

Catlettsburg Refining, LLC

2021 Fall Turnaround Safety Management Plan



PURPOSE

The purpose of the MPC Catlettsburg TAR Safety Management Plan is to provide a blueprint for performing the turnaround work safely and efficiently. The Catlettsburg Refinery is committed to performance excellence achieving zero incidents. The Catlettsburg Refinery's objective for the 2021 TARs is to achieve zero incidents and injuries.

RESPONSIBILITIES

MPC Personnel

Refinery Leadership Team

- Participate in the TAR housekeeping audit.
- Provide opening remarks for the TAR Boot Camp with TAR MPC and Contractor Supervision.

TAR Leadership

- Participate in the TAR Housekeeping Audits.
- Attend and actively participate in the TAR Leadership Boot Camp.
- Attend/Participate in the TAR Contractor Safety Meetings.
- Periodically attend MPC/Contractor shift start "toolbox" meetings.
- Present themselves as a positive safety champion in the field.
- Establish expectations for safe work.
- Resolve safety concerns.
- Promote and show support for MPC safety initiatives.
- Lead by example.
- Promote Stop Work Authority

TAR Coordinators/Operations Leadership

- Participate in all TAR housekeeping/safety audits.
- Attend the TAR Leadership Boot Camp.
- Attend/participate in TAR contractor safety meetings.
- Present themselves as a safety leader in the field.
- Support and expect contractors to execute work safely.
- Assist with the resolution of safety issues.
- Lead by example.

TAR Unit Operator

- Lead and actively participate in joint jobsite visits.
- Serve as authorized permit writer.
- Participate in daily housekeeping walkthrough audit.
- Prepare equipment to ensure that it is safe for the planned work.
- Conduct atmospheric testing at the job site area.
- Serve as the Confined Space Entry Supervisor.
- Remain available for consultation during maintenance work.

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MPC Safety Professional

- Develop and provide site specific onboarding training for contractor personnel.
- Assist with the resolution of safety issues and interpretation of site specific SWI's.
- Lead daily housekeeping walkthrough audits.
- Attend and actively participate in the TAR Leadership Boot Camp.
- Attend and actively participate in TAR contractor safety meetings.
- Be visible, engaged and available in the field.
- Complete weekly FAST audits.
- Correct unsafe acts or conditions.
- Resolve safety issues at the field level.
- Wear easily identifiable hard hat with MPC Safety rocker.

MPC BBS Observer

- Perform BBS observations.
- Attend and actively participate in TAR contractor safety meetings.
- Be visible, engaged and available in the field.
- Present themselves as a safety leader in the field.
- Assist with the resolution of safety issues.
- Correct unsafe acts or conditions.
- Actively participate in daily contractor toolbox meetings.

Contractor Personnel

Leadership

- Encourage craft personnel to participate in BBS process.
- Ensure site specific training is complete, documented and employees can demonstrate understanding.
- Ensure Safe Work Permit process is being followed.
- Participate in daily housekeeping walkthrough audits.
- Promptly correct observed unsafe acts and conditions.
- Lead by example.
- Enforce MPC Life Critical Disciplinary and Accountability Policy.

Contractor Site Foreman

- Ensure all injuries and near misses are reported immediately to MPC safety, TAR coordinators and operations using the MPC process and document on MPC provided forms.
- Report hazards encountered while performing work.
- Follow all MPC Safe Work Practices.
- Ensure the proper PPE and equipment is available, inspected and properly used during the accomplished work.
- Follow all MPC housekeeping standards.
- Conduct daily documented audits to ensure employees and follow safety policies and procedures.

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- Review the jobsite JHA, identify proper hazard mitigation measures and assign responsible persons.

Contractor Safety Professionals

- Develop and present daily toolbox safety meeting.
- Remain highly visible in the field wearing the provided yellow safety vest.
- Strive to resolve safety issues at the lowest level when they arise.
- Complete FAST audits.
- Actively participate in the daily housekeeping walkthrough audits.
- Conduct safety training.
- Wear easily identifiable hard hat with Contractor Safety rocker.

Contractor BBS Observer

- The BBS observer staffing plan will be based upon the scope of the TAR, the experience of TAR workforce, the density of the contractors, and the proximity of units involved in the TAR.
- The contractor observers will attend the Catlettsburg BBS training class prior to assignment.

REQUIREMENTS

1. Site Access

- Prior to arriving at the Catlettsburg refinery, a few pre-requisites must be met before a contractor badge will be issued.
 - DISA Compliant
 - Perform a Background Check
 - Complete TWIC enrollment
 - Complete Site-Specific Contractor Orientation
 - Proof of TWIC Card and RTC Card must be presented at CRLLC England Hill Badge Station
 - Refinery Access ID Card issue

1.1 DISA Compliant

- Catlettsburg Refinery utilizes the following to provide compliance with our Drug and Alcohol Program:
 - The DISA Contractors Consortium Program
 - The DISA Contractor Consortium Hair Testing Program

1.2 Background Check

- Contract workers must pass a background security check from one of the following background check providers:
 - DISA Global Solutions
 - First Advantage
 - Guidepost Solutions LLC
 - S2 Verify

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- Safety Council of Texas City

- Effective January 4, 2016, Marathon will no longer accept a TWIC card to meet the background check requirement.

1.3 Complete TWIC Enrollment

- Call the Security Badging Trailer at 606-921-2982 for information on TWIC and to make an appointment to set up.

1.4 Site-Specific Contractor Orientation

- The Regulatory Training Center (RTC) provides personnel computer based site-specific contractor orientation that is required prior to entering the Catlettsburg refinery. The RTC is open for training from 7 a.m. to 4 p.m. Monday through Friday.
- Registration forms are available on Regulatory Training Center's web site.
- Completed registration forms should be faxed to the RTC at 606-921-2993.
- Contractors must pre-register. Due to limited space, drop-ins may not be accommodated. Hours of operation for RTC are 7 a.m. to 4 p.m. Monday through Friday.
- There are 41 reciprocal sites to the RTC in the United States where a contractor may obtain Catlettsburg site-specific training. In some cases, this may be a more convenient alternative. These sites are listed on the Association of Reciprocal Safety Councils' Web site.
- The site-specific training is web-based. If interested in obtaining your training at one of these sites, contact them directly so that they can download the Catlettsburg training modules and schedule the training.
- In addition to the RTC Training listed above all contractor employees must also have completed OSHA 10 or OSHA 30 within the last year and be able to present proof of training. A Basic Plus class can be completed at RTC in lieu of the OSHA 10 or OSHA 30 class. A brief refresher for Basic Plus is required within 13 months of the Basic Plus training.

1.5 Refinery Access ID Card

- Upon receiving the TWIC card and successful completion of the necessary training; the contract worker is then required to go to the Catlettsburg Refining England Hill Badge Station to obtain their refinery access ID card.

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- Individuals will need to bring all documentation. Failure to provide valid documentation will result in non-issuance of contractor badge. Required documentation is as follows:
 - RTC Picture ID
 - TWIC Card
- During the hire in process all contract workers will be issued a Catlettsburg refinery Identification/Proximity card containing their photo. The contract worker must first present his/her Transportation Worker Identification Credential (TWIC) and a valid training card from the Regulatory Training Center (RTC) before a refinery identification/proximity card is issued
- Contract workers who do not have a TWIC will be issued a Lenel “TWIC Escort Required” orange colored badge. Those with a “TWIC Escort Required” badge must be escorted by a TWIC holder at all times while inside the facility gates.
- Those serving as the escort must complete the TWIC Escort Log and provide it to the security officer upon requesting entry. Escorting is defined as: “Continuous physical proximity to and visual contact with the escorted individual to enable the TWIC holder to witness the escorted individual’s actions.”
- Contract workers are required to have their Catlettsburg identification card on their person at all times while on company property.
- When asked by refinery Security, or the U.S. Coast Guard, all contract workers must provide their TWIC immediately if at the entrance gate and within ten minutes if inside the facility.
- Contractor access to the complex will be through gates selected by the CRLLC contractor management.
- Security will verify that each contractor produces an identification card and observes that each contractor scans in at the appropriate card reader.
- Contracts will notify security when their employee has completed their on-site job assignment or has been terminated.
 - A contract worker entering the refinery on a bus is required to hand their badge to the officer located at the Turnstile Scan Station before entry is allowed into a bus bullpen.
 - If a Turnstile Scan Station is closed the contractor worker must scan in at the North Gate.
- All contractor vehicles, both private and company owned, requesting to be driven past the refinery gates, in addition to possessing a valid vehicle identification

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card, must also be marked on both the sides of the vehicle with their company name and/or logo. The lettering for the vehicle identification signs must be readable at a reasonable distance and be in good repair. Markings not easily read or recognized due to wear will not be acceptable for use.

1.6 What Contractors Need to Know Prior to Coming On-site:

- a) Smoking – Smoking is NOT allowed within the refinery except in designated areas. Violation of this rule will be cause for immediate dismissal.
- b) No Drugs or Weapons – Illegal drugs, unauthorized alcohol, weapons and firearms are prohibited on refinery property. All individuals are subject to search while on company property.
- c) Facial Hair Facial Hair Policy– Beards are prohibited within the refinery. Mustaches and short sideburns are permitted if they do not interfere with the facial seal of protective breathing devices.
- d) Cell Phones Cell Phones and Electronic Devices – These devices are not allowed in process units. The use of cellular phones while driving a vehicle is prohibited. The site has an approved process for company issued cell phones and must be approved by the MPC Safety Supervisor.

1.7 Safety Equipment

- Standard Personal Protective Equipment – PPE required for entry into a process unit and/or tank farm areas is as follows:
 - Hard Hat with chemical splash goggles attached
 - Safety Glasses with side shields
 - Hearing Protection
 - FR Clothing
 - Gloves
 - Personal H2S Monitor
 - Safety Toed shoes with minimum 1/4 inch heel
 - Gloves on the person at all times with minimum ANSI/ISEA Level 3 cut protection in the palm, fingers and thumb.
- Certain areas/jobs may require additional PPE which shall be worn in accordance with posted signs or as stated on the safe work permit. Contractor PPE is not supplied by CRLLC.

1.8 Unit Access Restrictions During Start-up and Shut Down

- All non-essential MPC and contractor personnel are restricted from a unit that is in upset conditions or is undergoing a startup or shutdown until the unit is deemed “safe” or operating normally and the area is checked for leaks, vapors and any other unusual conditions.

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1.9 Vehicle Operation

- The speed limit on company property is 15 MPH unless otherwise posted. The posted speed limit must be obeyed on all public roads.
- All employees and contractors shall park their personal and/or company vehicle in authorized parking areas only.
- Use of seat belts and shoulder harnesses is required in motor vehicles equipped with them at any time the vehicle is in motion on a public roadway. When driving on company property, seat belt use is required for all employees and contractors while driving Motor Vehicles equipped with seat belts. If the motor vehicle is not equipped with seatbelts, personnel must use caution while driving. Seat belts and/or shoulder harnesses shall not be removed from any vehicle which had them installed from the factory.
- All motor vehicles with seat belt shoulder harnesses shall have hi-visibility (lime/green) reflective seat belt covers on them. Covers shall be 10” length or greater.
- Use of mobile communication devices, except for two-way communication systems, is prohibited while driving a motor vehicle inside the refinery. Mobile communication devices may be used inside the refinery if the vehicle is pulled off the road and stopped. Passengers may use mobile communication devices while the vehicle is in motion on a non-permitted roadway. Use of mobile communication devices while on public roadways is strongly discouraged and should be limited to conversations that are essential to the daily operations of the company.

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2. Contractor Safety Management Plan

Requirements:

- All contractor companies will develop a Catlettsburg Refinery Site Specific TAR Safety Management Plan to address hazard mitigation measures based on their scope of work. In order to provide time for a thorough review the Contractor TAR Safety Management Plans must be provided to the MPC safety department 4 months (dependent upon notification) prior to the mechanical start date. The TAR Specific Contractor Safety Management Plan shall be revised to include any changes in work scope. The content required for the contractor safety management plan is contained below.



- The information below should serve as the blueprint for contractor safety management plan development:
- Upon development of your company's site-specific safety management plan, it is the Catlettsburg Refinery's expectation that the plan is communicated and documented to all employees.
- The Catlettsburg Refinery Safety Department shall prepare a daily safety bulletin that includes behavioral based observations and other information obtained from the previous shift. It is the expectation that this information be provided to all contractor employees in their daily toolbox meetings, and a plan to communicate this information must be developed.
- Defined safety roles and responsibilities for all levels of contractor leadership (management, superintendents, safety reps, foremen, craft, etc.).
- Defined methods for auditing internal compliance with contractor and MPC safety work practices.

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3. Review Process of Contractor Safety Management Plans

- The Catlettsburg Refinery TAR Safety Lead(s) will request each contractor company working the upcoming turnaround to submit a safety management plan. The plan requirements are outlined in Turnaround Best Safety Practices RSP, RSP-1100-001. The requested safety management plans will be tracked on date requested and date received. Each contractor company is required to submit a safety management plan or job hazard analysis depending on the turnaround job scope. This information is a requirement to perform work at Catlettsburg Refinery.

- Once the contractor has submitted their completed safety management plan to MPC, they will be provided feedback on their plan. This feedback should include positives and opportunities for improvements on their plans. The contractor safety management plans will be reviewed using the requirements found in Turnaround Best Safety Practices RSP, RSP-1100-001 and ensures the plan does not violate any Catlettsburg Refinery Life Critical safety rules. Once all information in the document is reviewed and found to be in compliance with MPC guidelines, the safety management plan will then be approved.

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4. Training

TAR Boot Camp

- All contractor companies will attend the Catlettsburg TAR Leadership Boot Camp prior to the start of TAR. The Catlettsburg Refinery will utilize the Turnaround Best Safety Practices RSP, RSP-1100-001. Additionally, Catlettsburg will review previous TAR best practices.



- Attendance at the TAR Bootcamp is mandatory and must be completed prior to the start of the turnaround.
- Contractor Superintendents, Contractor Foremen (local and travelers), MPC / Contractor Safety Representatives, and third-party turnaround field coordinators shall participate.
- TAR Bootcamp meetings conducted by the site safety personnel shall include the following:
 - Overview of safety roles and responsibilities
 - TAR Leadership Expectations
 - Contractor Leadership Accountability
 - Housekeeping Expectations
 - Life critical safety procedures and expectations
 - Injury and Incident Reporting and Management Procedures
 - Near Miss Reporting
 - Personal Protective Equipment (PPE) requirements
 - Safety meeting schedules for the upcoming turnaround
 - Inclement weather and lightning procedures in place for the TAR
 - Site emergency and mustering procedures
 - Safety1 and Process Safety Leadership Skills (e.g., JHA , Stop Work Authority, Go No Go, etc.)
 - BBS Process in place for the TAR
 - Location of Safety Information (e.g., Contractor website, Safety Policies, Bulletins)
 - Safe Work Permits
 - Joint Job Site Visits Expectations
 - Job Safety Analysis Expectations
 - Energy Isolation for TAR (e.g., Perimeter blinds, group lock out etc.)
 - TAR Specific Hazards
 - TAR Emergency and Mustering Locations
 - BBS – based subjects

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- All attendees of the TAR Bootcamp will be required to provide signatures on an MPC training documentation form that will be maintained by the on-site training department.
- The Catlettsburg Refinery 2021 TAR Bootcamp Presentation is provided below:



5. Life Critical Safety Rules

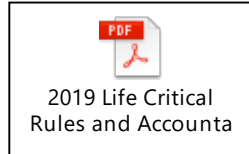
- During the 2021 TAR, strict adherence to the CBG Life Critical Safety Rules is mandatory. These rules are intended to ensure that employees and contractors during the 2021 TAR are held consistently accountable for compliance with the Life Critical Safety Rules as follows:
 - Safe Work Permit - Obtaining and working under a valid Safe Work Permit when one is required.
 - Fall Protection - Protect themselves from a fall from elevated locations. Fall protection is required when performing maintenance or construction activities 4 ft or higher. Self-Retracting Lifelines (SRL's) are required to be leading edge rated.
 - 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, de-energized, 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. – applicable to the Alky unit.
 - Cranes and Lifting - Comply with refinery crane and rigging safe work practices.

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- Electrical Safe Work Practices - Strict adherence to Electrical Safe Work Practices in RSP-1162-000, PPE requirements, and required Work Permits when working on or operating energized electrical equipment.
- Deviations from the Life Critical Safety Rules may result in up-to termination; however, Life Critical Rules violation discovered during a BBS observation will be correct on-site with no discipline to follow.



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6. Overview of Key Refinery Safety Procedures for TAR

Communication Plan

- All contractor companies participating in the 2021 TAR will be provided access to the Catlettsburg safe work instruction via the engineering webpage. They may also access any site safety information from any networked computer inside the refinery. SDS's will be available following this same path.

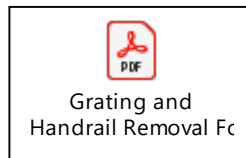
Equipment Specifications for Fire Watches

- All craft personnel assigned as fire watches will be trained and demonstrate proficiency in the duties and responsibilities of a fire watch. All contractor companies employing fire watches will ensure these craft persons demonstrate hands-on use of fire extinguishers, fire monitors, fire hoses, etc.
- Fire watches at the Catlettsburg Refinery responsibilities are as follows:
 - Shall print their legal name on the space provided on the reverse side of the safe work permit.
 - Shall be knowledgeable in extinguishing small fires and be trained on the equipment being used, hot work permit procedure and of the hazards involved in the work.
 - Shall know how to sound an alarm or contact emergency personnel in the event of a fire or changing conditions.
 - Maintain visual surveillance of the vicinity of the hot work for sparks, glowing embers, and small fires which the welder or person performing the work may not be able to see.
 - A fire watch will be maintained while work is in progress and for a minimum of 30 minutes after welding has ceased, if combustible materials are present and have the possibility of flare up.
 - Stop all activities when the Whelen System or HF Alky unit alarm is activated or when he/she observes a deviation from the permitted activity (cancel active permits).
 - Shall wear a flame resistant high-visibility vest while performing Fire Watch duties.



Removal of Grating, Handrails or Decking

- The Catlettsburg Refinery utilizes a decking / railing removal form. This form (along with a safe work permit) is required before any grating, handrail or decking is removed. A hard barricade, hole cover, etc. with appropriate signage will be used for any holes that may result in a fall hazard. Any holes created must be protected to prevent any potential fall hazards.

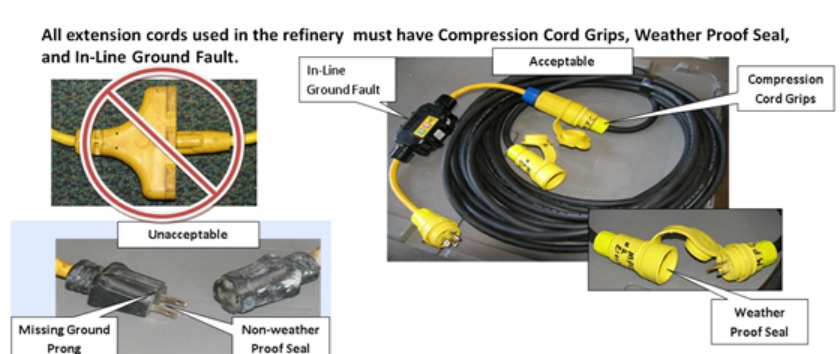


Assured Equipment Grounding Conductor Program

The Catlettsburg Refinery recognizes the Electrical Safe Work Practices RSP, RSP-1162-000 as their own Electrical Safe Work Practice SWI. Minimum requirements for the assured ground program is contained within this document.



- The Assured Equipment Grounding Program is an ongoing program of verifying the integrity of the equipment grounding conductor of cord sets and cord-and-plug connected equipment. Requirements for an assured equipment grounding program can be found in Article 590.6(B)(2) of the 2011 edition of the National Electrical Code (NFPA 70).
- The Catlettsburg Refinery has established an Assured Grounding Program that is contained within the Electrical Safe Work Practices (RSP-1162-000).
- As a reminder, the only temporary electrical cords and their connections are provided below:



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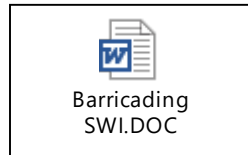


- The fatigue risk management plan provided below details who and how often persons working the TAR are required to take a rest day. This procedure will be closely monitored and strictly enforced.



Barricading

- The Catlettsburg Refinery utilizes a specific Barricading Safe Work Instruction for the purpose to prevent injury and equipment damage by restricting access to hazardous areas and providing visual warnings of such hazards. This Safe Work Instruction has been provided to all contractors in which training has been completed. It is the expectation that all contractor and MPC employees follow the standards set in place for effective barricades.



7. Injury & Illness Reporting Procedure

- It is the expectation of the Catlettsburg Refinery based on the Injury/Illness Reporting SWI that any injury, incident or near miss is promptly reported to your supervisor and MPC supervision. The TAR will adhere to RSW-EP-AS-SWI-02 for injury/illness reporting. Along with the attached Injury/Illness Reporting SWI, sufficient training has occurred with the contractor safety representatives in the contractor safety meetings has been completed on how to properly and promptly report any injury, incident or near miss. The instructions and flow chart will also be present in the TAR Onboarding for every contractor. The site injury and illness reporting safe work instruction is contained below.



8. Personal Near Miss Reporting Requirements

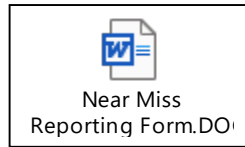
- In addition to MPC's Injury & Illness Reporting Procedure, Catlettsburg Refinery also expects all near misses to be reported and documented. Near miss reporting can be used to identify potentially hazardous conditions and allow for mitigation before an injury or other adverse event occurs.
- Anonymous Near Misses may also be reported to the Contractor Safety Coordinator Brooke Williams.

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- A designated drop-box with blank personal near miss forms will be located inside the safe work permit locations. A master copy of all personal near-miss reports will be kept by the TAR Safety lead. The Catlettsburg Refinery personal near-miss form can be obtained below.



9. Behavior Based Safety Program

- It is the expectation that quality BBS observations are conducted. BBS observations will be made using the existing Catlettsburg site process.
- Only BBS observers trained in the site process should prepare observations.
- BBS observers shall be visible in the field and wear a highly reflective yellow observer vest for easy identification.
- At the end of shift, observers will turn in their observations to the facilitator and/or co-facilitator. These observations will be entered into the BBS database and data will be compiled for the next day's safety bulletin for refinery wide distribution.
- The Safety Supervisor will determine the 2021 TAR BBS Observer staffing plan.
- The safety trends and focus areas will be compiled and placed into a BBS Safety bulletin. These bulletins are created daily by the BBS Facilitator and reviewed by either the Safety Supervisor or Safety Lead. These bulletins are distributed daily refinery wide to operations and all contractors. It is expected that all contractors and operations groups review the bulletin with their workforce for discussion.

10. TAR Safety Meetings

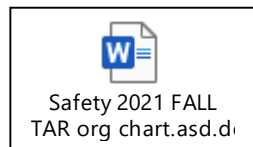
- Safety Representatives from each company participating in the TAR will attend the turnaround progress meeting. At the conclusion of the normal business meeting, safety professionals will discuss any safety concerns/issues from the previous shift. Any contractor injuries will be review by either the BBS facilitator and/or the contractor company safety representative of the company whom incurred the injury.
- During the TAR Progress meeting:
 - A review safety statistics, BBS observation trends, safety focus items, and other obstacles that they may be facing with their crews and/or work area.
- On nightshift, the MPC TAR Safety Professional may at his/her discretion establish a separate safety meeting that will normally occur after the TAR progress meeting. All nightshift safety professionals will be expected to attend.



- The safety trends and focus areas will be compiled and placed into a BBS Safety bulletin. These bulletins are created daily by the BBS Facilitator and reviewed by either the Safety Supervisor or Safety Lead.

11. MPC Staffing Plan

- See attached TAR Organizational Chart.



11.1 Contractor Safety Professional Staffing Plan

- To ensure that the contractor safety programs are implemented effectively, each contractor shall maintain a minimum ratio of Safety Professionals as reflected below:

Table 1.3.2: Contractor Safety Professional Staffing Requirements

Safety Professionals (Number)	Anticipated 'Hands on Tools' Crew Size
Dual Role	0-20 personnel
1	21-60 personnel
2	61-150 personnel
3	151-400 personnel
TBD based on the scope of work	>400 personnel

- Primary contractors shall include all sub-contractor personnel in their overall 'Hands on Tools' crew size headcount for determining the number of Safety Professionals required.
- Based upon complexity of work and past performance, the numbers in Table 1.3.2 can be adjusted.
- Dual Role: If a contractor company has 20 or fewer individuals onsite, they will not be required to have a dedicated Safety Professional. Those contractors shall designate one person as a 'Safety Representative' to act as a point of contact for the refinery Safety Department and will be expected to attend all required meetings in addition to their normal job tasks.
- The Lead Safety Professional shall meet the following criteria:
 - (a) Minimum of an Associate Degree in Safety, or
 - (b) 5 Years of relative experience in safety, or
 - (c) Safety Certification (e.g., CIH, CSP, OHST, CHST, CSST).

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- Additional Safety Professionals, if required, shall meet the following criteria: OSHA 30-hour Certification.

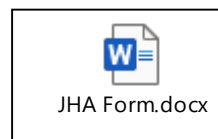
12. Safe Work Practices/Work Permit Plan

Safe Work Permit Plan

- A safe work permit is required for all physical performed within the refinery. The location of the safe work permit rooms has been identified on the CBG TAR plot plan.
 - FCC Safe Work Permit Locations – See Logistics Plan
 - Alky Safe Work Permit Locations – See Logistics Plan
 - Cumene Safe Work Permit Location – TBD by Operations

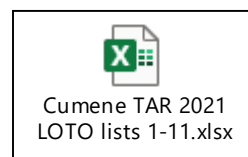
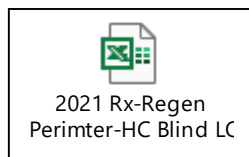
Safe Work Permit Obtainment

- Contractors will arrive at the LOTO shack and install locks/signs unit sign-in sheet or scan as applicable.
- Servicing Group Rep arrives at the designated permit shack location to receive permit.
- Section permit writer ensures permit scope and PPE are correct.
- Section Operator conducts Joint Jobsite Visit, confirms completed JHA, RAM score for invasive work and signs permit.



Isolation Strategy

- Below is a basic isolation plan for the 2021 TAR:



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- The LOTO sign-in procedure for the 2021 TAR is as follows:
 1. Sign into the unit
 - Servicing Group Rep will provide the list of signed in employees or employees scan in.
 2. Hang Lock on box
 - Servicing Group Rep will hang lock on Operation's Lock Box
 3. Place key in Contractor Lock Box
 - Servicing Group Rep will place key in Contractor Lock Box
 4. Service Group Representatives hang locks on Contractor Lock Box
 - Servicing Group Personnel hangs locks on Contractor Lock Box
 5. Go to Work
 - Servicing Group Rep verifies sign in
- The LOTO sign-out procedure for the 2021 TAR is as follows:
 - Work complete
 - Servicing Group Rep verifies sign off
 - Remove Lock from Contractor Lock Box
 - Servicing Group Personnel will remove lock from Contractor Lock Box.
 - Sign out of Area
 - Servicing Group Personnel will sign out of the unit or scan out.

Isolation Walk-Down Schedule

- The walk-down schedule will initially be conducted during operations TAR training in which operations walk down each listed blind. However, before the TAR maintenance begins, all servicing group/craft representatives will walk down the isolation list and complete the proper control of hazardous energy as listed in the Safe Work Practices. The schedule will be communicated at a later date.

Joint Job Site Visits

- A Joint Job Site Visit is a meeting between an Owning Department representative and at least one servicing representative of each party working off of the permit at the specific location where the job will be conducted. A Joint Job Site Visit is required prior to any Safe Work Permit being issued.
 - Initial Joint Job Site Visit
 - The meeting discussion will address the work scope and all safety aspects of the permit.



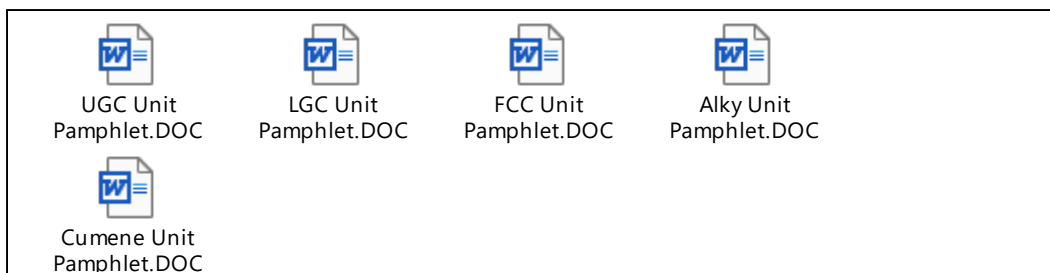
- The servicing representative that attends the Joint Job Site Visit is responsible for conveying the information covered in the discussion to all members of their work party. This information discussion shall be repeated for any new crew members prior to their beginning work.
- Post Joint Job Site Visit
 - Review of the job site, during the permit sign off period, to assure that clean-up is complete and that equipment has been restored to a safe condition.
 - The permit writer shall determine post joint-job site visit requirements for all work other than hot work, invasive and confined space work which is mandatory.
 - The Safe Work Permit procedure states that the joint job site visit is a meeting between the owning department representative and at least one servicing representative of each party working off of the permit at the specific location where the job will be conducted.

Worker Hazard Recognition

- It is the expectation at the Catlettsburg Refinery that all workers should be able to identify and mitigate hazards before an incident occurs. The Jobsite Hazard Analysis along with the Safety Leadership skills covered in the Site-Specific Orientation will display how works will be able to identify those hazards. The SLAM technique can be used to identify hazards before, during or at the end of the job.

13. TAR Specific Information

- A brief overview of the unit specific hazards is contained in the PSM pamphlet below:
- It is the expectation that each contractor employee will be trained on the contents of the process overview pamphlets and the training be documented and maintained for the duration of the TAR and forward it to the training department for archiving.



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TAR Crane Operations

- There will be several large crane lifts taking place between the FCC / Alky / and Cumene Units. These lifts will include normal, permitted, and critical crane lifts. Appropriate documentation shall be completed prior to lifts being performed, and all operators, riggers, and signal persons shall be qualified. For more information, please refer to RSW-MC-SWI-05-CB (Rigging and Lifting) SWI.



- The following links detail the various cranes that will be used during the 2021 TAR, and the lifting zones that will be barricaded during some of the larger lifts.



14. Housekeeping

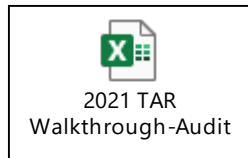
- Each contractor company participating in the 2021 Fall TAR will develop and implement a housekeeping process to ensure housekeeping issues are identified and promptly corrected. This is in addition to participating in the MPC daily housekeeping audits.
- At Catlettsburg Refinery, housekeeping will be everyone's responsibility. Prompt mitigation of housekeeping issues and maintaining a clutter-free work environment is a priority. Craft personnel are expected to continuously check their work area to ensure their jobsite and workspace is clear of debris and tripping hazards.
- Hoses and cords should be routed overhead and away from work areas when possible.
- Placement of hoses and cords on stairs and ladders is strictly prohibited.
- Housekeeping Team
 - The housekeeping team will consist at a minimum comprise of representative from the following groups:
 - MPC safety representatives
 - Contractor safety representatives (crews are working the TAR area)
 - Member(s) of contractor leadership
 - Member(s) of refinery management (when available)
 - Operations representative(s)

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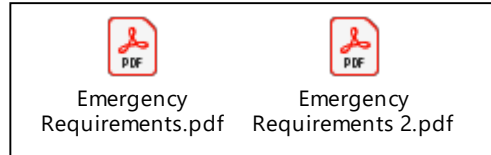
- TAR Coordinator(s)
 - This group will assemble at the LOTO / permitting designated area in the schedule below.
 - Alky- 9am-10am Days, 9pm-10pm Nights
 - FCC- 10am-11am Days, 10pm- 11pm Nights
 - Cumene- 1pm- 2pm Days, 1am-2am Nights
- The Catlettsburg Refinery daily housekeeping walkthrough form is contained below:





15. Catlettsburg Refinery Emergency Procedure

- Emergency Procedure
 - The 2021 TAR will be utilizing the current Catlettsburg Refinery One Plan for emergency situations. The Catlettsburg Refinery One Plan outlines several instances of incident procedures and mitigations for emergency situations. The NNA has specific scenarios in which the One Plan may be activated, and the procedures shall be followed.



- Vehicle Use
 - All vehicles must be pulled to the side of affected roadways. The vehicle must be shut off, with the keys left in the ignition. Personnel should then travel (on foot) to the designated muster location.

- Designated Muster Locations (Blue Triangle)



- Accountability Requirements
 - One of the elements included in Section 1910.38 of the OSHA regulations governing emergency action plans states: "as a minimum, procedures must be in place to account for all employees after an emergency evacuation is completed." Accountability is not optional, it is the LAW. Accountability is not completed until all personnel that could be within the emergency area have been located.
- Accountability of personnel during an emergency means that all personnel:
 1. Have been contacted
 2. Their status verified.
 3. Their status reported to the proper management level.
- Personnel to be accounted for include:
 1. Catlettsburg Refining employees (residents) assigned to the Unit.
 2. Visitors and suppliers.
 3. Contractors.



16. Severe Weather Plans

- Lightning
 - When lightning is detected within 6 miles of the refinery, Security shall notify all personnel via radio and the plant wide notification system that lightning has been detected in the area.
 - The following Lightning Warning Announcement shall be communicated:
“Attention, this is Security. A lightning advisory has been issued beginning at (applicable time). I repeat, a lightning advisory has been issued beginning at (applicable time).”
 - Security will instruct personnel to return to work when notification of the expiration of the lightning warning is received from SkyGuard.
 - The following Lightning Warning All Clear Announcement shall be communicated:
“Attention, this is Security. The lightning advisory has expired. I repeat, the Lightning advisory has expired”.
 - Examples of work that is allowed to continue during a lightning warning and work that must cease:
 - Allowed
 - Work on pumps, compressors, equipment, piping, electrical and instrumentation below the fin fan deck,
 - Work from a scaffold that is below the pipe rack,
 - Work on exchangers that is not upper most level,
 - Confined space entry work with Overhead Protection for the hole watch and emergency responders,
 - Work in a Building,
 - Loading activities under a covered loading rack
 - Not Allowed
 - Any work on the upper most level of a structure without Overhead Protection,
 - Any work on the top level in the pipe rack,
 - Work in open areas with no Overhead Protection,
 - Confined space entry that cannot provide Overhead Protection for the hole watch and emergency responders, including tank entry or work on the roof of a tank,
 - Crane or picker operations (see Section 3.3.4),
 - Elevated loading activities on rail loading racks or truck racks where no Overhead Protection is provided (unless deemed critical to refinery operations).
 - Painting or stack testing on a heater stack above the pipe rack



- Wind
 - The Catlettsburg Refinery will be following the recommended guidelines for high wind advisories of 20 MPH. When the SkyGuard weather system indicates wind gusts of excess of 20 mph, refinery security will announce a high wind advisory for the refinery. Attempts will be made to lower crane booms, man lifts and secure items that may be moved by the wind.

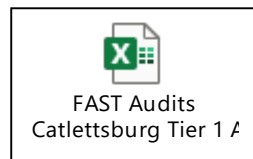
17. Heat Stress Prevention

- **Assessing Exposure**
 - When assessing exposure to heat, it is important to take into consideration both the ambient temperature, humidity, and the heat generated by the equipment and work. Examples of this work include:
 - High temperature lines, pumps, vessels, and heat exchangers.
 - Leak repair involving hot materials or equipment.
 - Fin-Fan coolers.
 - Operating Furnaces.
 - Internal Tank work (construction, repair, cleaning)
 - Work involving the use of semi-impermeable or impermeable clothing (Tyvek, slicker suits, etc.)
 - Hot work (cutting, welding, and burning).
 - Employees shall comply with the CBG Heat Stress Prevention SWI

18. Variances

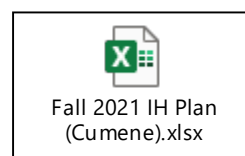
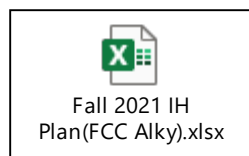
- Insert Variances Here.
 - Variance to use Tychem coveralls in Alky Unit.

19. TAR Assessments/Inspections



20. Industrial Hygiene Plan

- Industrial Hygiene Monitoring Plan – The industrial hygiene monitoring plan is a general pre-TAR assessment of certain job tasks that may require additional IH monitoring.

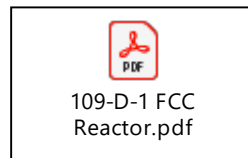


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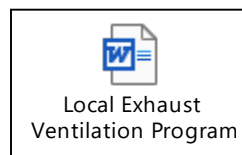
- Required Temporary Decon Locations – The Fall 2021 TAR does not anticipate any work that will require temporary decon locations.
- Confined Space Ventilation Plans
 - It is a best practice to provide ventilation for confined space entry. The Confined Space Entry Pre-Plans developed by the safety department will contain the information on which types of ventilation equipment is recommended for the specific vessel for a certain number of hot work activities in the confined space. However, it is the contractors' responsibility to properly place the ventilation equipment and to ensure it follows the designated pre-plan requirements. The confined space entry pre-plans will list these requirements on the initial entry pre-plan. An example of this plan is below:



- Breathing Air Oxygen Content Verification Procedure
 - The Catlettsburg Refinery Breathing Air Quality Control Procedure can be obtained below.



- Pyrophoric Material
 - Pyrophoric material mitigation is captured in the permitting process. Pyrophoric material is limited inside the refinery and is dealt with on a case by case basis. Pyrophoric material may be found during catalyst change outs and done under inert atmospheres.
- Dust Minimization Plan
 - Dust minimization is captured during the permitting process with adequate ventilation. The Catlettsburg Refinery will utilize the local exhaust ventilation management program safe work instruction which can be obtained below.



- Radiation Sources Plan

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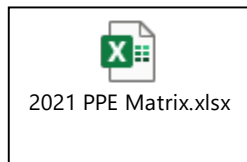
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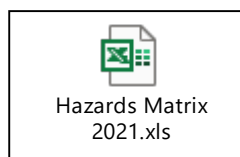
- Alky unit has 12 nuclear sources. During the unit isolation process, the source will have a shutter check performed by a qualified person. After performing the shutter check, the source will then be shut and locked as part of the isolation strategy. The lock and tag number will be identified on the unit LOTO / Blinding list. After successful closure, locking, and isolation, the source will then be removed from the vacuum tower and stored in a secured location until it's reinstallation after the TAR is complete.
- Cumene Unit has 2 nuclear sources (2 acid draws for F-67 & F-68 for the bottoms of the two rectifiers). During the unit isolation process, the source will have a shutter check performed by a qualified person. After performing the shutter check, the source will then be shut and locked as part of the isolation strategy. The lock and tag number will be identified on the unit LOTO / Blinding list. Nuclear sources will be staying at their designated locations.

APPENDIX

Refinery PPE Matrix



Potential Hazards Matrix



Catlettsburg Refinery TAR Plot Plans:



————— **END** —————

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2021 Fall Turnaround Safety Management Plan



REVISION HISTORY

*Document
Revision
History*

Complete the following table for each document revision.

Rev. No.	Description of Change	Author	Approved By	Rev. Date	Effective Date
0	Created TAR Safety Management Plan Document	Brett Sergent	Greg Gibson		5/26/18
1	Updated for 2021 TAR	JT White	Greg Gibson	6/10/21	6/10/21