igniting ordinary combustible materials, combustible dusts, flammable gasses or vapors. Non-Flame Hot Work will not

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

require continuous atmospheric monitoring unless determined to be necessary by the Permit Issuer per Section 4.2 of this procedure.

13.14.2.1 **Vehicle Entry** - Hot Work requirements for vehicles entering process units with the potential to become an ignition source.

13.14.2.2 **Power Tools** - Hot Work requirements for the use of electrical or pneumatic tools not approved for Class I, Division II areas

13.14.2.3 **PED (Portable Electronic Device)** – Hot Work requirements for the use of PED's that are not intrinsically safe for Class 1, Division II areas.

- 3.15 **Incipient Fire** – The initial or beginning stage of a fire, which can be controlled or extinguished by portable fire extinguishers, Class II standpipes, or small hose systems without the need for protective clothing or breathing apparatus.
- 3.16 **Intrinsically Safe** – A protection technique for the safe operation of electrical equipment in hazardous areas by limiting the energy, electrical and thermal, available for ignition.
- 3.17 **Lower Explosive Limit (LEL)** - The lower limit of flammability of a gas or vapor at ordinary ambient temperatures expressed in a percent of the gas or vapor in air by volume. For the purposes of this procedure, the %LEL limit for hot work permit authorization is 0.0% LEL. A variance per HSP-111 must be obtained prior to conducting work with readings above 0.0% LEL.
- 3.18 **Marine Chemist** -The holder of a valid certification card issued by the National Fire Protection Association (NFPA) in accordance with the "Rules for Certification of Marine Chemists." The Marine Chemist is qualified to determine whether inspections, alterations, or repairs of marine vessels, which may involve hazards covered by this program, can be undertaken safely.
- 3.19 **Permit-Required Area** – Any location other than a designated area approved for hot work and made fire-safe by removing or protecting combustible materials from ignition sources.

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

- 3.20 **PED (Portable Electronic Device)** - Any battery-operated device with a battery larger than a button that has the potential to create a spark when the battery is removed or is in use.
- 3.21 **Process Area** – Area employed in production in which an action, operations, or treatment embracing chemical, industrial, manufacturing, or processing factors/methods is carried out utilizing substances that may contain or could lead to a potential flammable and/or combustible hazard(s).
- 3.22 **Safe Work Permit** - a multifaceted safety planning tool to ensure that necessary safety precautions are addressed before beginning work on site. This permit is used to authorize Hot Work.
- 3.23 **United States Coast Guard (USCG) Hot Work Permit** – Permit issued by USCG which is required when conducting hot work activities on marine docks while hazardous materials are being handled, stored, loaded, or discharged. The Shipping (Logistics) Department will be responsible for maintaining the current USCG Hot Work Permit.
- 3.24 **Welding blanket/curtain** - A heat-resistant fabric designed to be placed in the vicinity of a hot work operation with light, moderate exposures such as that resulting from chipping, grinding, heat treating, sandblasting, and light welding. Designed to protect machinery and prevent ignition of combustible materials such as wood that are located adjacent to the underside of the blanket.
- 3.25 **Welding Pad** - A heat-resistant fabric designed to be placed directly under a hot work operation such as welding and cutting. It is intended for use in horizontal applications with severe exposures, such as those resulting from molten substances or heavy horizontal welding, and is designed to prevent the ignition of combustible materials that are located adjacent to the underside of the pad.

4.0 RESPONSIBILITIES

- 4.1 Equipment Owner
 - 4.1.1 Ensure that process lines or equipment are cleared, isolated, and secured per the site's requirements for HSP- 317 Control of Hazardous Energy.
 - 4.1.2 Ensure that affected employees are aware of hot work taking

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

place in the area or unit.

- 4.1.3 Ensure the proper applicable Job Permitting is completed.
- 4.1.4 For shift changes, review ongoing hot work activity with affected employees.
- 4.1.5 Develop an action plan and communicate to authorized employees the means by which notification will be given if conditions change and work must be stopped.
- 4.1.6 Ensure that hot work activities are not scheduled during plant operations that might expose combustibles to the ignition source.

4.2 Permit Issuer – (Area Operations Technician)

- 4.2.1 Determine if the work can be completed or needs to be moved to a designated hot work area.
- 4.2.2 Visits the hot work job site, conducts a pre-job meeting and completes an assessment to ensure the area and process conditions are acceptable for hot work.
- 4.2.3 Take necessary precautions to ensure combustible materials have been removed or controlled within 35 feet of the hot work that is to be performed.
- 4.2.4 If all combustible materials cannot be removed, ensures that guards are in place to confine the heat, sparks and/or slag.
- 4.2.5 Cover sewers with non-flammable covers within 35 feet.
- 4.2.6 Ensure that other potential hazards have been identified, such as elevated hot work, the need for barricading, atmospheric readings as required, the need for a fire watch, identifying if continuous monitoring is required, and other items as defined on the permit.
- 4.2.7 Ensure that sprinkler systems, hose systems, and other fire protection and/or extinguishing systems or equipment in the area where hot work is to be performed are verified as operational or ensure approved alternative fire protection measures are in place, such as wheeled or portable fire extinguishers.
- 4.2.8 Complete a detailed review of the hot work permit with the authorized employees and crew leader.

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

4.3 Contractors

- 4.3.1 Review and comply with all requirements of the safe work permit procedure.
- 4.3.2 Contractors shall ensure that all their crew(s) maintain compliance with all hot work requirements when performing hot work on Westlake's property.

4.4 Maintenance Crew Leaders

- 4.4.1 Ensure that only qualified and authorized employees perform hot work activities.
- 4.4.2 Ensure that employees who are found to have insufficient skills or understanding of hot work procedures do not perform hot work activities and receive retraining before conducting any hot work activities.
- 4.4.3 Ensure that the authorized employees utilize the required PPE for the hot work, including approved welding garment protection for the torso, arms, and hands and proper PPE to protect the face, head, and eyes.
- 4.4.4 Provide appropriate job safety instruction (i.e., potential hazards, job restrictions, etc.) to the authorized employees.
- 4.4.5 Notify the equipment owner or operations of the need to update the hot work permit when authorized workers are away from the job for more than 30 minutes.
- 4.4.6 Assign a qualified fire watch to the hot work site, when required, who will remain at the job site for 30 minutes following the hot work activities to monitor for stray sparks, smoldering fires, or other fire hazards. This time period will be continuous through all breaks and lunch periods. The equipment owner or area operations technician may extend this time period to 1 hour or longer.
- 4.4.7 After the hot work is complete and after the designated fire watch monitor time, notify the equipment owner or operations to close the hot work permit.

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

- 4.4.8 Review all applicable permits written for the hot work activities with the authorized employees performing the work and initiate dialog on potential hazards associated with the hot work.
- 4.4.9 Verify that all atmospheric monitoring, when required, has been completed and that all readings are within acceptable and approved ranges for hot work activities.
- 4.5 Authorized Employee
 - 4.5.1 Be qualified as a hot work permit receiver per the site's permit procedure.
 - 4.5.2 Be trained and qualified to perform the level of hot work assigned by the employer.
 - 4.5.3 Inspect designated hot work area(s) for combustibles and other hazards prior to beginning hot work activities.
 - 4.5.4 Utilize the required personal protective equipment for the type of hot work to be performed, including approved welding garment protection for the torso, arms, and hands and proper PPE to protect the face, head, and eyes.
 - 4.5.5 Be present and participate in all hot work job preplanning meetings.
 - 4.5.6 Review and understand all hot work permit requirements and ensure that necessary approvals have been granted before beginning any hot work activities.
 - 4.5.7 Follow the requirements and/or precautions documented on the hot work permit and ask questions as necessary.
 - 4.5.8 Inspect, operate, and handle equipment properly not to endanger lives and property.
 - 4.5.9 Perform hot work only when conditions are safe and stop if conditions change from the permitted conditions.
 - 4.5.10 Notify either the equipment owner supervisor or operations supervisor of the employees performing the work of an absence from the job of 30 minutes or more.
 - 4.5.11 Notify the equipment owner supervisor or operations when the hot work task is complete.

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

4.6 Fire Watch

- 4.6.1 The fire watch must wear a high visibility color vest and have appropriate fire extinguishing equipment, an alarm air horn, and a "plant radio," and be in a state of readiness throughout job completion.
- 4.6.2 The fire watch must be familiar with plant emergency procedures and trained in accordance with OSHA 29CFR1910.252.
- 4.6.3 The fire watch must look for fires in all hot work areas and try to extinguish them when capable, or otherwise contact Department Supervision via "plant radio."
- 4.6.4 The fire watch will keep the area wet when applicable and stop the hot work in the event of an emergency.
- 4.6.5 A fire watch must be maintained for a minimum of 30 minutes after all hot work operations are completed to monitor for stray sparks, smoldering fires, or other fire hazards. This time period will be continuous through all breaks and lunch periods. The equipment owner or area operations technician may extend this time period to 1 hour or longer.
- 4.6.6 The fire watch cannot leave the area when hot work activities have started without the supervisor assigning another trained person to relieve them.
- 4.6.7 The fire watch must be trained and qualified to monitor and observe hot work activities.
- 4.6.8 The fire watch must participate in all pre-job meetings, read the permit and additional fire watch responsibilities (listed on the back), and sign to accept the requirements.
- 4.6.9 A fire watch shall not perform additional tasks that would distract them from their duties as a fire watch.

4.7 Maintenance Superintendent

- 4.7.1 The area Maintenance Superintendent will be responsible for ensuring the Permanently Designated Hot Work Area is inspected annually per Section 5.5 of this procedure.

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

5.0 PROCEDURE

5.1 PREPARATION FOR HOT WORK

5.1.1 Hot work can only be permitted when the process or electrically classified area is free of combustible and/or flammable materials and/or combustible dusts and atmospheric monitoring is within acceptable ranges. If this cannot be accomplished, the hot work should be relocated to a designated hot work area outside the electrically classified or process area.

5.1.1.1 Eliminate ignition sources by selecting alternative work methods and equipment or moving the hot work location to a non-hazardous location.

5.1.1.2 Implement safeguards and controls (examples - fire blankets, enclosures, and wetting or cleaning surfaces)

5.1.2 If the object to be welded or cut cannot be readily moved, all moveable fire hazards in the vicinity will be taken to a safe place.

5.1.3 The work area must be tested, including all lower levels of elevated structures, sewers, trenches, and low spots near hot work sites. All readings must be recorded on the Safe Work Permit.

5.1.4 Atmospheric Monitoring equipment must be calibrated and function tested per the manufacturer's requirements. The calibration date, instrument name, and function test must be documented on the permit with the technician's signature.

5.1.4.1 Atmospheric testing will include:

5.1.4.1.1 Combustible gas (LEL) (=0%)
Readings greater than 0% require an approved variance per Westlake's Variance Procedure (HSP-111)

5.1.4.1.2 Oxygen (O²) (19.5 to 21.5%)

5.1.4.1.3 Toxic substances, 0% if the potential for

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

toxins exists during Hot Work.

5.1.4.1.4 All employees conducting atmospheric monitoring will be trained in the operation of atmospheric monitoring equipment

5.1.5 Guards or shields must be used to protect immovable fire hazards from heat, sparks, and slag.

5.1.6 Fire blankets may be used as protective curtains when necessary.

5.1.7 If sewers, trenches, and low spots are within a 35-foot radius of hot work, and a reasonable potential exists for the presence of flammable material, then they must be:

5.1.7.1 Covered with fire blankets, and wet down, or blanketed with foam.

5.1.8 All combustible materials should be relocated or precautions taken to prevent ignition of combustibles from thermal conduction or radiation when welding is performed on the other side of metal walls, partitions, ceilings, or roofs.

5.1.9 When welding at elevated heights, precautions must be taken to prevent sparks from contacting combustible materials below. (Example - Fire Blankets, wetting the area below, or a combination of both.)

5.1.10 Any pipelines or connections to drums or vessels containing hazardous materials must be disconnected or blanked before welding, cutting, or other hot work. (refer to the Control of Hazardous Energy Program HSP-317.)

5.1.11 Work areas must be cleared of all movable combustible materials, where practical, for a radius of 35 feet, including dry grass, sawdust, and other materials.

5.1.12 If hot work will be performed in a sprinkler area, the sprinkler system must be in service.

5.1.13 Hot work permits (Open flame or Non-flame) will become void, and work will shut down immediately if:

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

- 5.1.13.1 The plant emergency alarm system sounds.
- 5.1.13.2 Presence of uncontrolled flammable or combustible materials
- 5.1.13.3 Operations deems it necessary to stop the work.
- 5.1.13.4 Atmospheric monitoring results become unacceptable.
- 5.1.13.5 The presence of any fire
- 5.1.13.6 Any other changing conditions that should be addressed before continuing work
- 5.1.13.7 The permit may be reissued once the "All Clear" is sounded.

5.1.14 Hot work permits will follow the same requirements as HSP-200 Safe Work permit procedure.

5.1.14.1 It will be valid for the duration for the maintenance shift and must be re-validated following an absence greater than 30 minutes.

5.1.14.2 Must be present at the job site

5.1.14.3 No person shall issue a hot work permit to themselves.

5.1.16 All parties involved in the hot work process will utilize "Stop Work Authority" for identified hazards.

5.2 HOT WORK CONDUCTED IN PROCESS AREAS REQUIRES:

- 5.2.1 A fire watch shall not be assigned any other duties other than those stated in section 4.6.
- 5.2.2 Continuous atmospheric monitoring shall be required for the duration of the hot work activity.
- 5.2.3 All hot work will be conducted following OSHA's 29CFR 1910.252 "Welding, Cutting and brazing."

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

5.3 PREPLANNING REQUIREMENTS FOR HOT WORK IN PROCESS AREAS

- 5.3.1 A detailed description of the work will be submitted to Department Supervision far enough in advance for evaluation.
- 5.3.2 Preplanning will be the responsibility of the employee directly in charge of supervising the work.
- 5.3.3 When hot work is considered, Department Supervision must be contacted to obtain the hot work permit as specified on the Safe Work Permit.
- 5.3.4 Department Supervision will give approval if satisfied that hot work is necessary and can be accomplished without undue risk.
- 5.3.5 Where hot work will encompass multiple process areas, the owner of the pipeline, up to the first isolation valve, will be responsible for issuing the hot work permit with an approval signature from the affected unit supervisor in the comments section of the permit.
- 5.3.6 A fire watch must be assigned prior to issuing the permit if there is a potential for sparks to be produced and the sparks cannot be contained and controlled by the person performing the work.

5.4 NON-FLAME HOT WORK

5.4.1 Power Tools

- 5.4.1.1 Work requiring the use of electrical or pneumatic power tools that are not approved for Class I Division II areas (etc.) must be permitted for hot work with the designation of power tools only or Non-Flame Hot Work.
- 5.4.1.2 The Area Operations Technician must conduct a combustible gas check of the area in which the power tools will be used and document the readings on the permit.
- 5.4.1.3 Hot Work for Power Tools will not require the use of a fire watch unless sparks are produced which cannot be

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

controlled.

- 5.4.1.4 Permitted equipment will be immediately shut down by the operator in the event the plant emergency alarm system is sounded. The permit will become invalid and may be reissued once the "All Clear" is sounded.
- 5.4.1.5 An approved fire extinguisher must be obtained and located at the job site. Emergency fire extinguishers located throughout unit cannot be used to meet this requirement.
- 5.4.1.6 Portable Electronic Devices (PED), will follow the same requirements of "Power Tools" work with the exception of the requirement to obtain an approved fire extinguisher. No other requirements are required if the device is deemed intrinsically safe.

5.4.2 Vehicle Entry

- 5.4.2.1 A safe work permit will be issued for all vehicles and other internal combustion engine-driven equipment taken into an operating unit. (Example: trucks, forklifts, portable gasoline, diesel or electric pumps, powered compressors, light plants, etc.)
- 5.4.2.2 The Area Operations Technician must conduct a combustible gas check of the area in which the vehicle entry will be used and document the readings on the permit.
- 5.4.2.3 The Maintenance Crew Leader or vehicle driver will obtain clearance from the appropriate unit control room for the vehicle and/or equipment to enter the operating unit. The permit will be signed by the Department Supervision.
- 5.4.2.4 Permitted equipment will be immediately shut down by the operator in the event the plant emergency alarm system is sounded. The permit will become invalid and may be reissued once the "All Clear" is sounded.
- 5.4.2.5 Fixed point monitors or other means shall be used to

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

verify conditions on an established frequency where the potential for flammable vapors has been determined based on PHA information. A fire watch shall not be required.

5.5 DESIGNATED HOT WORK AREAS

5.5.1 Hot work permits are required in all plant operating areas, including tank farms, except:

5.5.1.1 Chlor - Alkali Maintenance Shop

5.5.1.2 PVC Maintenance Shop

5.5.1.3 VCM Maintenance Shop

5.5.1.4 Power and Water Maintenance Shop

5.5.1.5 CoGen Maintenance Shop

5.5.1.6 Central Maintenance Shop

5.5.1.7 Designated Shipping Areas

If equipment to be cut/welded has previously contained a flammable material, hot work permit requirements must be considered.

5.5.2 Areas specifically designated as construction sites unless located within the perimeter of a process area.

5.5.3 Designated Hot Work Area Requirements:

5.5.3.1 Designated area must have a sign at the entrance with the following wording: "Designated Hot Work Area."

5.5.3.2 Location is Fire Resistant, and combustibles are located at least 35 feet in all directions from the hot work area.

5.5.3.3 Openings or cracks in walls, floors, or ducts within 35 feet in all directions have been sealed to prevent the passage of sparks.

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

- 5.5.3.4 Ventilation is working properly.
- 5.5.3.5 The ground surface is concrete or other non-flammable material with no visible vegetation
- 5.5.3.6 Fully charged fire extinguishers are readily available and in proper working condition.
- 5.5.3.7 Permanently Designated Hot Work Areas shall be inspected and documented annually by the Maintenance Superintendent of the area to ensure the minimum requirements are continued by using Appendix 9.1 (Designated Hot Work Area Inspection.)
- 5.5.3.8 Designated hot work areas can not be located in areas classified as a Class 1 or Class 2 Hazardous Location as defined by this procedure.
- 5.5.3.9 Other areas approved by HSE

5.6 PROHIBITED HOT WORK AREAS

- 5.6.1 In areas not authorized by Department Supervision;
- 5.6.2 In the presence of uncleaned or improperly prepared equipment, drums, tanks, or other containers that have previously contained materials that could develop explosive atmospheres.
- 5.6.3 On unclean or improperly prepared tanks, pipes, vessels, etc., that may develop explosive atmospheres.
- 5.6.4 In building or process structures where fire protection systems are impaired, unless additional precautions are taken to ensure the area is safe for hot work operations.

5.7 HOT WORK IN CONFINED SPACES

- 5.7.1 Hot work in confined spaces will follow all requirements of Westlake's Confined Space Permit Program (HSP -202). When hot work is suspended for a period of time (30 minutes or greater) in a confined space (such as during breaks, lunch, or

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

overnight):

- 5.7.2 Atmospheric conditions must be verified and documented in the acceptable range prior to restarting hot work.
- 5.7.3 Hot work in confined spaces is prohibited if any of the atmospheric conditions are not within the acceptable ranges. No exceptions.
- 5.7.4 Torch valves must be closed.
- 5.7.5 The gas applied to the torch must be positively shut off at some point outside the confined space, and
- 5.7.6 The torch and hose must be removed from the confined space.
- 5.7.7 All electrodes must be removed from the holders;
- 5.7.8 The holders must be located so that accidental contact cannot occur, and
- 5.7.9 Combustion engine machines and electrical machines must be turned off, and electric machines must be disconnected from the power source.
- 5.7.10 Hot work inside of confined spaces requires continuous monitoring.

5.8 HOT TAP

- 5.8.1 A hot tap permit will be issued in addition to the safe work permit for all hot tap activities (see HSP-201 Hot Tap Permit).

5.9 HOT WORK ACTIVITIES IN NON-PROCESS LOCATIONS NOT IDENTIFIED AS "DESIGNATED HOT WORK AREAS"

- 5.9.1 A permit and a fire watch is required for spark-producing hot work in these areas where combustible material is present. A member of the hot work crew can be assigned fire watch duties. An approved fire extinguisher shall be located at the job site.

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

- 5.9.2 Hot work permits in these areas will be required to be issued during morning hours and must be complete by 12:00 PM. This will allow ample time after the work is complete to monitor the area for smoldering fires.
- 5.9.3 A certified permit writer, utilizing Appendix 9.2 (Hot Work Permit Map) will be responsible for issuing hot work permits in these areas. Common areas will be permitted by the current user of the area.
- 5.9.4 Hot work permits in these areas will be voided under the same conditions as section 5.1.14 of this procedure.

5.10 UNITED STATES COAST GUARD HOT WORK PERMIT

- 5.10.1 A USCG Welding and Hot-Work Permit is issued to Westlake. This permit authorizes welding, burning, or other hot work to be performed on marine docks while hazardous materials are being handled, stored, loaded, or discharged.
- 5.10.2 Requirements of Westlake's Safe Work Permit Program, Coast Guard's 33 CFR 126.15(c) "Handling of Explosives or Other Dangerous Cargoes Within or Contiguous to Water Front Facilities," and OSHA's 29CFR 1917.152 "Welding, Cutting and Heating (Hot Work)" must be met.
- 5.10.3 A copy of the USCG Welding and Hot-Work Permit must be posted in a protective holder at the marine docks at all times hot work is performed.
- 5.10.4 The shipping department will be responsible for maintaining a current USCG Welding and Hot Work Permit.
- 5.10.5 Captain of the Port
 - 5.10.5.1 Hot work is prohibited without the prior approval of the Captain of the Port (COTP) on a case-by-case basis. The following hot work activities must have the COTP approval:
 - 5.10.5.2 During gas-freeing operations
 - 5.10.5.3 Within 100 feet of bulk cargo operations involving the loading or unloading of flammable or combustible material

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

5.10.5.4 Within 100 feet of fueling (bunkering operations) Within 100 feet of explosives or 50 feet of other hazardous materials

5.10.5.5 On vessels having on-board explosives or other hazardous materials or cargoes (requires a one-time permit)

5.10.5.6 On cargo piping or appurtenances leading to or from the loading dock area

5.10.6 Gas Free Certificate

5.10.6.1 If the COTP requires that a Gas Free Certificate be issued for welding or hot work on the marine dock, a Gas Free Certificate and OSHA Form 74 "Log of Inspections and Test by Competent Person" must be issued by an NFPA Certified Marine Chemist.

5.10.6.2 Requirements of Westlake's Safe Work Permit Program and the National Fire Protection Association's (NFPA 306) "Standard for the Control of Gas Hazards on Vessels" must be met. An NFPA Certified Marine Chemist or a competent person is responsible for ensuring compliance with these requirements.

5.10.7 NFPA Certified Marine Chemist

5.10.7.1 Must hold a valid certification card issued by the NFPA in accordance with the "Rules for Certification of Marine Chemists."

5.10.7.2 Is responsible for performing all the duties of an Area Technician

5.10.7.3 Must physically inspect and test for gas-free conditions at each affected operation, ensuring compliance with OSHA and NFPA requirements before issuing a Gas Free Certificate

5.10.7.4 Determine flammability before welding, cutting, or heating is commenced on any surface covered by a

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

preservative coating. (If preservative coatings are determined to be highly flammable, they must be stripped from the area to be heated to prevent ignition.) Must complete, then issue the Gas Free Certificate, OSHA Form 74, and Westlake's hot work permit to marine dock employees before any hot work commences on the marine dock

5.10.8 The Gas Free Certificate must be signed by:

5.10.8.1 A NFPA Certified Marine Chemist; and

5.10.8.2 Shipping Supervision.

6.11.7.3 Copies of the Gas Free Certificate, Westlake's safe work permit, hot work permit, and any other necessary permits will be posted in the vicinity of the affected operation (See Safe Work Permit Procedure).

6.0 TRAINING REQUIREMENTS

6.1 Training will be conducted initially and when changes in the workplace or technology require modification of the Hot Work Procedure. Refresher training shall be required if there is evidence of a lack of knowledge regarding the hot work procedures or practices identified through the site hot work program assessment.

6.2 The training will be documented and stored in an approved database (i.e., Westlake's Learning Management System).

Training content will be determined by and appropriate for designated roles and responsibilities associated with hot work activities. (i.e., those individuals who are responsible for conducting atmospheric monitoring must be trained in the operation of atmospheric monitoring equipment. Those designated to be fire watches must be trained in all duties and operation of equipment utilized while serving as a fire watch).

6.3 All Westlake employees and contractors involved in hot work operations will be trained on the site's hot work procedure, including the roles and responsibilities of the hot work permitting process.

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

- 6.4 Westlake will provide location-specific hot work requirements to contractors conducting hot work.

7.0 PROGRAM REVIEW

- 7.1 An evaluation of the effectiveness of the Hot Work Program shall be conducted annually and shall include:
- 7.1.1 Review a sampling of permits on a periodic basis.
 - 7.1.2 Periodically interview individuals involved in hot work operations.
 - 7.1.3 Periodically conduct observations of hot work jobs.
 - 7.1.4 Documentation of identified gaps.
 - 7.1.5 Documentation of corrective actions taken to address gaps.

8.0 RECORDKEEPING

- 8.1 All open flame hot work permits shall be retained for a period of three years. Electronic copies of the permit are acceptable. Operating units should retain the permits within the area for one month to allow review by USIT per Section 7.0 of this procedure. After the one-month period, the permits shall be sent to the HSE department unit representative, who will ensure that permits are retained for the three-year period.
- 8.2 Designated Hot Work Area Annual Inspection (Appendix 9.1) shall be retained within the area by the responsible Maintenance Superintendent for the current year plus one.

9.0 REFERENCES

- 9.1 29 CFR 1915.14
- 9.2 29 CFR 1917.152
- 9.3 29 CFR 1910.252
- 9.4 HSP – 111 Variance Request Protocol
- 9.5 HSP – 200 Safe Work Permitting
- 9.6 HSP – 201 Hot Tap
- 9.7 HSP – 202 Confined Space Permitting
- 9.8 HSP – 317 Control of Hazardous Energy

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

10.0 APPENDICES

- 10.1 Designated Hot Work Annual Inspection Checklist
- 10.2 Hot Work Permit Map

Revision History

Rev	Changes	Approved	Date
6	Added section 5.9.1.1 to include hours for hot work in non-process buildings MOC #: 445	H. Garner	6/19/25
5	1. Updated Section 8.0 to reflect PSM requirements. Hot Work retention period is 3 years. Electronic copies are acceptable. 2. Updated Appendix 10.2 (Hot Work Map) to include substation areas that were not identified on previous map. MOC #: PLQ8.EHSSPSM.053124.78464	H. Garner	6/7/24
4	3. Added definition "Fire Watch" (Section 3.10), 4. Reorganized procedure numbering, 5. Expanded Section 4.4.6 and 4.6.5 to require fire watch monitoring continuous through all breaks. Equipment owner may extend requirement to 1 hour or longer. 6. Added Section 5.5 designated hot work area requirements and Appendix 9.1 (DHWA Checklist) 7. Added Section 7.1 to require retention of Hot Work permits for a one year period. 8. Added Appendix 9.2 (hot work area permit map) MOC #: PLQ8.EHSSPSM.063024.77393	H. Garner	03/11/24
3	Review; Added "or other areas approved by HSE to Designated Hot Work Areas	H. Garner	1/20/20
2	Westlake Branding. Addition of Revision History. Added responsibility to Equipment Owner 4.1.6	H. Garner	3/15/2017

HEALTH AND SAFETY PROCEDURE 203 – Hot Work

Appendix 10.1 (HSP-203)

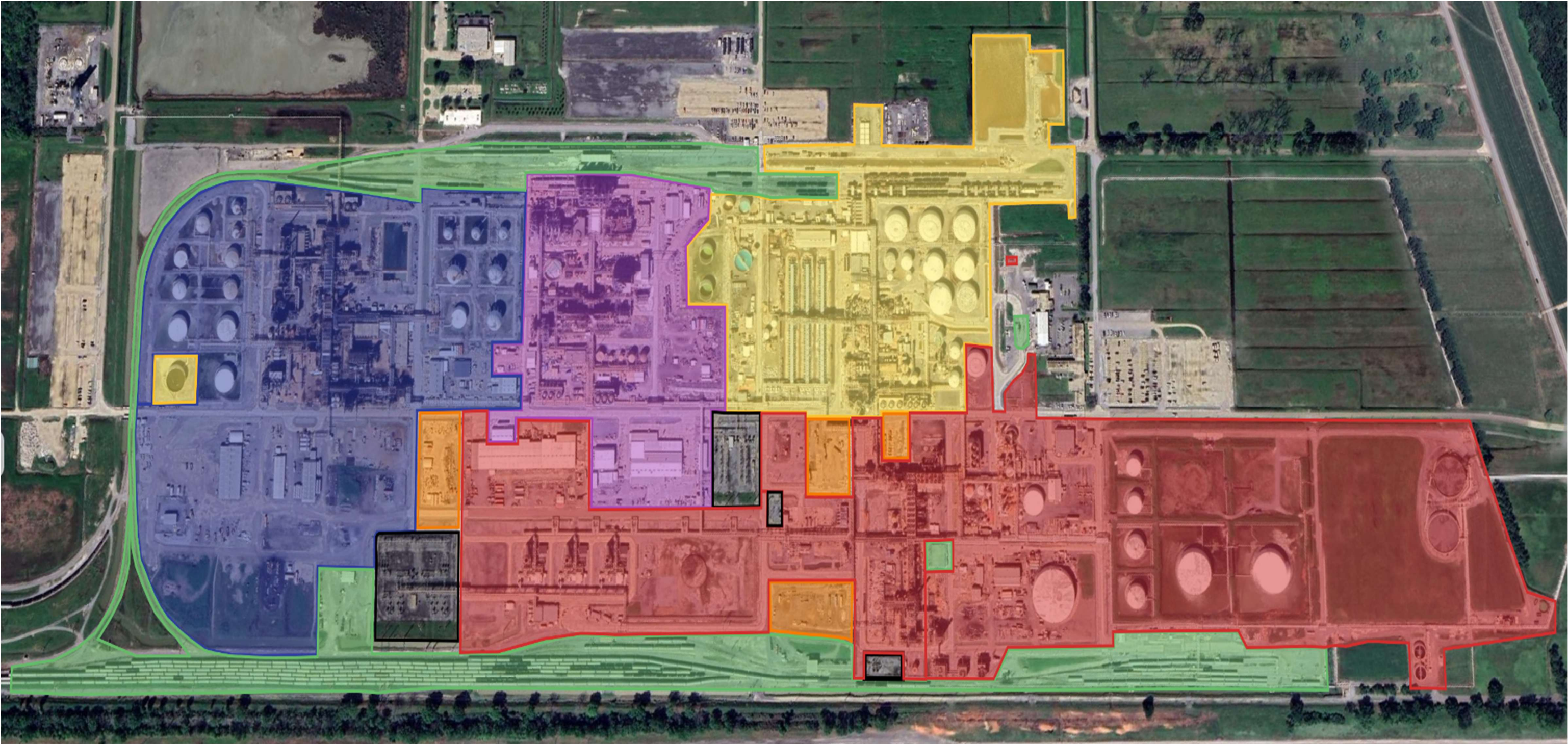
Designated Hot Work Area Annual Inspection

Date of Inspection:	
Inspected By:	

Instructions: To be a Designated Hot Work Area it is understood that the risk for fire is minimized by ensuring the following at a minimum is considered on an annual basis:

1. Are "Designated Hot Work Area" signs in place and unobstructed?	Yes / No
2. Are combustibles located at least 35 feet away from the hot work in all directions?	Yes / No
3. Are there any openings or cracks in walls, floors, or ducts within 35 feet in all directions?	Yes / No
4. Is ventilation working properly?	Yes / No
5. Is the ground surface concrete or other non-flammable material with no visible vegetation?	Yes / No
6. Are there fully charged fire extinguishers readily available and in proper working condition?	Yes / No

NOTE: This inspection shall be kept on file by the area Maintenance Superintendant for the current year plus one.



	CA Unit
	PVC Unit
	VCM Unit
	CoGen / Water Unit
	Shipping Dept.
	Electrical Dept.
	Common Areas