Pre-Planning Safety Checklist for Major Shutdown Site/Location: Date: MOP/WO Title: MOP/WO Number: **Employee(s) Completing Checklist: Pre-Shutdown Administrative Planning** Initials □ Complete 1. A review and validation of the MOP conducted by the Chief Engineer and MOP Manager. 1.a. Verify with updated one-lines □ Complete 1.b. Conduct a physical walk down. □ Complete 1.c. Chief Engineer submit recommended changes to the engineering firm for inclusion into the □ Complete □ N/A Provide Maintenance/MOP Pre-Planning Checklist to the engineering firm/vendor preparing the □ Complete □ N/A MOP. All expected outside vendors have conducted CES training prior to arriving to the site. □ Complete □ N/A 4. An approval for all expected contractors to come on-site has been submitted. □ Complete □ N/A **Pre-Shutdown Safety Planning** Initials Ensure MOP lists indentified vendors that will be participating in maintenance, including verifying □ Complete □ N/A valid contact information. Contracted employees have met JP Morgan Chase pre-qualification requirements. □ Complete □ N/A Send E-mail letter to all vendor point of contacts addressing: 3.a. Request for a list of employees expected onsite □ Complete □ N/A 3.b. Tool equipment inventory (attach an electronic copy of Tool Inventory Form) □ Complete □ N/A 3.c. Requirement that each employee must have own LOTO personal lock(s) □ Complete □ N/A 3.d. LOTO record sheet use (attach an electronic copy of LOTO Record Sheet Form) □ Complete □ N/A 3.e. Group lock process □ Complete □ N/A 3.f. Use of properly tested voltage rated gloves □ Complete □ N/A 3.g. Use of calibrated meters □ Complete □ N/A 3.h. Unique flammable, chemical and hazardous material to be used and MSDS availability □ Complete □ N/A 3.i. GFCI requirements for electrical cords or cord connected tools □ Complete □ N/A 3.j. Use of only vendor-supplied ladders that are electrically safe □ Complete □ N/A 3.k. Site's PPE requirements for switching and/or other electrical work expected to perform □ Complete □ N/A 3.I. Known site-specific hazards related to the work to be conducted (NFPA 70E 110.5) □ Complete □ N/A 3.m. Any unique hazards that may be introduced by contractor's work be relayed to the site. □ Complete □ N/A 3.n. That any contract-employee-related violations of site safety policies will be reported to the contract employer and a request for measures taken to correct violations be reported back to site Complete □ N/A management. (NFPA 70E 110.5) Ensure updated Single Line drawings, O&M manuals/specifications and other required □ Complete documentation are on hand. Pre-populate LOTO records with contractor's names □ Complete □ N/A Determine area access control methods (i.e., cone, stations, tape, and/or magnetic door warning □ Complete signs) and ensure all boundary equipment is available.

	Safety Planning (cont)				
					Initials
7.	Determine the number of locks, tags, lock-boxes and the amount and type of locking devices that will be required. Ensure they are available for use.		Complete		
8.	Ensure on-site shepherds hooks are available and inspected within the last two years.		Complete	□ N/A	
9.	Prepare tool inventory sheets for the all switchboard work.		Complete	□ N/A	
10.	Determine required personal protective equipment based on scope of the work and utilizing the Electrical Safety and Lockout Tagout Policy.		Complete		
	10.a. Ensure all required PPE is available on site and inspected or will be brought on site by vendors.		Complete		
	10.b. On-site voltage rated gloves checked as new or within the 6 month testing requirement.		Complete		
11.	Determine if temporary lighting is needed and ensure it is available for use.		Complete	□ N/A	
12.	Ensure applicable MSDS's are available for use		Complete	□ N/A	
13.	Verify on-site test meters to be used for the following:				
	13.a. Proper category (minimum of CAT III)		Complete	□ N/A	
	13.b. Calibration certification sticker issued in the past year		Complete	□ N/A	
	13.c. Batteries are good		Complete	□ N/A	
	13.d. Internal protection fuses are not blown (if equipped)		Complete	□ N/A	
	13.e. Lead and meter integrity		Complete	□ N/A	
14.	Verify all GFCl's to be used have been properly tested and in good working order.		Complete	□ N/A	
	Make available consolation forms for safety non-compliance.		Complete	□ N/A	
	Pre-populate LOTO Audit Sheet(s) that will be used during LOTO process		Complete	□ N/A	
	Ensure the proper number, type and rating of grounding devices/cables are available onsite or will be brought onsite by contractor(s).		Complete	□ N/A	
18.	Conduct and document additional safety training, as necessary. Review safety lessons learned from previous shutdowns.		Complete	□ N/A	
	Day of the Shutdown				
	Day of the offictiown				Initials
1.	Ensure that all outside vendors that have not previously conducted CES training, have done so	_	Complete	N/A	IIIIIais
_	prior to conducting work onsite.		Complete	IN/A	
2.	Person-in-charge conduct a pre-job walk down of the MOP and rehearsal meeting with vendor(s). Attempt to anticipate unexpected events and identify and minimize all possible hazards. As a minimum, include:				
	2.a. Who's in charge		Complete		
	2.b. Purpose and extent of the task		Complete		
	2.c. Critical steps involved		Complete		
	2.d. Qualifications (required skills) and number of employees to be involved		Complete		
	2.e. All hazards that personnel may be exposed to		Complete		
	2.f. The voltage levels involved		Complete		
	2.g. Personal protective equipment involved		Complete		
	2.h. Insulating materials and electrically rated tools involved		Complete	□ N/A	
	2.i. Tool inventory methods		Complete		
	2.j. Electrical diagrams, equipment details, sketches/pictures of unique features, and any reference data to be used		Complete		
	2.k. Any secondary (back-fed or induced) voltage sources		Complete		
	2.I. Any unusual work conditions or special precautionary techniques		Complete		
	2.m. Work (shock/arc flash) protection boundaries and available incident energy levels		Complete		
	2.n. Use of a "standby" (safety) person		Complete	□ N/A	
	2.o. Any secondary (back-fed or induced) voltage sources		Complete		
	2.p. Review lock-out Tag-out procedure, including voltage testing and grounding methods, if required.		Complete		
	2.q. Associated back-out plan understood		Complete		

Day of the Shutdown (cont)			
			Initials
2.r. Prepare for an emergency by discussing the following:			
2.r.(1) CPR training of standby person	☐ Complete	□ N/A	
2.r.(2) Emergency equipment type and location	☐ Complete		
2.r.(3) Emergency contact method(s) and number(s)	□ Complete		
2.r.(4) Fire alarm station and fire extinguisher locations	□ Complete		
2.r.(5) Confined space rescue methods	□ Complete	□ N/A	
2.r.(6) Emergency equipment shut-off methods	□ Complete	□ N/A	
3. Coordinate with vendor(s) to ensure vendor-owned equipment brought onto the site meets the following pre-requisites:	□ Complete	□ N/A	
3.a. Voltage rated gloves checked as new or within the 6 month testing requirement.	□ Complete	□ N/A	
3.b. Vendor's names are listed on all LOTO Tags used.	□ Complete	□ N/A	
3.c. Test meters have calibration certification sticker issued in the past year	☐ Complete	□ N/A	
4. Ensure breakers are racked out in conjunction with locking out removable circuit breakers, unless exempted by Chief Engineer.	□ Complete	□ N/A	
Chief Engineer or his designee will inspect the switchboard to ensure that all grounds are removed, prior to instructing the utility to reenergize the switchboard.	□ Complete		
Chief Engineer or his designee will inspect the switchboard to ensure that all enclosures are in place, prior to instructing the utility to reenergize the switchboard.	☐ Complete		
7. Ensure Utility company checks phase rotation prior to transfer to the site.	☐ Complete	□ N/A	
			Initials
Infrared Camera Scanning			Initiala
Check IR camera to ensure it is within the certification date.	□ Complete	□ N/A	
2. Ensure Energized Work Permit is completed prior to the maintenance shutdown and reviewed with affected parties, if bolted equipment covered are removed with equipment energized and/or infrared camera is expected to pass the Restricted Approach Boundary.	□ Complete	□ N/A	
Ensure safety boundaries and warning signs are in place when equipment panels/doors are open (exposing energized parts) and left unattended.	□ Complete	□ N/A	
marks:			
gineer's Signature:			_
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