The list for rental equipment for hurricane preparation and recovery will be maintained and coordinated by the Shops Team Leader. All modifications for the rental equipment list will be provided to the Shops Team Leader by April 1 of each year. The Shops Team Leader will revise the list to determine the necessary equipment and will confirm availability/ reservations with rental companies by April 15.

Hurricane Supply Lists

Hurricane supply lists will be reviewed annually by the Emergency Response – Procurement Team by May 1. The needed supplies will be obtained by the Procurement Team and be on site by June 1. Hurricane supply lists should include ride-out, post-hurricane, and first-return. These lists should include PPE, tools, bedding, food, and water for the appropriate staffs. Vehicles for the Assessment Team should also be considered.

Personnel Lists

Personnel lists will be reviewed annually by Sweeny Complex management. This review will be completed by May 1 of each year. Personnel lists will consist of designated and volunteer personnel for the Storm Team, Assessment Team.

Post-Hurricane Fuel Plan

Due to the potential wide spread loss of power, a plan must be established to provide refueling capabilities outside of the normal means. This plan should incorporate means to move fuel from storage tanks to portable fuel containers and tank trucks. While the primary purpose for these fueling capabilities will be for the facility equipment, consideration should be given to providing fuel for civil services, such as fire departments, ambulance services, and area law enforcement agencies, and military groups assigned to the area, such as National Guard.

As part of the pre-season preparation, a sufficient number of personnel should be trained in the operating procedures and the operation of the equipment designated for the refueling plan. Personnel trained to perform the refueling operation should be included on the Assessment Team.

Shutdown Review

The shutdown sequence and timeline will be reviewed annually by the Phillips 66 Operations and Maintenance Managers and ChevronPhillips Operations Manager and updated by the Emergency Response Team. All changes to the shutdown sequence will be provided to the Emergency Response Team by May 1. This review should include an estimated number of operations personnel needed to shutdown the unit in the designate time frame and any maintenance personnel needed to assist in the shutdown and an estimate of when they will be needed.

Incident Action Plan for Storm Team

During pre-season preparation, a general incident action plan will developed for the Storm Team by the Emergency Response Team. Items to be addressed in this incident action plan will include: site safety plan; resource list; communication plan; and medical plan.

The site safety plan should identify potential hazards for pre- and post-hurricane activities, as well as establishing protocols for personnel lockdown based on wind speeds. The buddy system should be established as standard procedure during post-hurricane assessment and any other operations. The general site safety plan will be developed, but will be modified according to specific hazards or situations.

The resource list should identify available resources at the site and their last known location. This should

include vehicles, equipment, materials, and personnel. The resource list will need to be updated prior to landfall to identify the relocation of equipment and personnel.

The communication plan should identify primary, secondary, and tertiary means of communication during pre-hurricane, ride-out, and post-hurricane operations on site. Primary, secondary, and tertiary means of communication should also be identified for communication between the Storm Team and the Assessment Teams for pre-hurricane and post-hurricane communications. All means of communication should be tested by June 1 and tested monthly during the hurricane season.

The medical plan should identify local medical facilities, all area hospitals, all area ambulance services, and area emergency air transport services. This plan will be revised during pre-hurricane preparation as information is obtained regarding closures or restrictions of service. As hospital closures are identified, alternative locations will be identified on this plan.

PRE-HURRICANE PREPARATIONS (PHASE 2 TO 6)

Pre-hurricane preparation should begin when a tropical system threatens the Gulf Coast Area, and the Hurricane Risk Indicator (HRI) for Freeport becomes Positive. Pre-hurricane preparations should be completed at least 12 hours prior to Worst Case Scenario (WCS) timeline for 58 mph winds at Freeport. Pre-hurricane preparations should begin during Phase 2 and continue into Phase 6.

A positive HRI for Freeport triggers Phase 2 for pre-hurricane preparations. As the tropical system progresses, additional Phases may be activated by the designated triggers. Sweeny Complex management will evaluate the storm progression and utilize the progressive phases to make decisions for appropriate levels of preparedness.

Based on the predicted strength and impact to the Sweeny Complex, management will determine if the facility will continue to operate in reduced operations or if it will shutdown.

If a shutdown is deemed necessary, Sweeny Complex management will determine a timeline for shutdown and the release of personnel. Timelines should take into account WCS timeline for 58 mph winds at Freeport, county evacuation schedules, and other factors. The timeline for the release of personnel should address contractors, non-essential personnel, shutdown/ essential personnel, and Assessment Team.

Storm and Assessment Teams personnel should be provided adequate time to secure their family, residence, and property before reporting for Storm and Assessment duty. Storm Team personnel should be provided with a list of personal items to provide during the ride-out and the appropriate time to report for ride-out duty. When they report for duty, they will be provided with their ride-out shelter assignment, a safety briefing, and any other guidelines or instructions. Assessment Team personnel should be provided with a list of personal items to provide and appropriate time and location to report for their duties.

Storm shelters will be located in the BRT, NGL & Unit 24 Control Rooms.

Contractors with equipment in the plant will be notified by the contractor representative to prepare or remove their equipment before a Hurricane Warning is issued.

All hurricane preparations, that were deemed necessary, should be completed 12 hours prior to WCS timeline for 58 mph wind impact on Freeport.

POST-HURRICANE

Post-hurricane personnel accountability for Sweeny Complex employees will be a priority. This responsibility will be coordinated by the IC & HR.

Once the hurricane has past the facility, the Storm Team will conduct an initial assessment to determine if there is any major damage or immediate hazards that must be addressed. Results of the initial assessment will be communicated to the IC and appropriate members of the Assessment Team will be dispatched to the facility for a focused assessment and planning for any repairs and start-up.

If normal refueling is not available through the transportation center, the Post-Hurricane Fuel Plan should be put into service to provide fuel for needed equipment.

Sweeny Complex management will develop a timeline for personnel return-to-work and post-hurricane start-up. These timelines should take into consideration damage to facility and area infrastructure, housing availability, availability of needed resources, and pre-start-up work lists.

ALL TEAMS

Pre-Season:

- Develop/ review Team Hurricane Checklist before May 1 (LP)
- Develop/ review list of items (portable buildings, equipment, chemicals, etc.) in team area that will need to be secured, stored, or removed (list should be maintained and updated through hurricane season); provide hurricane preparation work list to appropriate Heavy Craft or EIM Team Leader before May 1 and provide updates as necessary (Procurement)
- Develop/ review list of windows or doors to be boarded or taped and provide list to appropriate Heavy Craft Team Leader before April 15 (Rambo)
- Develop/ review list of sandbag requirements for team area and provide list to appropriate Heavy Craft Team Leader before April 15 (Rambo)
- Remind team personnel to provide post-hurricane contact information to Human
- Resources Team (HR)
- Determine list of critical documents (paper and electronic) that will need to be secured (RLT)
- Identify essential and non-essential personnel for shutdown activities – may identify essential personnel by necessary number in each craft or job classification (RLT)
- Maintain area in a ready-state (All)

Pre-Hurricane:

- Secure all computers and electronics (provide for venting if it will continue running) (All)
- Secure or dispose of any loose items in team area (outside) (All)
- Fuel all vehicles and portable equipment (compressors, generators, pumps, etc.) before electricity is lost (All)
- Dispose or secure any items in vehicles
- Secure lids on dumpsters

PRODUCTION TEAMS

Pre-Season:

- Develop/ review Team Hurricane Checklist, update as necessary and provide hurricane preparation work list to appropriate Heavy Craft or EIM Team Leader before May 1.
- Review Hurricane Shutdown Sequence before May 1 and update as necessary
- Develop/ review pre-start-up checklist for post hurricane, update as necessary, and provide work list to Turnaround Team Leader before May 1
- Review post hurricane start-up sequence before May 1 and update as necessary

Pre-Hurricane:

- Secure all dike drains per Environmental requirements
- Isolate deluge/ water spray systems after units are shutdown
- Secure firefighting foam drums/ stations, portable monitors and fire extinguishers
- Secure or remove:
  - Breathing air equipment
  - Drums and compressed gas cylinders (cap cylinders if not removed)
  - Utility hoses (steam, water, air, nitrogen, etc.)
  - Scaffolds
  - Material/ equipment on towers, platforms, piperacks, and cooling towers
  - Unit bicycles
  - Sample bottles and bombs
- Remove debris from storm water ditches and sumps
- Secure all sample points
- Secure cooling tower fans after unit shutdown
- Isolate and secure chemical and lube oil drums/ tanks (consider filling if feasible)

Post-Hurricane:

- Return deluge/ water spray systems to service
- Return fire fighting foam drums/ stations, portable monitors and fire extinguishers to ready-state

Personal Hurricane Plan

- Information to Know
  - Watch vs. Warning
    - Hurricane watch – identifies a coastal area in which hurricane conditions are possible within the next 36 hours
    - Hurricane warning – identifies a coastal area in which hurricane conditions are expected within the next 24 hours
  - Vulnerability of your home from a hurricane
    - Storm surge
    - Flooding
    - Wind

- What if I don't Evacuation?
  - Determine a safe location from each hazard
    - Run from water; Hide from wind
    - Safety may not be in your house – consider local shelters
  - Have ample supplies (see "disaster supply kit" below)
    - Food and water
    - First-aid

- What if I decide to Evacuation
  - Check area evacuation plans
  - Develop personal evacuation plan
  - Secure property/ residence

- Personal Evacuation Plan
  - Pre-identify several places to go
    - Family/ friends
    - Hotel/ motel
    - Shelter
  - Have telephone number for locations
  - Have detailed (and up to date) road map for the area traveling through
  - Have a "call center" – if your family is evacuating from different locations, at different times, or even in separate vehicles, having a friend or family member out of the evacuation area that can serve as a call center may help keep you in communication; cell phones are not always in coverage area
  - Have escape routes and meet locations – like a "call center", pre-determining your evacuation route and meeting points along the route can keep your family together
  - Have plan for pets/ animals – identify a location, method, and allow time for getting your pets and animals to a safe location
  - Have a disaster supply kit
    - Water – 1 gallon per person per day – 3-7 days
    - Food – non-perishable; canned; can opener; special food for infants and elderly; snacks; utensils – 3-7 days
    - Cooking tools and fuel
    - Blankets/ pillows
    - Clothing – seasonal/ rain gear/ sturdy shoes
    - First Aid Kit/ Medicines/ Prescriptions

- Special items – for babies and elderly
- Toiletries/ Hygiene items/ Moisture wipes
- Flashlight/ batteries
- Radio – battery operated w/ weather
- Cash (with some small bills) – ATM and banks may not be accessible or open where you go
- Keys
- Toys, books and games
- Tools – have a basic tool kit for any minor repairs
- Important documents
  - Transport your valuable documents in waterproof containers such as waterproof containers or waterproof bags
  - Driver License; Social Security Card; Insurance policy; wills; deeds; birth/ marriage certificate; tax records
- Vehicle fuel tanks filled
- Pet care items
  - Identification/ immunization/ medications
  - Ample food and water
  - Carrier or cage
  - Muzzle and leash

➢ Secure Property and Residence
- Move all lawn furniture and décor inside
- Secure all vehicles being left behind
- Secure home
  - Roof – gabled roofs; shingles; straps
  - Windows – shutters; plywood
  - Doors – head/ foot bolts; dead bolts; hinges
  - Garage doors – brace across panels

➢ Links for information
- National Weather Service – National Hurricane Center – www.nhc.noaa.gov
- Brazoria County Emergency Management and Hurricane Preparedness Guide- http://www.brazoria-county.com/em/index.asp

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1.0 APPLICABILITY (§265.30 and §265.50)

As cited in 40 CFR §262.34(a) and 40 CFR §262.34(a)(4).

2.0 PURPOSE (§265.51)

This addendum to the Sweeny Complex Integrated Contingency Plan (ICP) has been prepared to provide additional information in the ICP in order for the Sweeny Complex, which includes the Phillips 66 Company and the Chevron Phillips Chemical Company LP, to comply with federal regulations as required by 40 CFR 265 Subpart C (Preparedness and Prevention) and 40 CFR 265 Subpart D (Contingency Plan). The federal regulations are incorporated by reference in Title 30 of the Texas Administrative Code (TAC) 30TAC §335.112(a).

This plan, as an addendum to the ICP, addresses RCRA Waste Facility Contingency Plan and Emergency Response Procedures required to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the Sweeny Complex Old Ocean, TX for the Phillips 66 Company and Chevron Phillips Chemical Company LP, Hazardous Waste Container Storage Areas.

3.0 INTRODUCTION

3.1 Facility Description

The Sweeny Complex is made up of both the Phillips 66 Company refinery and the ChevronPhillips Chemical Company olefins and natural gas liquids processing facility.

The Sweeny Complex consists of several facilities, which are linked by multiple pipelines and operates as a single unit. The Sweeny Complex is defined as the assets owned and operated by Phillips 66 (P66), Chevron Phillips Chemic al Company Limited Partnership (CPC) and Sweeny Cogen Limited Partnership located in southern Brazoria County, Texas.

Phillips 66 Company is a petroleum refinery located at the intersection of FM 524 and Spur 419, Old Ocean, in Brazoria County Texas. Current refinery operations include the production of gasoline, fuel oil, diesel, ethylene, cyclohexane, hexanes, pentanes, toluene, kerosene, butanes, butadiene, benzene, Xylene, and sulfur.

The Phillips 66 Company (P66 Co.) facility consists of heavy oil section including crude units 9, 25.1 and 25.2, Gas Oil Distillation section and Coker, namely units 26.1, 26.2, 29.1 and 29.2. The refinery consists of two fluid catalytic cracking units accompanied with the associated gas plants; unit 3, 4, 27.1 and 27.2. There is also an Aromatics section with process units 7, 11, 14, 15, 17, 19, 20 and 35. The Alky-Sulfur process area is made up of units 5, 6, 8, 28.1, 28.2 and 30.

Phillips 66 Company also owns and operates the San Bernard Terminal, a tank storage, barge loading/unloading and pipeline facility, at CR 372, Sweeny, TX 77480), the Jones Creek Terminal, a tank storage and pipeline facility, at 6225 Hwy 35 Peach Point Rd, Jones Creek, TX 77541) and the Freeport Terminal, a marine tanker unloading, barge loading/unloading tank storage and pipeline facility at CR 731 & FM 1495, Freeport, TX 77541).

Chevron Phillips Chemical Company LP, Sweeny Facility (CPC) is an olefins and natural gas liquids facility located at 21689 Highway 35, Old Ocean, in Brazoria County Texas. The CPC Facility consists of the following natural gas liquids units: Unit 10A&C (10.1) and 10B (10.3), 10D (10.2), 12, 18, and 21. Unit 10B is a Phillips 66 Refinery asset operated by CPC. The olefins units consist of Units, 22, 24, and 33. Area G which includes Warehouse 7 (staging warehouse), the Pole Barn, the Weld and Measurement Shop, the Three Car Garage, and Conex buildings are located within the facility. There is a CPC Environmental Building located at the facility as well. The CPC facility is co-located with the Phillips 66 refinery (Phillips).

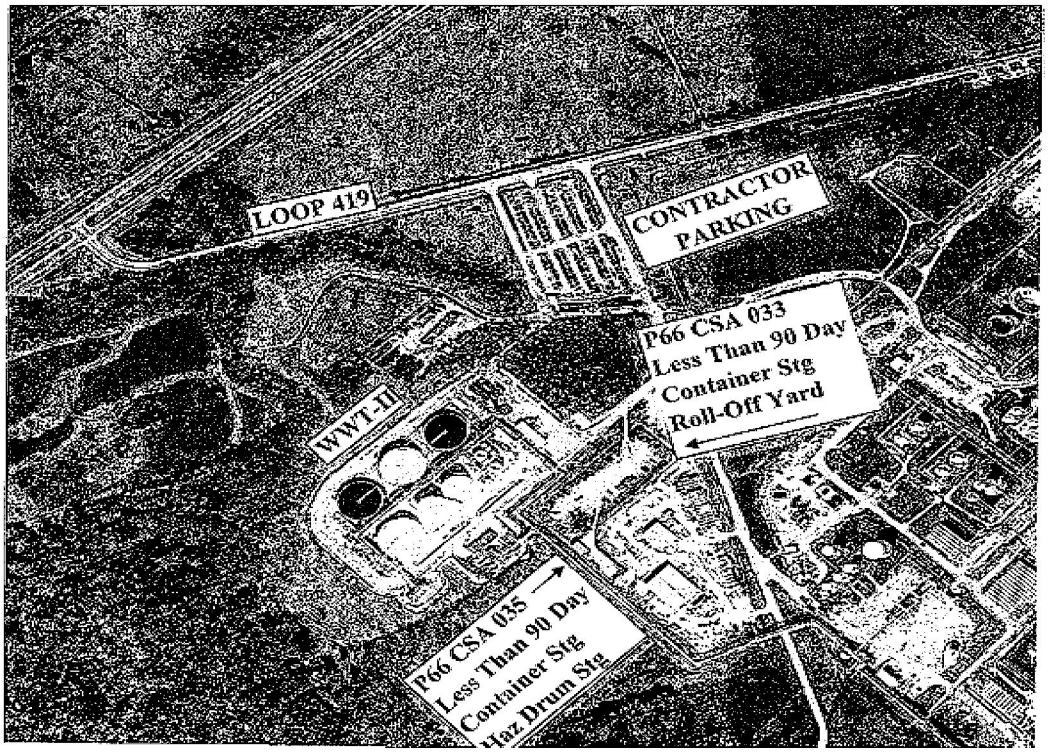
The Sweeny Complex also has operational equipment such as storage facilities utility distribution processes, cooling towers and flares and wastewater handling associated with the above-listed manufacturing facilities.

Both facilities are large quantity hazardous waste generators. Hazardous wastes generated at each site include: listed wastes, characteristic wastes, universal wastes and used oil.

P66 Co. and CPC each operate two (2) RCRA permit-exempt hazardous waste container storage areas (CSA) for management of containers of hazardous waste at the Sweeny Refinery. Both entities are allowed to accumulate hazardous waste for less than 90 days in the CSAs and are not required to obtain a RCRA storage permit nor to operate under interim status as cited in 40 CFR 262.34. In addition, P66 Co. also operates RCRA permit-exempt hazardous waste CSA's at each of the three terminals.

The two areas for P66 Co. are Unit No. 030 (Less Than 90 Day Roll-Off Yard) and Unit 035 (New Drum Storage Building). They are located within the facility southeast of Wastewater Treater No.2. This location is south of the Contractor parking area, off of Loop 419 (see Figure 1).

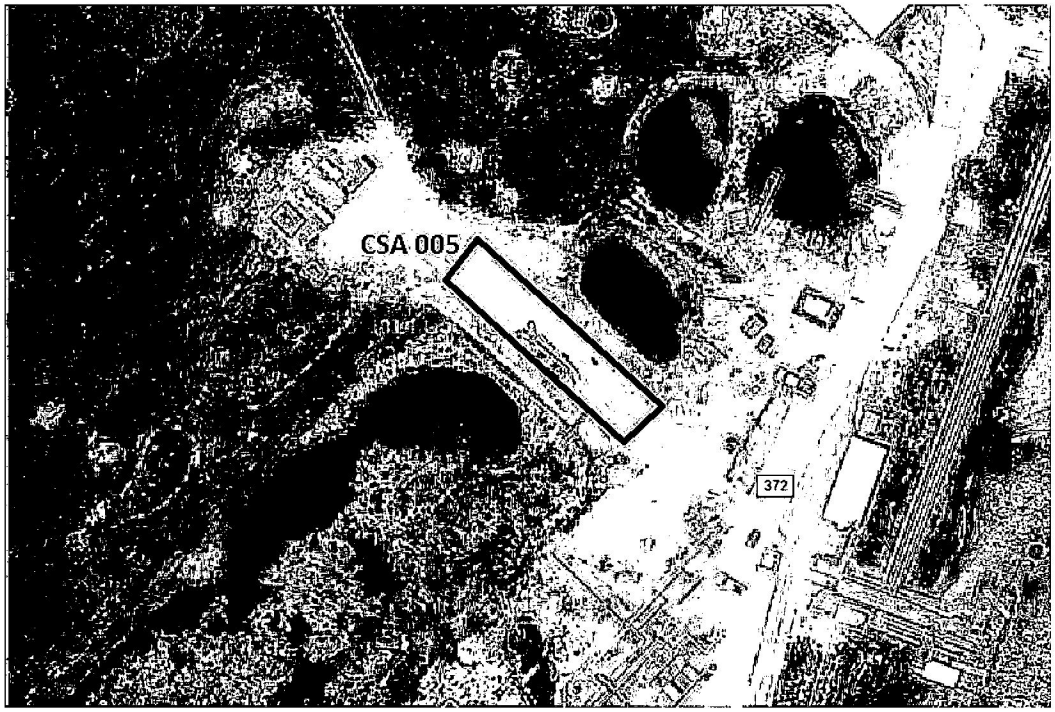
Figure 1
P66 Co Refinery - RCRA Permit Exempt Less Than 90 Day Container Storage Area 030 & 035



The area at the San Bernard Terminal is Unit No. 005 (Misc. Mobile Storage Container Area). It is located within the terminal northeast of the control-room (see Figure 2).

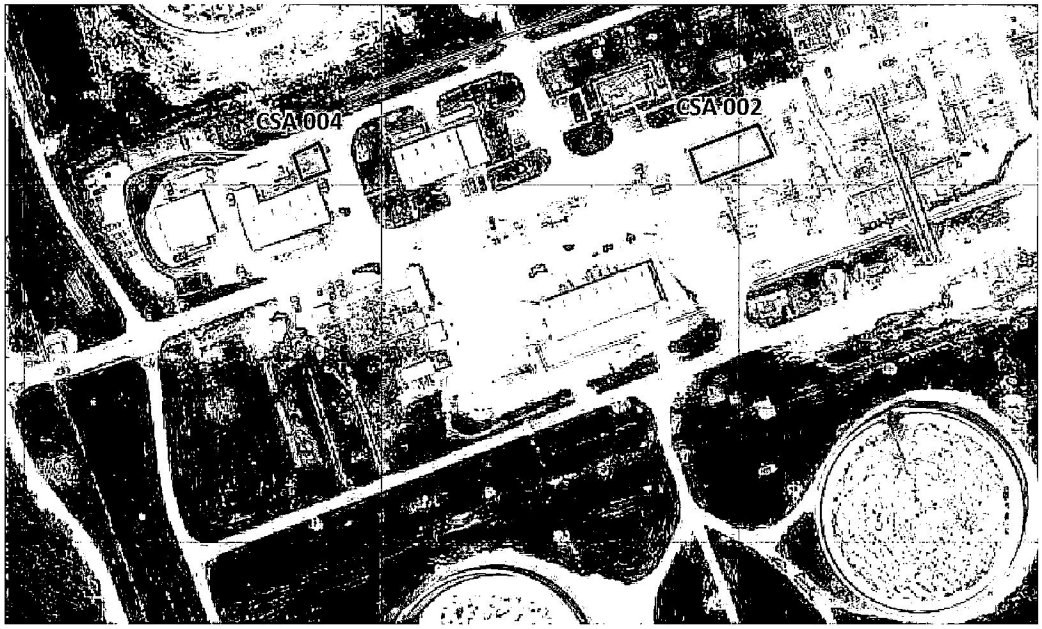
Figure 2

P66 Co. San Bernard Terminal – RCRA Permit Exempt Container Storage Area 005



The two areas at the Jones Creek Terminal are Unit No. 002 (Less Than 90 Day Container Storage Area) and Unit No. 004 (Non-Haz Asbestos and Non-Asbestos Insulating Material Storage Area), (see Figure 3).

Figure 3
P66 Co. Jones Creek Terminal – RCRA Permit Exempt Container Storage Area 002 & 004



The two areas at the Freeport Terminal are Unit No. 008 (Misc. Mobile Storage Container Area) and Unit No. 010 (Less Than 90 Day Container Storage Area), (see Figure 4).

Figure 4
P66 Co. Freeport Terminal – RCRA Permit Exempt Container Storage Area 008 & 010

The first of three areas for CPC is CSA 001 which is located within the facility on the northeast side of the intersection of Ethylene Road and 22nd Street. This location is approximately 100 feet East of the NGL/U22 Control Room (see Figure 5).

Figure 5
CPC RCRA Permit Exempt Less than 90 Day Container Storage Area 001

The second of the three areas for CPC is CSA 003 which located within the facility northeast of the P66 Unit 35 on the north facility property line bounded by Loop 419. The CSA is approximately 150 feet southwest of the intersection of FM 524 and Loop 419 (see Figure 6).

Figure 6
CPC RCRA Permit Exempt Less than 90 Day Container Storage Area 003

The third of the three areas for CPC is the Clemens C-39 Area which located within the South side of the Clemens facility. The CSA is located at the non-active C-39 Compressor location. (see Figure 7).

Figure 7
CPC RCRA Permit Exempt Less than 180 Day Storage Area Clemens C-39 Area

3.2 Sources of Hazardous Waste Generation

Hazardous wastes are generated as a result of manufacturing, maintenance and support operations at the Sweeny Complex. Hazardous wastes accumulated and managed in containers are transported to the CSA areas for storage then shipment to an appropriately permitted offsite Treatment, Storage, or Disposal facility. The Environmental Departments for P66 and CPC are responsible for proper operation of the CSAs. The Environmental Departments for P66 and CPC are also responsible for the shipment and disposal of the hazardous waste from the Waste Facility at least once every 90 days. Table 1 contains a list of hazardous wastes that are managed in the CPC CSAs.

Table 1
RCRA regulated waste accumulated at the CSAs:

Waste Description	
Contaminated Absorbents and Debris	*Process Filters*
Compressed Gas Cylinders	*Contaminated Soil*
Contaminated PPE	*Waste Polymer*
Benzene Sludge	*Corrosive Liquids with Sludge*
Spent Process Catalyst	*Spent Desiccant*
Aerosol Cans	*Fluorescent Lamps*
High Intensity Discharge Lamps	*Mercury, Mercury Debris or Articles*
Paint and Paint Solids	*Used Batteries*
Hazardous Lab Waste	*Oily Water / Wastewater*
Oily Sludge	*Primary / Secondary Sludge*
Cement Kiln Fuel	*Tank Bottom Sludge*
Heat Exchanger Bundle Sludge	*Spent Carbons / Spent Sandblast Grit*

This list is not all inclusive

4.0 EMERGENCY PREPAREDNESS AND PREVENTION

4.1 Maintenance and Operation of Facility (§265.31)

The CSAs have been designed, are operated and maintained to minimize the potential for a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment. The containers within the CSAs are designed, managed, and maintained to meet the requirements of 40 CFR 265 Subpart I for use and management of hazardous waste containers.

The drum storage buildings for P66 Co and CPC respectively are covered buildings with diked concrete floors.

4.2 Required Equipment. (§265.32(a),(b),(c),(d))

In accordance with the requirements of 40 CFR 265.32 the CSAs have been equipped with the following equipment:

Plant personnel working at the CSAs are provided with hand-held two-way radios, capable of summoning emergency assistance from the plant Emergency Response Team.

Upon contacting the appropriate Shift Superintendent (601 for P66Co and 602 for CPC) via the two-way radio, alarm systems can be activated and outside emergency assistance from local police departments, fire departments, or State or local emergency response teams can be accessed, if the situation warrants such a need.

The capability of summoning emergency assistance from the Complex Emergency Response Team is discussed in the Sweeny Complex Integrated Contingency Plan.

A fire extinguisher is located at the Hazardous Drum Storage Buildings belong to both P66 Co and CPC. Other portable Fire extinguishers and fire protection water delivery systems are available in all areas of the plant where there may be flammable materials, including the CSAs. The Sweeny Complex has a firewater supply system, which is available at adequate volume and pressure to supply water hose streams, or foam producing equipment, or water spray systems to the CSAs. In addition to the emergency equipment located at the CSAs, the Sweeny Complex Emergency Response Team can respond with extensive fire control equipment including apparatus' such as quick attack trucks, pumpers, foam applicators, spill control equipment, and decontamination equipment. Sweeny Complex Emergency Response Team and is charged with the duty of responding to all plant emergencies.

4.3 Testing and Maintenance of Equipment (§265.33)

The Sweeny Complex communication and alarm systems, fire protection equipment, spill control

equipment, and decontamination equipment, are routinely inspected, tested and maintained as necessary to assure proper operation in time of emergency. The testing and maintenance responsibility for these systems is defined in the, "Core Plan, Internal and External Communications" portion of the ICP, under "Plant Alarm Testing.

Responsibility for fire extinguisher and spill kit maintenance at the P66 Co Hazardous Drum Storage Building is the responsibility of the P66 Co Environmental Team.

Plant Maintenance has responsibility for the CPC fire extinguisher, while the CPC Environmental Team is responsible for the maintenance and upkeep of the spill kit.

4.4 Access to Communications or Alarm System (§265.34(a),(b))

In accordance with regulatory requirements, whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation have immediate access to an emergency communication device (radio or phone), either directly or through visual or voice contact with another employee.

Whenever an employee is working alone at any of the CSAs that employee shall be equipped with a two-way radio to summon internal emergency assistance.

4.5 Required Aisle Space (§265.35)

The CSAs are to be operated with sufficient aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area during an emergency.

5.0 AGREEMENTS WITH LOCAL SERVICE PROVIDERS (§265.37(a)(1),(2),(3),(4) & (b))

Pre-arrangements, or attempts at such, have been successfully made with outside responders to ensure that the response knows their role in working efficiently with the Complex Emergency Response Team / Incident Command. All outside responders will take orders from the Incident Commander at the Complex.

Scanned copies of the latest communications made with the local agencies/responders are found on the P66 Co electronic file under: ***S:\teams\Environmental\Waste (HSE 500)\Contingency Plan***

Law enforcement agencies will be requested, if necessary, to assist and/or provide traffic control and

evacuation if required. Those agencies consist of the Brazoria County Sherriff's Office and the State of Texas Department of Public Safety.

Area fire departments will be notified to provide assistance if required. Those entities being the Brazoria Fire Department, Old Ocean Fire Department, Sweeny Fire Department, West Columbia Fire Department, and the Wild Peach Fire Department.

Local hospitals will be notified if their assistance is needed in the event of fire, hazardous materials release or explosion. Those hospitals consist of the Matagorda Regional Medical Center, Sweeny Community Hospital and Brazosport Memorial Hospital. These hospitals have been provided a list of hazardous waste and potential injuries resulting from physical exposures, fires or explosions that they might encounter should their services be needed. Waste profiles will be consulted as necessary to help in determining the specific constituents possible in a waste stream should a release occur. Copies of the waste profiles are on file with the Environmental Teams at both P66 Co and CPC.

Agreements have been made with outside response companies through the PHILLIPS Complex Procurement Team. A list of the contracted response companies are found in , "Annex I, Emergency Contact List" portion of the ICP, under Index No. 8 – Industrial Agency Help.

6.0 COPIES OF THE CONTINGENCY PLAN & EMERGENCY RESPONSE

A copy of the ICP including this plan is maintained electronically on the CPC Intranet at: \\cpamswe-fs05\share\WEBLINKS\EHS\Safety\ICP as well as the Phillips 66 Intranet at: https://connect.sp.phillips66.net/sites/sweeny/en-us/enterprise-support-teams/loss-prevention/Pages/default.aspx

7.0 PROCEDURES (§265.52(a)

The local law enforcement agencies, fire departments, and hospitals were provided with the most recent version of the ICP. These agencies will be updated as the ICP is updated and/or revised.

8.0 EMERGENCY COORDINATOR (§265.55)

The Sweeny Complex Integrated Contingency Plan (ICP) describes how the alarm and notification system works. Anyone at the Sweeny Complex may report an emergency. Once an emergency is reported, the incident command system is immediately initiated in accordance to the type of emergency occurring.

Reporting Emergencies – All emergencies will be reported so the proper response actions can be taken. There are three methods that can be used at the Sweeny Complex.

a. By telephoning Security Team at the Main Gate; extension 3462
b. Plant Radio
c. By telephoning extension 2911

RCRA regulations require that a qualified Emergency Coordinator be on-site at all times, or available on call. The Sweeny Complex has determined this role will be satisfied by the Shift Superintendent (radio call numbers 601 & 602). The term, Incident Commander, is equivalent to the regulatory term Emergency Coordinator and will be used describe the duties of the Emergency Coordinator.

All Incident Command Procedures are described in the Incident Management Handbook. The Incident Commander will assume control of the incident beyond the first response level and will be responsible for all aspects of the response operations.

The Incident Commander is thoroughly familiar with all aspects of the plant's contingency plan, all operations and activities at the plant, the location and characteristics of waste handle, the location of all records within the facility, and the facility layout. The Incident Commander also has the authority to commit the resources needed to carry out the contingency plan.

8.1 List of Emergency Coordinators (§265.52(d)) and (§265.55)

Below is an up to date list of Shift Supervisors for both P66 Co (601) and CPC (602). These facility employees are qualified to act as the Emergency Coordinator (Incident Commander). This list includes names, job title, office phone, address and home phone. One individual from P66 Co and one from CPC will be on duty at the Sweeny Complex at all times.

Phillips 66 Company (P66 Co)				
Name	**Job Title**	**Office Phone**	**Address**	**Home Phone**
Dale R. Poehl	Shift Superintendent (601)	979-491-2384	19822 CF 684B, Sweeny, TX 77480	979-345-6208
Steve Miller	Shift Superintendent (601)	979-491-2384	4106 CR 461A, Brazoria, TX, 77422	979-798-4242
Nick Aparicio	Shift Superintendent (601)	979-491-2384	233 CR 824, Bay City, TX	979-240-9044

			77414	
G. D. Lindsey	Shift Superintendent (601)	979-491-2384	610 Walnut St., Sweeny, TX 77480	979-548-0035
Paul A. Kresta	Shift Superintendent (601)	979-491-2384	2944 CR 417, Brazoria, TX	979-345-2104

ChevronPhillips Chemical Co (CPC)				
Name	**Job Title**	**Office Phone**	**Address**	**Home Phone**
Jason Glenewinkel	Shift Superintendent (602)	979-491-5776		
Thomas Edward (Ed) Badders	Shift Superintendent (602)	979-491-5776	PO Box 4037, Brazoria, TX 77422	979-798-6804
Heath Hagemeier	Shift Superintendent (602)	979-491-5776	2735-6 CR 510, Brazoria, TX 77422	979-236-9308
Paul K. Ward	Shift Superintendent (602)	979-491-5776	15 Glenwood North, Van Vleck, TX 77482	979-241-1276
Destin Noak	Shift Superintendent (602)	979-491-5776		

9.0 EMERGENCY EQUIPMENT (§265.52(e))

The Integrated Contingency Plan includes a list of all emergency equipment at the facility with the location and a physical description of each item on the list, and a brief outline of its capabilities. The list for the Sweeny Complex is maintained in the ICP, "Annex II, Emergency Response Equipment Inventory Overview".

10.0 EMERGENCY PROCEDURES (§265.56)

The Complex emergency response procedures are outlined in the ICP. Additional clarification to regulatory requirements is summarized here.

11.0 ACTIVATION OF INTERNAL COMMUNICATIONS SYSTEMS (§265.56(a)(1))

Any employee can initiate an emergency response by radio communication or phone. Following the initial notification the Incident Commander has the responsibility to address the incident and take the required actions which include but are not limited to the following:

11.1 Notification of Appropriate State or Local Agencies (§265.56(a)(2))

If external help is required to respond and control the emergency event, the Incident Commander will make such a request through notification of the appropriate State and local agencies with designated response roles.

11.2 Assess the Incident Extent (§265.56(b))

Whenever there is a release, fire, or explosion the Incident Commander will assess the situation to determine the character, exact source, amount, and the scope of the released materials. He may do this by direct observation, or review of facility records or manifests and, if necessary, by chemical analysis.

11.3 Assess the Incident for Internal & External Impact (§265.56(c))

At the same time the Incident Commander will access for possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment will consider both direct and indirect effects of the event. Those impacts being the effects of any toxic, irritating, or asphyxiating gases, that are generated, or the effects of any hazardous surface water run-offs from water or chemical agents used to control fire and heat-induced explosions.

In the event when evacuation of a CSA or any other portion of the Complex becomes an issue, the Incident Commander has been instructed to utilize all available resources to determine safe distances and location for such purposes.

The Contingency Plan discusses the evacuation of the Sweeny Complex through rally points and evacuation gate locations throughout the plant. One of the duties of the Shift Supervisor is to utilize the resources available to him to determine safe distances and location for evacuation purposes.

11.4 Report External Impact Including Evacuation (§265.56(d)(1),(2))

If the Incident Commander determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he shall report the findings as follows:

If his assessment indicates that evacuation of local areas may be advisable, the appropriate local authorities must be notified immediately. The Incident Commander (or his designate) will be made available to help the appropriate officials decide whether local areas should be evacuated; and

The Incident Commander (or his designate) will immediately notify the Texas Commission on Environmental Quality (TCEQ Region 12, or Austin).

The report will include:

- Name and telephone number of reporter;
- Name and address of facility;
- Time and type of incident (e.g., release, fire);
- Name and quantity of material(s) involved, to the extent known;
- The extent of injuries, in any; and
- The possible hazards to human health, or the environment, outside the facility.

12.0 PREVENTION OF FURTHER IMPACT (§265.56(e),(f))

The Incident Commander will take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolation containers.

If the facility stops operation in response to a fire, explosion or release, the Incident Commander will monitor for leaks, pressure buildup, gas generation, or rupture in valves, pipes, or other equipment, wherever this is appropriate.

12.1 Post Incident Response Requirements (§265.56(g),(h),(i))

Immediately after an emergency the Incident Commander, or his designated appointment, will provide for the treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other materials that result from the event.

The Incident Commander, or his designated appointment, will insure that, in the affected area of the facility;

No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and

All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

A written follow up report of the incident will be made, within 15 days. This duty will be the responsibility of the Environmental Team responsible for the effected CSA . The report will include:

The name, address, and phone number of the owner/operator,

The name, address, and phone number of the facility,

The date, time, and incident type,

The name and quantity of the material(s) involved,

The extent of injuries, if any,

An assessment of actual or potential hazards to human health or the environment, where this is applicable, and

The estimated quantity and disposition of recovered material that resulted from the incident.

13.0 AMENDMENTS OF CONTINGENCY PLAN (§265.54)

This addendum to the Contingency Plan will be reviewed, and immediately amended, if necessary, whenever applicable regulations are revised; the plan fails in an emergency; the facility (that being the CSA) changes – in its design, construction, operation, maintenance, or other circumstances – in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency; the list of emergency coordinators changes; or the list of emergency equipment changes.

Appendix A

Twinrix Immunization

Patient Information/Questionnaire/Consent/Declination

Hepatitis A and B are serious diseases that affect the liver.
Hepatitis A is spread via the fecal-oral route. This can occur through person-to-person contact or by eating or drinking contaminated food or water. Outbreaks can often be traced to: Poor kitchen hygiene. Raw or undercooked shellfish cultivated in sewage-contaminated water. Vegetables grown in soil fertilized with human excrement. Sharing personal care items such as toothbrushes may also place a person at risk.
Hepatitis B is spread by: Direct or indirect contact with infected blood and body fluids. Sexual contact. Contaminated medical or dental equipment. Contact with infected blood from cuts and nosebleeds. During piercing and tattooing. Sharing personal care items such as toothbrushes or razors may also place a person at risk.
Hepatitis B is very concentrated in the blood and can survive up to 30 days outside the human body. Many infected people are asymptomatic (without symptoms) but can pass on the virus.
Hepatitis A and B have several symptoms in common: Low-grade fever, muscle aches, loss of appetite, nausea, vomiting, fatigue, urine may darken and jaundice (yellow skin and eyes).
Vaccine
Twinrix combines Hepatitis A and B vaccine into one dual, 3 dose vaccine. Twinrix is indicated for active immunization of persons 18 years of age or older against disease caused by Hepatitis A virus (HAV) and Hepatitis B virus (HBV).
Twinrix will not prevent hepatitis caused by other agents such as Hepatitis C, Hepatitis E virus or other pathogens known to infect the liver
The series of 3 doses given: on day 0, 1 month and 6 months.
Risks and Possible Side Effects
Adverse reactions with Twinrix were mild and self-limiting and did not last more than 48 hours. The most common reaction is a local reaction at the injection site.
Contraindication
Vaccination is generally not recommended for the following people:
1. Hypersensitivity to yeast
2. Acute febrile illnesses
3. Pregnancy

If you have any of the above, please notify the staff. If you have any questions, please ask now.

For Clinic Use ONLY - Phillips Co Health Services	
Clinic ID:	
Administered By	Date:
Manufacturer	Lot
Site of Injection:	

Adverse reactions (common):

Pain, redness or swelling at injection site

Fever, rash or headache

Swelling of the glands in the cheeks or neck

Nausea/vomiting, diarrhea of stomach ache

Screening Questionnaire for Adult immunization

Patient: The following questions will help us determine which vaccines may be given today. If a question is not clear, please ask your health care provider for clarification.

	Yes	No	Unknown	Comments
Are you sick today?				

Do you have any allergies to medications, food or any vaccine?	
Do you have cancer, leukemia, AIDS or any other immune system issue?	
Do you take cortisone prednisone, other steroids, anticancer drugs, or have had x-ray treatments?	
Have you received any vaccinations in the past 4 weeks?	
Are you living with someone who has not been Immunized?	
Suffering a condition such as epilepsy, nervous system problems, or Gillian Bare Syndrome (GBS)?	
For Women: Are you pregnant or is there a chance you could become pregnant during the next month?	

Consent

Having been fully informed of the Hepatitis disease(s), available vaccine, possible side effects of the vaccine and been offered the opportunity to receive the vaccine at no charge, I request that the Twinrix vaccine be given to me or the person named below for whom I am authorized to make this request. However, as with all medical treatment, there is no guarantee that I will become immune, or that I will not experience an adverse side effect(s) from the vaccine.

Decline

I understand that due to my occupational exposure to potentially infectious disease(s), I may be at risk of acquiring a Hepatitis Infection. Having been fully Informed of the disease(s), available vaccine, possible side effects of the vaccine and been offered the opportunity to receive the vaccine at no charge to me, at this time I decline to receive the vaccine. I understand that by declining this vaccine, I continue to be at risk of acquiring Hepatitis, a serious disease. In the future if I continue to have occupational exposure to Hepatitis or other potentially infectious materials and I want to receive the Twinrix vaccine, I understand that I may receive the vaccine series at no charge to me.

INFORMATION ABOUT PERSON TO RECEIVE VACCINE	INFORMATION ABOUT PERSON DECLINING VACCINE
Last Name First Name M.I.	Last Name First Name M.I.
Address	Address
Birth Date SSN	Birth Date SSN
Signature of person to receive vaccine or person authorized to make this request	Signature of person to receive vaccine or person authorized to make this declination

Hepatitis B Vaccinations

Patient Information/Questionnaire/Consent/Declination

The Disease

Hepatitis B (HBV) is a serious liver infection caused by the hepatitis B virus (HBV). Most persons fully recover from the infection after 1-2 months. For some people (5-10% infected), HBV infection becomes chronic, meaning it lasts more than six months and may lead to fatal liver disease or liver cancer. Chronic carriers may have no symptoms, but can continue to transmit the disease to others.

Hepatitis B is a major infectious disease hazard to workers who have contact with potentially infected blood or body fluids. Among the nation's 5 million healthcare workers an estimated 10-12 thousand are infected each year with hepatitis B, resulting in over 200 deaths. The hepatitis B antigen is found in blood, saliva, urine, semen, vaginal secretions and possibly other body fluids. The virus can survive for days on environmental surfaces, and every contact with the virus is capable of causing infection.

For Clinic Use ONLY - Phillips Co Health Services	
Clinic ID:	
Administered By	Date:
Manufacturer	Lot
Site of Injection:	

The Vaccine

Hepatitis B vaccine is derived from yeast by means of advanced biotechnology and it produces a protective antibody to HBV. Full immunization requires three doses of vaccine over a six-month period, although some persons may not develop immunity. Persons who have been infected with HBV prior to receiving the vaccine may go on to develop clinical hepatitis in spite of immunization. The duration of immunity is unknown at this time. Persons with immune-system abnormalities, such as dialysis patients, have less response to the vaccine.

Vaccination

To prevent HBV infection is recommended for workers who have occupational exposure to blood and/or other potentially infectious material.

Possible Vaccine Side Effects

The incidence of side effects is very low. No serious side effects have been reported after taking the vaccine. The most commonly reported reactions have been injection site soreness and fatigue. Other less common reported reactions (1-10% of injections) include redness or swelling of the injection site, low grade fever, headache, or dizziness. The possibility exists of more serious side effects, or may be identified with more extensive vaccine use.

If you have any question about HBV or the hepatitis B vaccine, please ask at this time.

I have read or have had explained to me the above information and have had a chance to ask questions which were answered to my satisfaction. I understand the benefits and risks of the above vaccine, and being fully informed, request that it be given to me or to the person named below for whom I am authorized to make this request.

Consent

Having been fully informed of the HBV, available vaccine, possible side effects of the vaccine and been offered the opportunity to receive the vaccine at no charge, I request that the Hepatitis B vaccine be given to me or the person named below for whom I am authorized to make this

Decline

I understand that due to my occupational exposure to potentially infectious disease(s), I may be at risk of acquiring a HBV Infection. Having been fully Informed of the disease(s), available vaccine, possible side effects of the vaccine and been offered the opportunity to receive the vaccine at no charge to me, at this time I decline to receive the vaccine. I

request. I understand I must have three doses of the vaccine to confer immunity. However, was with all medical treatment there is no guarantee that I will become immune, or that I will not experience an adverse side effect(s) from the vaccine.

understand that by declining this vaccine, I continue to be at risk of acquiring HBV, a serious disease. In the future if I continue to have occupational exposure to Hepatitis or other potentially infectious materials and I want to receive the Twinrix vaccine, I understand that I may receive the vaccine series at no charge to me.

INFORMATION ABOUT PERSON TO RECEIVE VACCINE	INFORMATION ABOUT PERSON DECLINING VACCINE
Last Name First Name M.I.	Last Name First Name M.I.
Address	Address
Birth Date SSN	Birth Date SSN
Signature of person to receive vaccine or person authorized to make this request	Signature of person to receive vaccine or person authorized to make this declination

IMMUNIZATION/VACCINATION CONSENT/DECLINATION FORM

Medical Provider: When completed, please forward to Chevron Phillips Chemical Co. LLC Health & Medical Services, P.O. Box 4910, The Woodlands, TX 77387-4910

Part A: Employee or Applicant: Please Complete Part A

Last Name	First Name	M.I.	Birth Date (MM/DD/YY)	Gender	Employee no.
				O Male O Female	

Job Title	Work Location	4 Digits of SSN	Contact Telephone Number

Home Address	City	State	Zip Code	Exam Date (MM/DD/YY)

Part B: Immunization/Vaccination Consent

Check All That Apply:

- ☐ Hepatitus A Vaccine
- ☐ Tetnus, Diphtheria (Td) or Tetnus Vaccine
- ☐ Other (Specify): _____
- ☐ Other (Specify): _____

I have read, or had explained to me, the information sheet about the _____ immunization/vaccination. I have had the opportunity to ask questions, which were answered to my satisfaction, and I understand the benefits and risks of the immunization/vaccination as described. I request that the immunization/vaccination be given to me.

Employee Printed Name	Employee Signature	Date (MM/DD/YY)

Immunization/ Vaccination	Date Administered	Injection Site		Manufacturer	Lot Number	Expiation Date
	___/___/_____	O RT Deltoid	O LT Deltoid			
	___/___/_____	O RT Deltoid	O LT Deltoid			
	___/___/_____	O RT Deltoid	O LT Deltoid			

Part C: Immunization/Vaccination Declination

Check All That Apply:

- ☐ Hepatitus A Vaccine
- ☐ Tetnus, Diphtheria (Td) or Tetnus Vaccine
- ☐ Other (Specify): _____
- ☐ Other (Specify): _____

I have read, or had explained to me, the information sheet about the _____ immunization/vaccination. I have had the opportunity to ask questions, which were answered to my satisfaction, and I understand the benefits and risks of the immunization/vaccination as described. I decline the offer of this immunization/vaccination.

Employee Printed Name	Employee Signature	Date (MM/DD/YY)

Part D: Health Care Provider Verification (Person Administering Immunizations)

Providers Printed Name	Providers Signature	Date (MM/DD/YY)	Credentials

OSHA Required Statement of Hepatitis Vaccination
Consent / Declination 29 CFR § 1910.1030 App A

Medical Provider: When completed, please forward to Chevron Phillips Chemical Co. LLC Health & Medical Services, P.O. Box 4910, The Woodlands, TX 77387-4910

Part A: Employee or Applicant: Please Complete Part A

Last Name	First Name	M.I.	Birth Date (MM/DD/YY)	Gender	Employee no.
				O Male O Female	

Job Title	Work Location	4 Digits of SSN	Contact Telephone Number

Home Address	City	State	Zip Code	Exam Date (MM/DD/YY)

Part B: Hepatitis B Vaccine Acceptance

I understand that due to my occupational exposure to blood and other potentially infectious materials, I have been given the opportunity to be vaccinated with the Hepatitis B vaccine at no charge to me. I accept the opportunity

Employee Printed Name	Employee Signature	Date (MM/DD/YY)

Date Administered		Injection Site		Manufacturer	Lot Number	Expiation Date
1st Injection	___/___/_____	O RT Deltoid	O LT Deltoid			
2nd Injection	___/___/_____	O RT Deltoid	O LT Deltoid			
3rd Injection	___/___/_____	O RT Deltoid	O LT Deltoid			

Part C: Hepatitis B Declination

I understand that due to my occupational exposure to blood or other potentially infectious materials, I may be at risk of acquiring Hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with the Hepatitis B vaccine, at no charge to myself. However, I decline the Hepatitis B vaccine at this time. I understand that by declining this vaccine, I continue to be at risk of aquiring Hepatitis B, a serious disease. if in the future, I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis b vaccine, I can receive the vaccination series at no charge to me.

If you have already had Hepatitis B vaccinations, state the date received: _____

Employee Printed Name	Employee Signature	Date (MM/DD/YY)

Part D: Health Care Provider Verification (Person Administering Immunizations)

Providers Printed Name	Providers Signature	Date (MM/DD/YY)	Credentials

NOTE:
A copy of this form is to be maintained at the work location. The original is to be sent to the designated Chrevron Phillips Chemical Medical Facility. This form must be maintained for the duration of employment, plus 30 years in accordance with 29 CFR 1910.20

VACCINE INFORMATION STATEMENT

Hepatitis B Vaccine

What You Need to Know

Many Vaccine Information Statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1 What is hepatitis B?

Hepatitis B is a serious infection that affects the liver. It is caused by the hepatitis B virus.

- In 2009, about 38,000 people became infected with hepatitis B.
- Each year about 2,000 to 4,000 people die in the United States from cirrhosis or liver cancer caused by hepatitis B.

Hepatitis B can cause:

Acute (short-term) illness. This can lead to:

- loss of appetite
- diarrhea and vomiting
- tiredness
- jaundice (yellow skin or eyes)
- pain in muscles, joints, and stomach

Acute illness, with symptoms, is more common among adults. Children who become infected usually do not have symptoms.

Chronic (long-term) infection. Some people go on to develop chronic hepatitis B infection. Most of them do not have symptoms, but the infection is still very serious, and can lead to:

- liver damage (cirrhosis)
- liver cancer
- death

Chronic infection is more common among infants and children than among adults. People who are chronically infected can spread hepatitis B virus to others, even if they don't look or feel sick. Up to 1.4 million people in the United States may have chronic hepatitis B infection.

Hepatitis B virus is easily spread through contact with the blood or other body fluids of an infected person. People can also be infected from contact with a contaminated object, where the virus can live for up to 7 days.

- A baby whose mother is infected can be infected at birth;
- Children, adolescents, and adults can become infected by:
  - contact with blood and body fluids through breaks in the skin such as bites, cuts, or sores;
  - contact with objects that have blood or body fluids on them such as toothbrushes, razors, or monitoring and treatment devices for diabetes;
  - having unprotected sex with an infected person;
  - sharing needles when injecting drugs;
  - being stuck with a used needle.

2 Hepatitis B vaccine: Why get vaccinated?

Hepatitis B vaccine can prevent hepatitis B, and the serious consequences of hepatitis B infection, including liver cancer and cirrhosis.

Hepatitis B vaccine may be given by itself or in the same shot with other vaccines.

Routine hepatitis B vaccination was recommended for some U.S. adults and children beginning in 1982, and for all children in 1991. Since 1990, new hepatitis B infections among children and adolescents have dropped by more than 95%—and by 75% in other age groups.

Vaccination gives long-term protection from hepatitis B infection, possibly lifelong.

3 Who should get hepatitis B vaccine and when?

Children and adolescents

- Babies normally get 3 doses of hepatitis B vaccine:

  1st Dose: Birth
  2nd Dose: 1-2 months of age
  3rd Dose: 6-18 months of age

  Some babies might get 4 doses, for example, if a combination vaccine containing hepatitis B is used. (This is a single shot containing several vaccines.) The extra dose is not harmful.

- Anyone through 18 years of age who didn't get the vaccine when they were younger should also be vaccinated.

Adults

- All unvaccinated adults at risk for hepatitis B infection should be vaccinated. This includes:
  - sex partners of people infected with hepatitis B,
  - men who have sex with men,
  - people who inject street drugs,
  - people with more than one sex partner,
  - people with chronic liver or kidney disease,
  - people under 60 years of age with diabetes,
  - people with jobs that expose them to human blood or other body fluids,

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

- household contacts of people infected with hepatitis B,
- residents and staff in institutions for the developmentally disabled,
- kidney dialysis patients,
- people who travel to countries where hepatitis B is common,
- people with HIV infection.

- Other people may be encouraged by their doctor to get hepatitis B vaccine; for example, adults 60 and older with diabetes. Anyone else who wants to be protected from hepatitis B infection may get the vaccine.
- Pregnant women who are at risk for one of the reasons stated above should be vaccinated. Other pregnant women who want protection may be vaccinated.

Adults getting hepatitis B vaccine should get 3 doses—with the second dose given 4 weeks after the first and the third dose 5 months after the second. Your doctor can tell you about other dosing schedules that might be used in certain circumstances.

4 Who should not get hepatitis B vaccine?

- Anyone with a life-threatening allergy to yeast, or to any other component of the vaccine, should not get hepatitis B vaccine. Tell your doctor if you have any severe allergies.
- Anyone who has had a life-threatening allergic reaction to a previous dose of hepatitis B vaccine should not get another dose.
- Anyone who is moderately or severely ill when a dose of vaccine is scheduled should probably wait until they recover before getting the vaccine.

Your doctor can give you more information about these precautions.

Note: You might be asked to wait 28 days before donating blood after getting hepatitis B vaccine. This is because the screening test could mistake vaccine in the bloodstream (which is not infectious) for hepatitis B infection.

5 What are the risks from hepatitis B vaccine?

Hepatitis B is a very safe vaccine. Most people do not have any problems with it.

The vaccine contains non-infectious material, and cannot cause hepatitis B infection.

Some mild problems have been reported:

- Soreness where the shot was given (up to about 1 person in 4).
- Temperature of 99.9°F or higher (up to about 1 person in 15).

Severe problems are extremely rare. Severe allergic reactions are believed to occur about once in 1.1 million doses.

A vaccine, like any medicine, could cause a serious reaction. But the risk of a vaccine causing serious harm, or death, is extremely small. More than 100 million people in the United States have been vaccinated with hepatitis B vaccine.

6 What if there is a serious reaction?

What should I look for?

- Look for anything that concerns you, such as signs of a severe allergic reaction, very high fever, or behavior changes.

  Signs of a severe allergic reaction can include hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, and weakness. These would start a few minutes to a few hours after the vaccination.

What should I do?

- If you think it is a severe allergic reaction or other emergency that can't wait, call 9-1-1 or get the person to the nearest hospital. Otherwise, call your doctor.
- Afterward, the reaction should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your doctor might file this report, or you can do it yourself through the VAERS web site at **www.vaers.hhs.gov**, or by calling **1-800-822-7967**.

VAERS is only for reporting reactions. They do not give medical advice.

7 The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines.

Persons who believe they may have been injured by a vaccine can learn about the program and about filing a claim by calling **1-800-338-2382** or visiting the VICP website at **www.hrsa.gov/vaccinecompensation.**

8 How can I learn more?

- Ask your doctor.
- Call your local or state health department.
- Contact the Centers for Disease Control and Prevention (CDC):
  - Call **1-800-232-4636 (1-800-CDC-INFO)** or
  - Visit CDC's website at **www.cdc.gov/vaccines**

Vaccine Information Statement (Interim)

Hepatitis B Vaccine

2/2/2012

Office Use Only

42 U.S.C. § 300aa-26

Appendix B

Bloodborne Pathogen Exposure Control Plan

Initial Report Of Human Body Fluid Exposure/Injury

Attachment B - Page 1 of 4

To be filled out by evaluating healthcare professional

Employee

Name _____

SS# _____

Classification Group _____

Work Phone No. _____

History

Date of Report _____

Date of Exposure/Injury _____ Time _____

Location of Exposure _____

Safety Measures Employed at Time of Exposure/Injury (Circle all that apply)

Gloves
Eye Protection
Mask
Gown
Other (Specify) _____

Type of Exposure/Injury (Check appropriate responses)

Skin Contact
Location _____
Integrity _____
Mucus membranes
____ Eyes (Specify) OD OS OU
____ Nose
____ Mouth
Percutaneous
Instrument Involved (Specify) _____
Type of Wound
____ Puncture
____ Laceration Depth _____ Length _____

Body Fluid Contacted (Circle appropriate responses)

Whole Blood
Serum
Stool
Diluted Blood/Serum
Urine
Sputum
CSF
Other (Specify) _____

Bloodborne Pathogen Exposure Control Plan

Initial Report Of Human Body Fluid Exposure/Injury

Attachment B - Page 2 of 4

Estimated Amount _____

Estimated Time Elapsed from Source to Recipient _____

How Injury Happened (brief description) _____

_____

_____

First Aid Measures - Worksite

None

Wound Cleansed/Irrigated _____

Agent Utilized _____

Duration _____

Other (Specify) _____

First Aid Measures - Medical Department

None

Wound Cleansed/Irrigated _____

Agent Utilized _____

Duration _____

Other (Specify) _____

Source

Name & SS# _____

Classification Group _____

Work Phone No. _____

Diagnosis(es)/Complaint _____

Source's Labs Check if ordered. Enter result and date when available.

		Result	Date
HBsAg	____		
ALA (ALT)	____		
ASP (AST)	____		
anti-HIV-1	____		

If ALA and/or ASP is/are normal is NANB hepatitis suspected?

Yes ____

No ____ Explanation _____

Initial Report Of Human Body Fluid Exposure/Injury

Attachment B - Page 3 of 4

If Source is Unknown

Risk of hepatitis B or NANB hepatitis is:

High ____

Low ____

Negligible ____

Employee's Labs

Check if ordered. Enter date and result when available

		Result	Date
None Needed	____		
ALA (ALT)	____	_____	
ASP (AST)	____	_____	
anti-HBs	____	_____	
anti-HIV-1	____	(Do not record results here)	
Save Serum	____		
Other (Specify)	_____		

Employee's HBV Immunization Status

Check appropriate response

____ Not Occupationally Indicated

____ Occupationally Indicated, but Declined

____ Enrolled and/or Started in the Past

Series Complete **Yes** **No**

Number of Doses Received _____

Date of Last Dose _____

____ Enrolled Today

____ Previously Infected with Hepatitis B

Treatment

None Needed ____

	Date	Dose	Lot #
IG, 1st Injection IG			
2nd Injection HGIG			
1st Injection HGIG			
2nd Injection			
Hepatitis B			
Td or Tdap			
Other (Specify)			

Initial Report Of Human Body Fluid Exposure/Injury

Attachment B - Page 4 of 4

Follow-Up Check appropriate response(s)

____ None Needed - No Identified Risk of Infection
____ HBV Exposure - HBsAg, anti- HBs, ALA, ASP in 6 months
____ NANB Exposure - ALA, ASP, HV in 1, 3 & 6 months
____ HIV-1 Exposure - anit-HIV-1 in 6 weeks, 3 & 6 months
____ Other (Specify) _____

Comments _____

_____

_____

RN _____

Consulting MD _____

http:// sptupl48.conocophillips.net/sites/hse/ADM040%20Shared% 20 Documents/content/060H05d.03.doc

Confidential

Physician Written Opinion

Please Print - Use Black Ink

Employee Name Last First Middle	Employee Number	Location	Department

Exam Type or Exposure: (Check appropriate response or enter reason for exam)

- ☐ Asbestos
- ☐ Benzene
- ☐ Butadiene
- ☐ Chrome Catalyst
- ☐ DART
- ☐ Fire Brigade
- ☐ HazMat
- ☐ HAZWOPER
- ☐ Incinerator
- ☐ Lasers
- ☐ Lead
- ☐ Vinyl Chloride
- ☐ Other (Specify) _____

Complete Only for Asbestos Exam

Have you informed the employee of the increased risk of lung cancer attributed to the combined effects of smoking & asbestos exposure? YES NO

Are there medical complaints related to exposure indicated above?

☐ NO ☐ YES Explain: _____

Are specific medical questionnaires required? (i.e. Asbestos, Benzene)

☐ NO ☐ YES Date Administered & Reviewed: _____

Laboratory Results:	Normal	Abnormal	Remarks/Results
Blood	☐	☐	
Urine	☐	☐	
Chest X-Ray	☐	☐	
Pulmonary Function	☐	☐	
Other (Specify)	☐	☐	

Findings to related exposure? ☐ Normal ☐ Abnormal

Recommendations/Personal Protective Equipment?

Restrictions: Enter restriction & comments below or check ☐ None

Restriction _____ Re-Exam Date: _____

Employer retains other additional records concerning surveillance program(s) which are available to employees upon request.

This written opinion & any appropriate medical questionnaires (i.e. Asbestos, Benzene) were reviewed by me & I informed the employee of these results

A copy of this completed form was given to the employee by me:

☐ YES ☐ NO

Examining/Reviewing Physician's Signature _____ **Date** _____

THIS FORM IS NOT TO BE USED IN PLACE OF MEDICAL EXAMINATION FORM 1622-1

RC-Medical records Form 16208-S 4/12

Examining Physician's Written Opinion

Medical Provider: When completed, please forward to Chevron Phillips Chemical Co. LLC Health & Medical Services, P.O. Box 4910, The Woodlands, TX 77387-4910

Part A: Employee or Applicant - Please Complete Before Exam

Last Name	First Name	M.I.	Birth Date (MM/DD/YY)	Gender	Employee no.
				O Male O Female	

Job Title	Work Location	4 Digits of SSN	Contact Telephone Number

Home Address	City	State	Zip Code	Exam Date (MM/DD/YY)

Height: Feet Inches Weight (lbs.)

Part B: Issuing Office responsible forwarding this written opinion.

Upon receipt of the completed form, Medical will provide two copies of the form to the issuing office listed below. One copy is for the issuing office files. The other copy is to be given to the employee within 15 days of it's receipt.

Check All That Apply:

☐	Asbestos	☐	Chromium VI	☐	HazMat/HAZWOPER	☐	Other (Specify):
☐	Benzene	☐	ERT	☐	Laser Use		
☐	Butadiene	☐	Formaldehyde	☐	Lead		

Issuing Office Contact	Phone	Date Results Received from Medical(MM/DD/YY)

Issuing Office Address	City	State	Zip Code	Date Results Issued to Employee(MM/DD/YY)

Part C: To be Completed by Examining Physician.

Chevron Phillips Chemical Co. L.P. requests that the examining physician inform the employee of the examination findings, but does not reveal on this form specific findings or diagnoses unrelated to occupational exposure to the substance(s).

1. In my opinion, based on my evaluation of (Employee Name)			On this Exam Date (MM/DD/YY)
The Employee is of:	☐ No Increased Risk	☐ Increased Risk	of material health impairment from exposure to the substance(s) listed above, or upon the use of personal protective equipment, such as clothing or respirators.

2. I recommend the following limitations on the employee, based on the exposure to the indicated substance(s), including personal protective equipment:

☐ No Limitations

☐ Specific Limitations :

Part D: To be Completed by Examining Physician

As the Examining Physician, I took the following action(s): (choose "Yes" or No")

☐	Yes	☐	No	I have reviewed the appropriate related OSHA Medical Surveillance Guidelines.
☐	Yes	☐	No	I reviewed the Employee's current medical history/questionnaire.
☐	Yes	☐	No	I informed the Employee of the results of the medical examination and of any medical conditions related to exposure to the substance(s).

Physician's Printed Name	Physician's Signature	Date (MM/DD/YY)	Credentials

Appendix C

Bloodborne Pathogen Exposure Control Plan

Sharps Injury Log

Attachment C

Establishment/Facility Name:

Date	Case/Report No.	Type of Device	Brand Name of Device	Work Area Where Injury Occurred	Brief Description of How Incident Occurred (i.e. procedure being done, action being performed, disposal injection, etc., body part injured)

29 CFR 1910.1030, OSHA's Bloodborne Pathogens Standard, in paragraph (h)(5), requires an employer to establish and maintain a Sharps Injury Log for recording all percutaneous injuries in a facility occurring from contaminated sharps. The purpose of the log is to aid in the evaluation of devices being used in healthcare and other facilities and to identify problem devices or procedures requiring additional attention or review. This log must be kept in addition to the injury and illness log required by 29 CRF1904. The Sharps Injury Log should include all sharps injuries occurring in a calendar year. The log must be retained for five years following the end of the year to which it relates. The log must be kept in a manner that preserved the confidentiality of the affected employee.

http://spthr.conocophillips.net/sites/hr/WebDocs/IOHS/Forms-medicai/Bioodborne%20Pathogens%20Guidelines.pdf

Appendix D

Bloodborne Pathogen Source Testing

Consent/Declination for Testing - for Human Immunodeficiency Virus (HIV)/Acquired Immune Deficiency Syndrome (AIDS) and/or Hepatitis B Virus (HBV)

AIDS (HIV) and Hepatitis B (HBV) are viruses transmitted in blood or body fluids that have potentially fatal outcomes for exposed individuals. An employee has been accidentally exposed to your blood or body fluids. Testing is necessary to determine if you are infected with these viruses and possibly transmitting them to others. These results will prove beneficial in the health care management of both you and the exposed individual. If you are presently known to be infected with HBV or HIV, testing is not required, however, you will be required to provide Phillips 66 Health Services with a written confirmation of your HBV or HIV status from your licensed health care provider.

☐ **HIV/AIDS**

HIV stands for human immunodeficiency virus. If left untreated, HIV can lead to the disease, Acquired Immune Deficiency Syndrome, also known as AIDS, is a viral illness that is spread by contact with the blood or body fluids of an infected person. As part of your evaluation for AIDS, a test is needed to determine if you have had previous contact with the AIDS virus. The test for AIDS is done on a blood specimen. The test sometimes gives false positive result, which means the test could be positive without the AIDS virus being present. Therefore, a confirmation test is done on all positive results. It is possible in the very early stage of the illness (the first few weeks after contact with an infected person) that the test could be negative even though the active infection is present, especially for individuals in high risk groups or for their intimate contacts. A single negative test cannot establish with certainty that infection is not present.

☐ **HBV**

Hepatitis B, also called serum hepatitis or HBV, is a viral infection that causes damage to the liver. Most persons fully recover from the infection after 1-2 months. However, chronic infection with hepatitis B virus (HBV) can occur (5-10%) and may lead to fatal liver disease or liver cancer. Chronic carriers may have no symptoms, but continue to transmit the disease to others. Hepatitis B is a major infectious disease hazard to persons who have contact with potentially infected blood or body fluids. The hepatitis B antigen is found in blood, saliva, urine, semen, vaginal secretions, and possibly other, body fluids. The virus can survive for days on environmental surfaces, and every contact with the virus is capable of causing infection. As part of your evaluation for HBV, a test is needed to determine if you have had previous contact with the HBV virus. The test for HBV is done on a blood specimen.

1. If my blood is found to be positive, I will be notified and provided with information regarding follow-up.
2. I have had the opportunity to ask questions about this blood test(s) and understand that I will be counseled about the test results and its implications.
3. I understand that my test(s) result will be kept confidential to the full extent provided by law. I understand that care is being given to maintain my records in a secure manner.
4. I understand that the results of testing shall be made available to the exposed employee.
5. In consenting to this test(s), I have read and understand this information.
6. If you are presently infected with HBV of HIV, testing is not needed, however, we will require written confirmation of your HBV or HIV status from your licensed health care provider

I have read or have had explained to me the above information and have had a chance to ask questions which were answered to my satisfaction. I understand the benefits and risks of the above testing, and being fully informed, I will either consent or decline such testing.

Consent	**Decline**
Having been fully informed of Human Immunodeficiency Virus (HIV)/Acquired Immune Deficiency Syndrome (AIDS) and Hepatitis B Virus (HBV), I consent to the HIV and HBV testing.	Having been fully informed of Human Immunodeficiency Virus (HIV)/ Acquired Immune Deficiency Syndrome (AIDS) and Hepatitis B Virus (HBV), I decline the HIV and HBV testing.
INFORMATION ABOUT PERSON TO RECEIVE TESTING	**INFORMATION ABOUT PERSON DECLINING TESTING**
Please Print	
Last Name First Name M.I.	Last Name First Name M.I.
Address	Address
Birth Date SSN	Birth Date SSN
Signature of person to receive vaccine or person authorized to make this request	Signature of person to receive vaccine or person authorized to make this declination

Source Declination Form

POST-EXPOSURE BLOOD COLLECTION AND TESTING FOR HBV, HCV, AND HIV STATUS SOURCE INDIVIDUAL'S INFORMED DECLINATION FOR BLOOD COLLECTION AND TESTING

I hereby voluntarily decline to authorize Chevron Phillips Chemical and/or its representatives to collect and test my blood for Hepatitis B Virus (HBV) and/or Hepatitis C Virus (HCV), and/or Human Immunodeficiency Virus (HIV) infectivity.

Chevron Phillips Chemical has requested my voluntary consent to collect and test my blood for Hepatitis B, Hepatitis C, and/or HIV infectivity because a Chevron Phillips Chemical employee was occupationally exposed to my blood or other body fluids. Chevron Phillips Chemical has made this request pursuant to the U.S. Occupational Safety and Health Administration's Bloodborne Pathogens Standard (29 CFR 1910.1030)

I understand that if my consent is not required by law and my blood is already available to Chevron Phillips Chemical, Chevron Phillips Chemical may exercise it legal right to test my blood and communicate the results to the exposed employee regardless of this declination.

After having been informed of the foregoing considerations, I hereby decline to authorize the collection and testing of my blood for Hepatitis B, Hepatitis C, and HIV infectivity.

Signature of Source Person	Printed Name of Source Person	Source Individual's SSN

Date (MM/DD/YY)	

Source Individual's Employer	Source Individual's Job Title

Signature of Witness	Printed Name of Witness

Date (MM/DD/YY)

Source Consent Form

Please Print

Last Name	First Name	M.I.	Birth Date (MM/DD/YY)	Gender O Male O Female	Employee no.

Job Title	Work Location	SSN	Work Phone Number

Home Address	City	State	Zip Code	Home Phone No.

I have been advised that, owing to the handling of my blood and/or other body fluids, an exposure incident has occurred involving these potentially infectious materials and another person.

I hereby agree to provide a specimen of my blood and consent to the testing of this specimen for the infectious disease checked below:

- ☐ HBV (Hepatitis B Virus)
- ☐ HBC (Hepatitis C Virus)
- ☐ HIV (Human Immunodeficiency Virus)
- ☐ Other (Specify) _____

I have been Informed that the collected blood will be tested so that the individual who was exposed to my blood and/or other body fluids can be Informed of the HBV, HCV, and HIV serological status of my blood subject to revision.

Signature of Source Person	Printed Name of Source Person

Date (MM/DD/YY)

Signature of Witness	Printed Name of Witness

Date (MM/DD/YY)

Appendix E

Bloodborne Pathogen Exposure

Testing Consent/Declination - for Human Immunodeficiency Virus (HIV)/Acquired Immune Deficiency Syndrome (AIDS) and/or Hepatitis B Virus (HBV)

HIV/AIDS

Please Read Carefully

HIV stands for human immunodeficiency virus. If left untreated, HIV can lead to the disease, Acquired Immune Deficiency Syndrome, also known as AIDS, is a viral illness that is spread by contact with the blood or body fluids of an infected person. As part of your evaluation for AIDS, a test is needed to determine if you have had previous contact with the AIDS virus. The test for AIDS is done on a blood specimen. The test sometimes gives false positive result, which means the test could be positive without the AIDS virus being present. Therefore, a confirmation test is done on all positive results. It is possible in the very early stage of the illness (the first few weeks after contact with an infected person) that the test could be negative even though the active infection is present, especially for individuals in high risk groups or for their intimate contacts. A single negative test cannot establish with certainty that infection is not present.

HBV

Hepatitis B, also called serum hepatitis or HBV, is a viral infection that causes damage to the liver. Most persons fully recover from the infection after 1-2 months. However, chronic infection with hepatitis B virus (HBV) can occur (5-10%) and may lead to fatal liver disease or liver cancer. Chronic carriers may have no symptoms, but continue to transmit the disease to others. Hepatitis B is a major infectious disease hazard to persons who have contact with potentially infected blood or body fluids. The hepatitis B antigen is found in blood, saliva, urine, semen, vaginal secretions, and possibly other, body fluids. The virus can survive for days on environmental surfaces, and every contact with the virus is capable of causing infection. As part of your evaluation for HBV, a test is needed to determine if you have had previous contact with the HBV virus. The test for HBV is done on a blood specimen.

I have read or have had explained to me the above information and have had a chance to ask questions which were answered to my satisfaction. I understand the benefits and risks of the above testing, and being fully informed, I will either consent or decline such testing.

Consent

Having been fully informed of the HIV/AIDS and HBV illnesses, I consent to the HBV and HIV exposure testing If my blood is found to be positive, I will be notified and provided with information regarding follow-up. I have had the opportunity to ask questions about this blood test(s) and understand that I will be counseled about the test results and its implications. I understand that my test(s) result will be kept confidential to the full extent provided by law. I understand that care is being given to maintain my records in a secure manner. In consenting to this test(s), I have read and understand this information.

Decline

Having been fully informed of the HIV/AIDS and HBV illnesses, I decline the HBV and HIV exposure testing. I understand that due to my occupational exposure to blood or other potentially infectious material, I may be at risk of acquiring Hepatitis B virus (HBV) infection and/or Acquired Immune Deficiency Syndrome (AIDS). If, in the future, I continue to have occupational exposure to blood or other potentially infectious materials and I want to receive testing, I understand that I may receive the testing at no charge to me.

INFORMATION ABOUT PERSON TO RECEIVE TESTING	INFORMATION ABOUT PERSON DECLINING TESTING
Please Print	
Last Name First Name M.I.	Last Name First Name M.I.
Address	Address
Birth Date SSN	Birth Date SSN
Signature of person to receive vaccine or person authorized to make this request	Signature of person to receive vaccine or person authorized to make this declination

Exposed Employee Consent Form

Please Print

Last Name	First Name	M.I.	Birth Date (MM/DD/YY)	Gender O Male O Female	Employee no.

Job Title	Work Location	SSN	Work Phone Number

Home Address	City	State	Zip Code	Home Phone No.

I have been advised that, owing to an exposure incident involving a source individual's blood and/or body fluids I have potentially been exposed to infectious material.

I hereby agree to provide a specimen of my blood and consent to the testing of this specimen for the infectious disease checked below:

- ☐ HBV (Hepatitis B Virus)
- ☐ HBC (Hepatitis C Virus)
- ☐ HIV (Human Immunodeficiency Virus)
- ☐ Other (Specify) _____

I also understand results of the source person's blood test will be disclosed to me, if available, as part of my medical evaluation. I have been informed of applicable laws regarding confidentiality of this information related to the source person. The results of my blood test will be kept as confidential as possible but may be required to be released to a government agency In accordance with applicable state law.

Signature of Employee	Employee's Printed Name

Date (MM/DD/YY)

Signature of Witness	Printed Name of Witness

Date (MM/DD/YY)

*If I decline to have my blood tested for HIV infectivity at this time, I understand that my blood will be maintained for 90 days and I may elect HIV testing during this 90 day time period

Appendix F

Bloodborne Pathogen Exposure Control Plan

Review of Symptoms - Employees with Exposure to Human Body Fluid(s) Attachment F

To be filled out by employee

Employee

Name _____

SS# _____

Classification Group _____

Work Phone No. _____

Have you had any of the following within the last 12 months?

	Y	NO	Comments
Fatigue or general loss of energy lasting two weeks or more?	___	_____	_____
New, unexpected cough lasting more than two weeks?	___	_____	_____
Shortness of breath so severe that you could not walk up stairs that lasted for at least one week?	___	_____	_____
Loss of appetite for more than two weeks?	___	_____	_____
Unexplained weight Joss of 10 lbs. or more or 10% of your normal weight?	___	_____	_____
Diarrhea lasting five days or longer?	___	_____	_____
Fever greater than 100 F, that lasted for at least two weeks?	___	_____	_____
Night sweats (drenching bedclothes with sweat) that lasted for at least one week?	___	_____	_____
Tender swollen glands (enlarged lymph nodes) that lasted at least two weeks?	___	_____	_____
Yeast infections of the mouth?	___	_____	_____
Any other serious infections?	___	_____	_____

Please Specify: _____

Employee Signature	Date (MM/DD/YY)

This plan will be reviewed annually be the Sweeny Complex Emergency Response Team and the Chevron Phillips EHS Team. Modifications may be based on changes in operating principals or areas for improvement identified in drill and incident critiques outlined in Annex I of this document. Annual reviews will be documented in the plan.

Requests for changes may also be submitted to the Sweeny Complex Emergency Emergency Response Team. These requests will be reviewed and, if deemed appropriate, revisions will be made to the Plan. If the request is deemed unnecessary or inappropriate, or the recommended changes are altered, a response with an explanation will be sent to the requester.

Revision History is at the end of this document.

Revision History			
Revised By	**Rev Number**	**Revision Date**	**Revisions**
B. Duncan	1	2010	• Changed incident classification throughout ICP from Level 1 & Level 2 to Medical, Level 3, Level 2 & Level 1. • Revision to the EAP include: addition of language to reflect operations personnel remaining in FIC if not downwind from a toxic release and procedure; addition of list of complex evacuation points located outside of the fence line; addition of description of Rally Point Coordinators and a list of their roles and responsibilities; revised set of instructions for Emergency Response Team members when the plant alarm is activated; and a reference to the roles and responsibilities of the Rally Point Representative. • Revisions to Emergency contact list include: change National Foam to Kidde Fire Fighting; remove KIOX radio station; update contact information for Dow Chemical for mutual aid; add Lyondell and OXEA contact information for mutual aid; add contact information for Dooley Tackaberry, Total Safety and Wilson Supply for safety supplies; add contact information for Chevron Phillips Chemicals Incident Management Team (IMT) • Updated Emergency Response Equipment Overview • Added Response to Report from Public of Spill on River document, Severe Weather Document and Rally Point Representative document
J. Williams	2	2011	• Added more detail to the Severe Weather Document, specifically on lightning and high winds. • Added information and requirements for the Main Office Building alarms in the Internal and external communications document. • Updated the Emergency contact list and the Life Flight information. • Updated Incident Command System section. • Revised Rally Point information • Modified CPC Logo. • Revised Hurricane Plan-added Phase 7. • Updated emergency response equipment overview. • Added Safe Haven Criteria/definition

N. Adams	3	2012 2012 cont...	• Changed COP logo to P66 on cover page • Changed ConocoPhillips to Phillips 66 throughout the ICP • Updated key contact for plan development and maintenance • Added loading and unloading of marine vessels to Purpose and Scope • Corrected latitude/longitude for San Bernard Terminal • Added TRRC regulated on solid waste and permit number to Purpose & Scope • Revised TCEQ SW permit on Purpose and Scope • Added Addendum 1 (RCRA waste- ER procedures) verbiage to the Initial Discovery & Flowchart section • Added number 5 & 6 to initial discovery of a small release addressing using multi-gas sensors to help determine barricade locations • Defined the acronym for CAER in the Initial Discovery & Flowchart • Changed the description for Rally Point #3 in the Emergency Action Plan • Updated Emergency Action Plan Rally Points drawing number and omitted how to obtain additional copies of the map • Added Rally Point #4 to the Emergency Action Plan for Clemens Terminal • Added Unit 22 NGL Control Room to Emergency Action Plan for locations that require essential operations critical personnel to remain to control or shutdown operations during a major emergency incident and omitted Unit 33 Control Room in the Emergency Action Plan Clarified CPC and P66 rather than just Emergency Response Team in the Emergency Action Plan • Clarified that it is the Main Guard gate that conducts plant alarm testing for the Sweeny Complex in the Internal and External Communication section and omitted that they test the Terminal alarm systems • Omitted exact locations of every H2S analyzer alarm and stated that they are strategically located throughout the Complex in the Internal and External Communication section • Added Unit 22 Outside Heater Operator and omitted Unit 10B/12 Outside Operator, Sweeny Tank Farm Operator & Coker Ops from the IRT list in the Establish Response Management System section • Eliminated step 2 (proceed to designated

		2012 cont...	pick up point) of the Initial Response Team Members section of the Establish Response Management System section. Now the plan simply states to "respond to incident location" • Updated emergency contact lists (Annex 1) for P66 and CPC; added MSRC & Phoenix Pollution Control and Environmental Services for spill control • Added CPC S&H team and P66 rather than stating Emergency Response Team to the Incident Documentation section • Updated the Emergency Response Equipment Inventory Overview section • Updated First Aid Station hours of operation in the First Aid and Emergency Medical Services procedure • Revised the Blood borne pathogen (BBP) plan according to P66 and CPC medical review and added attachments / appendices as supporting documents • Added the description "Phillips designed UOP" to the Unit 30 HF in the HF Acid Emergency Response and Control Plan • Added Unit 6 South as a unit that HF acid is present to the HF Acid Emergency Response and Control Plan • Eliminated Air Evac Life as a service by air in the HF Acid Emergency Response and Control Plan • Changed Garner to Phoenix Environmental in the HF Acid Emergency Response and Control Plan • Eliminated the reference to attachment II and III and stated where exactly the reference / procedure could be found pertaining to roof and firewall drains in the Prevention section • Updated the Texas Pollution Discharge Elimination System Permit reference and permit number in the disposal facilities for plant effluents discharged in navigable waters section of the prevention plan • Added that CPC inspection records are maintained in Ultra Pipe in the Prevention section • Added the description "CPC Unit Supervisors" to the Prevention section • Changed Personnel Safety to Loss Prevention in the Response to a Report from Public of Spill on River • Added details to the thunderstorm/lightning section of the Severe Weather plan • Added Brazoria County Emergency Management & Hurricane Preparedness Guide link to Personal Hurricane Plan

B. Boren	4	2013	• Updated Night Superintendent Contact Information (601) • Updated REVISED BY: • Revision date • Removed 1 Ton Ford w/ Utility Bed • Added ¾ Ton Chevrolet Flat Bed
B. Boren	5	2014	• Reviewed
B. Boren	6	February 2015	• Reviewed
B. Boren	7	August 2015	• Updated QI & IC Employees
B. Boren	8	February 2016	• Reviewed • Headers corrected • Added into Addendum 1 (Safe Haven Procedure) P66 & CPC • Moved Revision History to stand alone within document • Added RCRA Addendum • Changed "Pipeline" verbiage throughout doc. To Midstream • Corrected Address Jones Creek, Refinery, Cogen • Updated RCRA Document • Lightning Alert Notifications (Severe Weather)
B. Boren	9	February 2017	• Changed "CPC" to "CPChem" throughout document • Clarification of process and addition of railcar storage and sit yard • Clarification of site information • Added PE Unit information • Added SitYard Information • Updated Clemens Terminal information • Updated 602 phone number • Updated CPChem Bomb Threat requirements • Added emergency road closure support • Removed Plant Pagers information • Removed pager reference • Added Admin Extension rally points • Added PE Unit Rally Points • Added CPChem Admin Extension Building • Added PE Units to Safe Havens • Clarification of rally point coordinators, removed CPChem H&S Team • Clarification of CPChem Safety personnel responsibilities • Added extension building • Clarification of 602 roles during incidents • Update of company name • Added PE Unit Operators, clarification of

			602 responsibilities • removed reference to pagers • Clarification of EOC duties, removed reference to pagers • Added Bay City Tribune to contacts list, revised West Columbia contact • Removed Sweeny EMS • Clarification of incidents, grammar at bottom • Added SitYard equipment, PE Unit equipment, updated extinguisher numbers, grammar • Update CPChem Bomb Threat information • Removed pagers references • Clarification of First Aid Stations • Addition of PE Unit Chemicals • Clarification of drills • Updated Weather contractor information • Clarification of CPChem lifting procedures • Clarification of Storm Team and Storm Assessment Teams • Company clarifications • Re-entry letter clarification • work team clarification • Updated logos on medical forms • added sentence to BBP plan • Lightning Alert (Severe Weather) Changes • Safe Havens • Shelter In Place Locations • Shelter in Place Kit Contents • Bloodborne Pathogens Update • Removed Fire Phone Laboratory • Removed Laboratory Personnel from Emergency or Ambulance duties • Added Engine 21 to Emergency Vehicles List • Changed Severe Weather (Lighting)
B. Boren B. Boren	10	May 22, 2017 June 29, 2017	• Removed REMO (Remote Emergency Management Operations for all of ICP. Cancelled REMO Team 2017 Hurricane Season. • Added Hurricane Storm Shelters into Hurricane Plan Section

Brad Jurgensmeier Ronnie Thompson	11	2019 6/24/2019	• Updated Emergency Action Plan – reformatted, added CPChem-specific information and requirements for Safe Havens/Shelter-in-Place, PE Rally Point & accountability procedures, and general evacuation requirements. • Added CPChem Corporate Incident Management Team notification process. • Added that CPChem Medical Clinic is accessible on weekends through 602. • Added wording to 605 restorability's for roll call for ERT/IRT • Added wording to Drill and exercise "HF and LPG drill"
Dustin Zingale **Ronnie Thompson**	12	07/06/2021	• Added Rally Points from the new P66 Frac Units and Major Projects • Changed IRT from U22 Heater Operator to U12/10B Outside Operator • Updated the alarm zone response • Updated Unit 30 emergency response for defensive and offensive tactics • Removed "Old Ocean Community Alarm" references
Dustin Zingale **Ronnie Thompson**	13	8/27/2021	• Remove more references to the pager system. • Removed references to the Brazoria County News • Added up to date RCRA information • Removed Unit 30 and P66 Main Office Building (MOB) as safe havens • Specified field activation stations (push buttons) as CPC only. • Removed information about an evacuation horn at U30.
Justin Newton **Vincent Njoroge**	14	10/17/2021	• Added Satellite Air Monitoring (SAM) Team responsibilities and when the SAM Team should be activated as part of an incident response.

SWEENY

SW-COGEN-EOP-GEN02 - Cogen Freeze Protection Actions

PUBLISHED

Version 4.0.0

2022-04-13

Expires 2025-04-13

EMERGENCY

SIGN-OFF REQUIRED

This procedure is written to give instruction on actions that need to be taken just prior to predicted freeze events and during actual freezing conditions to ensure safe and reliable operations of equipment at Sweeny Cogen. This procedure, although it may be used as reference, should not be used for pre-season winterization preparation. Please reference Procedure SW-COGEN-NOP-GEN01 Cogen Preseason Winterization, for preseason winterization preparations.

Domain:
Sweeny Refinery (SW) > Operations (OPS) > Utilities (UTIL) > Cogen (COGEN) > EOP

Access:

Everyone in this domain | Field

Completion sequence:
None

Content type:
Procedure

Facility:
Sweeny

Phase of Operation:
Routine Operations

Procedure Type:
Emergency Operating Procedure

Retention Code:
CG01

Sign-Off:
Sign-off Required

Use Classification:
Emergency

Printed copies of this procedure are no longer valid three (3) days after the "Printed" date shown on the document footer.

HSE and Other Considerations

Additional Precautions

Refer to the SDS system to review the hazards that may be encountered during the use of this procedure. The SDS system provides electronic access to the current properties of, and hazards presented by, the chemicals used in the process; the precautions and controls necessary to prevent exposure; the personal protective equipment requirements; and the control measures to be taken if physical contact or airborne exposure occurs.

CERTIFIED OPERATORS HAVE THE AUTHORITY TO SHUT DOWN A PROCESS IF THEY BELIEVE AN UNSAFE CONDITION EXISTS THAT COULD INJURE PERSONNEL, DAMAGE EQUIPMENT, OR WOULD HAVE AN ADVERSE ENVIRONMENTAL IMPACT ON THE COMMUNITY.

The Shift Leader or designee will remove all non-essential personnel from the Unit when process charge is introduced or at any time he/she deems necessary to ensure the safety of personnel/contractors in accordance with Refining Required Standard O-34-RS-2 using the plant radio system.

Condition for initiating an Emergency Procedure is Fire, Gas Release, or exceeding a SOL. Transition to Normal Operations when the unit is secure.

Health Hazards

- Cold ambient temperatures
- Slipping hazards on ice
- Electrical Hazards

Additional PPE

- Normal minimum PPE is required to carry out this procedure.
- Use appropriate PPE when draining or venting process equipment.

Additional Tools and Personnel

There are **no** procedure-specific tools or personnel required.

References

Sweeny PSI (Process Safety Information/Operating Limits Procedures)

Sweeny Rally Point Map

Sweeny Safety Standards

SDS (Safety Data Sheet) System

Sweeny Emergency Zone Map

Cogen Freeze Round Logsheet

Cogen Freeze Rounds Logsheet

Prerequisites

There are **no** prerequisites.

This original completed procedure, as well as copies of any supporting documentation related to winter preparation, will be kept in the "Cogen Winterization Preparation" binder in the Cogen Control Room for two years. A copy of this completed procedure will be given to the Utilities Operations Supervisor for electronic upload to the Shared Folder. Additionally, copies of ALL maintenance records pertaining to freeze protection equipment will also be stored in this binder.

CAUTION Any SAP Notifications written to address issues found within 72 hours of a predicted freeze shall be submitted as an "E" and a list with details concerning the discrepancies shall be entered into the Console and Outside Operators OIS. Additionally, an email must be generated outlining the

discrepancies and sent to the Shift Leader, Shift Supervisor and Operations Supervisor.

Within 72 hours prior to predicted freeze event:

1. **FLD** Verify that all of the heat trace circuits are operational and fill out the Cogen Heat Trace Circuit Operational checklist for each unit and the Unit Critical Instrumentation/Equipment Inspection checklists (nine checklists total, eight unit lists and one BOP list).

   Sign **Date**

2. **FLD** At each heat trace electrical distribution panel, ensure all appropriate circuit breakers are not open nor tripped. Write a SAP notification specific to that panel with details for any circuits that were found in the open or tripped position.

   Sign **Date**

3. **FLD** At each heat trace control panel, place the switch into "Hand" to energize all circuits. Circuits are energized when the associated light turns on. If circuits do not energize, write a SAP notification specific to that panel with details.

   Sign **Date**

4. **FLD** Once testing is complete, return switch back to "Auto".

   Sign **Date**

5. **FLD** Within each heat trace control panel, if ambient conditions are above 40*F, adjust the thermostat to 10* above the current ambient temperature (use a heat gun for verification) and validate that the "auto" circuit is functioning. If raising the thermostat to 10* above ambient does not cause the heat trace circuit to energize automatically, write a SAP notification with specific details.

Sign **Date**

6. **FLD** Once testing is complete, set the thermostat to **50*F**.

Sign **Date**

7. **FLD** Verify that all nine Operational Checklists have been properly completed and stored in the "Winterization" binder.

Sign **Date**

8. **FLD** If wet compression systems are not in service and ambient temperature drops to 45 DegF, complete first level of winterization using Procedure #02501403, Operation of the Wet Compression System.

Sign **Date**

9. **CON** If wet compression systems are in service and they shut down on “Icing” and ambient temperature is not expected to increase for more than a shift, complete first level of winterization using Procedure #02501403, Operation of the Wet Compression System.

Sign **Date**

10. **FLD** If ambient temperature drops to 38 DegF, complete the second level of winterization of the wet compression systems using Procedure #02501403, Operation of the Wet Compression System. In addition to this, isolate and winterize demin polishers using Procedure #0250800, Operation/Winterizing of the Demin Polishers.

Sign **Date**

11. **FLD** Verify the natural gas skid "Freeze Filter" is in service. If not, using Procedure #0250705, Gas Skid Freeze Protection Operation, place the system in service. Write an SAP Notification if discrepancies found.

Sign **Date**

12. **CON** All "E" notifications written, Discrepancies logged in OIS and an email sent to Shift Leader, Shift Supervisor and Operations Supervisor.

Sign **Date**

During the freeze event:

WARNING Once the ambient temperature has reached 32*F and until it has climbed back to at least 34*F (as read on the Cogen Control Room Weather Station displayed on the wall), a documented logsheet, "Cogen Freeze Rounds Logsheet", must be filled out and stored in the Winterization binder. The logsheet must be completed every three hours.

13. **FLD** Freeze Round/Logsheet Frequencies:

Sign **Date**

13.1. **FLD** **26F** or above: Round must be done every 3 hours

Sign **Date**

13.2. **FLD** 23F to 25F: Round must be done every 2 hours

Sign **Date**

13.3. **FLD** 22F or below: Round must be completed every hour

Sign **Date**

14. **FLD** Continue to monitor all heat tracing and address any issues ASAP.

Sign **Date**

15. **FLD** Verify Freeze Fiter at Natural Gas Skid is working properly.

Sign **Date**

16. **CON** Monitor all DCS indications for any signs of transmitters freezing up.

Sign **Date**

17. **FLD** Install blankets on hydraulic skid radiators as needed to maintain warmth in sumps.

Sign **Date**

18. **FLD** Perform frequent rounds looking for any freeze related issues.

Sign **Date**

19. **FLD** Closely monitor IA air dryers.

Sign **Date**

20. **FLD** Verify eye wash station freeze protection devices are dumping water.

Sign **Date**

BOP FREEZE ROUNDS

Date: _____	Operator performing inspection (print name): _____			
	Round 1	**Round 2**	**Round 3**	**Round 4**
Time:				
Ambient Temp:				
Freeze Fiter I/S and working?				
Plant Air Dryer Sump1 drains bleeding?				
Plant Air Dryer Sump2 drains bleeding?				
Station Air Driers 1 & 2 Dew Point <-10F?				
Station Air Driers 3 & 4 Dew Point <-10F?				
Safety Shower freeze valves dumping?				
Transmitter Encl 1 --Supply Water PT1425, PSL1420, PSL1405				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 2 --Water Tank 1 LT1401, LSLL1403				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 3 --Water Tank 2 LT1402, LSLL1404				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 4 --1-3 Steam FT2800, PT2800				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 5 --4 Steam FT2810, PT2810				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitters Unenclosed --Steam FT2801, PT2801, FT2810A, PT2810A				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Comments:				

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UNIT 1 FREEZE ROUNDS

Date: _____	Operator performing inspection (print name): _____			
	Round 1	**Round 2**	**Round 3**	**Round 4**
Time:				
Ambient Temp:				
All circuits breakers closed in HTDP?				
Heat trace panel indicator light on?				
Inst Air Dryer Water Pot drain bleeding?				
Transmitter Encl 1 --Condensate FT3210				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 2 Temp --Feedwater PT1814, FT2150				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 3 Temp --Steam FT 2135, PSH2122, PT2120				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 4 Temp --LP Press PT1920, PT1935				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 5 Temp --HP Press PT2106, PT2107				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 6 Temp --PA Steam FT36602, PT15910				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Hydraulic Skid Sump				
Temperature?				
Insulation in place?				
Windbreak in place?				
Densitometer				
Insulation in place?				
Comments:				

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UNIT 2 FREEZE ROUNDS

Date: _____ Operator performing inspection (print name): _____

	Round 1	Round 2	Round 3	Round 4
Time:				
Ambient Temp:				
All circuits breakers closed in HTDP?				
Heat trace panel indicator light on?				
Inst Air Dryer Water Pot drain bleeding?				
Transmitter Encl 1 --Condensate FT3210				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 2 --Feedwater PT1814, FT2150				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 3 --Steam FT 2135, PSH2122, PT2120				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 4 --LP Drum West PT1920, LT1906				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 5 --LP Drum East LT1907, PT1935				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 6 --HP Drum West PT2106, LT2106				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 7 --HP Drum East PT2107, LT2107				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 8 --PA Steam FT36602, PT15910				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Hydraulic Skid Sump				
Temperature?				
Insulation in place?				
Windbreak in place?				
Densitometer				
Insulation in place?				
Comments:				

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UNIT 3 FREEZE ROUNDS

Date: _____ Operator performing inspection (print name): _____

	Round 1	Round 2	Round 3	Round 4
Time:				
Ambient Temp:				
All circuits breakers closed in HTDP?				
Heat trace panel indicator light on?				
Inst Air Dryer Water Pot drain bleeding?				
Transmitter Encl 1 --Condensate FT3210				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 2 --Feedwater PT1814, FT2150				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 3 --Steam FT 2135, PSH2122, PT2120				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 4 --LP Drum West PT1920, LT1906				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 5 --LP Drum East LT1907, PT1935				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 6 --HP Drum West PT2106, LT2106				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 7 --HP Drum East PT2107, LT2107				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 8 --PA Steam FT36602, PT15910				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Hydraulic Skid Sump				
Temperature?				
Insulation in place?				
Windbreak in place?				
Densitometer				
Insulation in place?				
Comments:				

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UNIT 4 FREEZE ROUNDS

Date: _____	Operator performing inspection (print name): _____			
	Round 1	Round 2	Round 3	Round 4
Time:				
Ambient Temp:				
All circuits breakers closed in HTDP?				
Heat trace panel indicator light on?				
Inst Air Dryer Water Pot drain bleeding?				
Transmitter Encl 1 --Condensate FT3210				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 2 --Feedwater PT1814, FT2150				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 3 --Steam FT 2135, PSH2122, PT2120				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 4 --LP Press PT1920, PT1935				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 5 --HP Press PT2106, PT2107				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Transmitter Encl 6 --PA Steam FT36602, PT15910				
Temperature?				
Insulation in place?				
Windbreak in place?				
Additional heat working?				
Hydraulic Skid Sump				
Temperature?				
Insulation in place?				
Windbreak in place?				
Densitometer				
Insulation in place?				
Comments:				

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SWEENY

SW-COGEN-EOP-GEN03 - Cogen Hot Weather Actions

PUBLISHED

Version 2.0.0

2022-04-14

Expires 2025-04-14

CRITICAL

SIGN-OFF REQUIRED

This procedure is written to give instruction on actions that need to be taken just prior to predicted hot weather events and during actual hot conditions to ensure safe and reliable operations of equipment at Sweeny Cogen. A "Hot Weather Event" is defined as any period of time in which the local temperature is expected to or actually exceeds 100*F. This procedure, although it may be used as reference, should not be used for pre-season summer preparation. Please reference Procedure SW-COGEN-NOP-GEN04 Cogen Preseason Summer Prep, for preseason summer preparations.

Domain:
Sweeny Refinery (SW) > Operations (OPS) > Utilities (UTIL) > Cogen (COGEN) > EOP

Access:
Everyone in this domain | Console | Field

Completion sequence:
None

Content type:
Procedure

Facility:
Sweeny

Phase of Operation:
Routine Operations

Procedure Type:
Normal Operating Procedure

Retention Code:
CG01

Sign-Off:
Sign-off Required

Use Classification:
Critical

HSE and Other Considerations

Additional Precautions

Refer to the SDS system to review the hazards that may be encountered during the use of this procedure. The SDS system provides electronic access to the current properties of, and hazards presented by, the chemicals used in the process; the precautions and controls necessary to prevent exposure; the personal protective equipment requirements; and the control measures to be taken if physical contact or airborne exposure occurs.

CERTIFIED OPERATORS HAVE THE AUTHORITY TO SHUT DOWN A PROCESS IF THEY BELIEVE AN UNSAFE CONDITION EXISTS THAT COULD INJURE PERSONNEL, DAMAGE EQUIPMENT, OR WOULD HAVE AN ADVERSE ENVIRONMENTAL IMPACT ON THE COMMUNITY.

The Shift Leader or designee will remove all non-essential personnel from the Unit when process charge is introduced or at any time he/she deems necessary to ensure the safety of personnel/contractors in accordance with Refining Required Standard O-34-RS-2 using the plant radio system.

Condition for initiating an Emergency Procedure is Fire, Gas Release, or exceeding a SOL. Transition to Normal Operations when the unit is secure.

Health Hazards

- Hot ambient temperatures
- Dehydration
- Heat Exhaustion or Heat Stroke
- Contact Burn Hazards
- Electrical Hazards

Additional PPE

There are **no** procedure-specific PPE requirements beyond standard required PPE.

Additional Tools and Personnel

There are **no** procedure-specific tools or personnel required.

References

- Refining Required Standard O-34-RS-2
- Sweeny Emergency Zone Map
- Sweeny PSI (Process Safety Information/Operating Limits Procedures)
- Sweeny Rally Point Map
- Sweeny Safety Standards

Prerequisites

There are **no** prerequisites.

NOTE **A copy of this completed procedure must be given to the Utilities Operations Supervisor for electronic upload to the Shared Folder.**

CAUTION Any SAP Notifications written to address issues found within **72** hours of a predicted hot weather event shall be submitted as an "E" and a list with details concerning the discrepancies shall be entered into the Console and Outside Operators OIS. Additionally, an email must be generated outlining the discrepancies and sent to the Shift Leader, Shift Supervisor and Operations Supervisor.

NOTE Although all items listed in this procedure are checked routinely during shift rounds, the intent of this procedure is to ensure that a focused observation is made on all equipment critical to the operation of the facility which could fail or be compromised due to above average ambient temperature. **In addition to completing this procedure prior to a predicted event as a preventive measure, this procedure must be initiated again anytime the actual ambient temperature exceeds 100*F for three hours or more.**

High Voltage Electrical

Switchyard Control Building

1. **FLD** Verify that HVAC system is functioning properly.

Sign **Date**

2. **FLD** Verify that external doors are functioning properly and closed.

Sign **Date**

Switchyard Auto Transformers

3. **FLD** Verify temperatures and pressures in normal range.

Sign **Date**

4. **FLD** Verify cooling fans working properly.

Sign **Date**

Switchyard Breakers

5. **FLD** Verify pressures in normal range.

Sign **Date**

Generator Breakers

6. **FLD** Verify U1 pressures in normal range.

Sign **Date**

7. **FLD** Verify U2 pressures in normal range.

Sign **Date**

8. **FLD** Verify U3 pressures in normal range.

Sign **Date**

9. **FLD** Verify U4 pressures in normal range.

Sign **Date**

Transformers

Unit 1

10. **FLD** Verify all cooling fans working properly and left in Auto.

Sign **Date**

11. **FLD** Verify temperatures and pressures in normal range.

Sign **Date**

12. **FLD** Verify no active alarms on alarm panel.

Sign **Date**

Unit 2

13. **FLD** Verify all cooling fans working properly and left in Auto.

Sign **Date**

14. **FLD** Verify temperatures and pressures in normal range.

Sign **Date**

15. **FLD** Verify no active alarms on alarm panel.

Sign **Date**

Unit 3

16. **FLD** Verify all cooling fans working properly and left in Auto.

Sign **Date**

17. **FLD** Verify temperatures and pressures in normal range.

Sign **Date**

18. **FLD** Verify no active alarms on alarm panel.

Sign **Date**

Unit 4

19. **FLD** Verify all cooling fans working properly and left in Auto.

Sign **Date**

20. **FLD** Verify temperatures and pressures in normal range.

Sign **Date**

21. **FLD** Verify no active alarms on alarm panel.

Sign **Date**

Unit 1

22. **FLD** Verify all doors are functioning properly and closed

Sign **Date**

23. **FLD** Verify HVAC units in Electrical Package working properly.

Sign **Date**

24. **FLD** Verify Vent Fan and Exhaust Louvers in Mechanical Package working properly.

Sign **Date**

25. **FLD** Verify Vent Fans and Exhaust Louvers in Turbine Enclosure working properly.

Sign **Date**

26. **FLD** Verify auxiliary portable air movers (if installed) in Turbine Enclosure are working properly.

Sign **Date**

27. **FLD** Verify HVAC in CEMS Shelter and HRSG MCC working properly.

Sign **Date**

Unit 2

28. **FLD** Verify all doors are functioning properly and closed.

Sign **Date**

29. **FLD** Verify HVAC units in Electrical Package working properly.

Sign **Date**

30. **FLD** Verify Vent Fan and Exhaust Louvers in Mechanical Package working properly.

Sign **Date**

31. **FLD** Verify Vent Fans and Exhaust Louvers in Turbine Enclosure working properly.

Sign **Date**

31.1. **FLD** Verify auxiliary portable air movers (if installed) in Turbine Enclosure are working properly.

Sign **Date**

32. **FLD** Verify HVAC in CEMS Shelter and HRSG MCC working properly.

Sign **Date**

Unit 3

33. **FLD** Verify all doors are functioning properly and closed.

Sign **Date**

34. **FLD** Verify HVAC units in Electrical Package working properly.

Sign **Date**

35. **FLD** Verify Vent Fan and Exhaust Louvers in Mechanical Package working properly.

Sign **Date**

36. **FLD** Verify Vent Fans and Exhaust Louvers in Turbine Enclosure working properly.

Sign **Date**

37. **FLD** Verify auxiliary portable air movers (if installed) in Turbine Enclosure are working properly.

Sign **Date**

38. **FLD** Verify HVAC in CEMS Shelter and HRSG MCC working properly.

Sign **Date**

Unit 4

39. **FLD** Verify all doors are functioning properly and closed.

Sign **Date**

40. **FLD** Verify HVAC units in Electrical Package working properly.

Sign **Date**

41. **FLD** Verify Vent Fan and Exhaust Louvers in Mechanical Package working properly.

Sign **Date**

42. **FLD** Verify Vent Fans and Exhaust Louvers in Turbine Enclosure working properly.

Sign **Date**

43. **FLD** Verify auxiliary portable air movers (if installed) in Turbine Enclosure are working properly.

Sign **Date**

44. **FLD** Verify HVAC in CEMS Shelter and HRSG MCC working properly.

Sign **Date**

Control Packages

Main MCC

45. **FLD** Verify Vent Fan in Battery Room working properly.

Sign **Date**

46. **FLD** Verify Vent Fans in Main MCC working properly.

Sign **Date**

3/4 MCC

47. **FLD** Verify all doors functioning properly and closed.

Sign **Date**

48. **FLD** Verify HVAC working properly.

Sign **Date**

Control Room

49. **CON** Verify Control Room HVAC working properly.

Sign **Date**

50. **CON** Verify DCS DPU Room HVAC working properly.

Sign **Date**

Discrepancies Documented

51. **CON** SAP Notifications entered for any found discrepancies?

Sign **Date**

52. **CON** Discrepancies entered into Console OIS?

Sign **Date**

53. **CON** Email outlining discrepancies sent to Operations Supervisor, on-shift Shift Leader and Shift Supervisor?

Sign **Date**

54. **FLD** Discrepancies entered into Field Operator OIS?

Sign **Date**

Table of Contents

1.0 PURPOSE

This document identifies a work process for response to a suspected or confirmed cybersecurity related incident involving industrial control systems at P66 operated refining sites. This work process is an extension (subordinate) of the refinery Incident Command System. The Incident Command System provides the overall response process and command structure for all refinery incidents.

For this response process, a cybersecurity incident is a computer security situation that has actual or potential adverse impact to industrial control system functionality and/or the related refinery process operations and equipment.

2.0 SCOPE

This response process applies to any industrial control system at Phillips 66 refining sites. This response process does NOT apply to IT business systems or non-cybersecurity related incidents such as a physical security breach (without also some type of computer or network breach or misuse, etc.) or equipment malfunction.

Industrial control systems include distributed control systems (DCS), supervisory control and data acquisition (SCADA) systems, programmable logic controllers (PLC), safety instrumented systems (SIS), human-machine interfaces (HMI) used for process control, and ancillary instrument and control devices that are interconnected and mutually dependent on hardware, software, and communication technology, either through direct or wireless protocols.

3.0 OVERVIEW AND OBJECTIVES

At a high level the response work process includes three consecutive stages:

1. **Detection** – A cybersecurity incident is suspected, site resources are notified, and the response plan is activated
2. **Response** – Actions are implemented to contain and remediate incident impacts and recover system functionality and process operations.
3. **Investigation** – The incident causes are investigated and action plans developed to ensure that cybersecurity risks are mitigated to prevent recurrence.

The first priority of this response process is to ensure safe process operations by containing (isolating) the incident and restoring critical operations. A secondary priority of this response process is to collect evidence and supporting information for investigative processes to determine the cause, fault mode, and attack

vector or access method. Collection of evidence and related information should not impede immediate recovery of critical operations and associated process safety.

It is recognized that a cybersecurity incident may only be suspected when initially detected, however the response process should be activated. This response process is tolerant to situations where a cybersecurity incident is suspected, incident response is started, and further investigation determines the situation was not cybersecurity related.

4.0 RESPONSIBILITIES

4.1. Site Incident Commander

The site Incident Commander is the overall site incident lead that is responsible for activating and coordinating the Incident Command System (overall response organization and process).

4.2. Control System Administrators

Site Control System Administrators are responsible for conducting the actions identified in this response process, including isolation and containment of incident impacts with respect to control system equipment and full recovery of control system functionality.

4.3. Control System Group Lead

The control system group lead is responsible for coordinating site control system resources.

4.4. P66 IT Response Center

The P66 IT Response Center is responsible for the internal coordination of IT related activities and resources.

4.5. Honeywell Security Center of Excellence

The Honeywell Security Center of Excellence will assign single point of contact (Honeywell Lead) responsible for coordination of Honeywell related resources and activities.

5.0 CONTROL SYSTEM CYBERSECURITY INCIDENTS

Control system cybersecurity incidents are computer security situations that have actual or potential adverse impact to industrial control system functionality or to the related refinery process operations and equipment. General examples of cybersecurity incidents include, but are not limited to:

- Unauthorized or unintended use of control system equipment
- Unauthorized access or attempted access (reconnaissance) to systems or data; theft of data
- Unauthorized change or destruction of control system data, configurations, or control algorithms
- Virus, worm, or other malware infections on control system equipment

Control system cybersecurity incidents can lead to the following control system failures (in order of criticality):

5.1. Loss of Control (LOC)

Inability of the control system to control the process unit; also includes:

a. Denial of Control – Situation that prevents operator inputs/changes on the control system from manipulating the process equipment.
b. Unauthorized Control – Manipulation of process unit controls or equipment by someone other than those authorized to make such changes on the control system.

5.2. Loss of View (LOV)

Control system is unable to provide a reliable view to the process on every Human Machine Interface (HMI) (operator console) being used for control, i.e. the board operator cannot view the status of the process; also includes:

a. Manipulation of View – Intentional situation that changes or freezes the HMI to provide an inaccurate view of the process to the operator.

5.3. Loss of Data (LOD)

Process values on HMI graphics do not regularly update; value or multiple values on a HMI are not available (but not all data on all HMIs); loss of continuous process history data.

5.4. Loss of Performance (LOP)

Graphic call-up times or data refresh rates are unusually long; system response to an operator input is unusually long; loss of an advanced process control application.

See O-31-UP-10 DCS Failure Categories for further definition of control system failure categories.

6.0 REFINERY INCIDENT COMMAND SYSTEM

This response process is a subordinate process to the site Incident Command System process. The site Incident Command System provides the overall command and reporting structure. It is recommended that the control system cybersecurity response process be coordinated through the "Operations" organization of the Incident Command System structure. Considerations include:

- Incident command is used for any situation that compromises process operations and/or safety (not just for a fire)
- The site Incident Commander has the decision of when to activate the Incident Command System, the level of activation is dependent on particular situation and potential risks
- All internal and external communications and notifications are coordinated through the Incident Command System

- This control system response process provides guidance for when to involve the site Incident Commander

7.0 CYBERSECURITY INCIDENT RESPONSE PROCESS

The following section provides the cybersecurity incident response process details in support of the response flowchart located in Appendix A. The numbers of the following items match the numbers for the corresponding activities on the flowchart.

1. ***Suspected Cybersecurity Incident***

   If a cybersecurity incident is suspected or confirmed, proceed to item #2 now and begin response to the incident. Suspected cybersecurity incidents should be treated as cybersecurity incident until such time as they are proven not to be cybersecurity related. See Appendix C for indicators of potential cybersecurity incidents. Examples of cybersecurity incidents include but not limited to:
   - Unauthorized or unintended use of control system equipment.
   - Unauthorized access or attempted access (reconnaissance) to systems or data; theft of data.
   - Unauthorized change or destruction of control system data, configurations, or control algorithms.
   - Virus, worm, or other malware infections on control system equipment.

2. ***Notify Contacts for Site Control System Support***

   The appropriate site control system administrator(s) and group lead(s) are notified that a cybersecurity incident is suspected involving the control system; control system administrators should respond to the incident and coordinate the response activities specifically associated with the control system.

3. ***Determine Incident Scope and Criticality***

   The control system administrator(s) should perform the following activities:
   - Confirm that the situation is a suspected (or confirmed) cybersecurity incident
   - Make an initial determination of the incident scope and criticality:
     - High Criticality – Incident is associated with **Loss of Control** or **Loss of View** failure; malicious change or destruction of control system configuration or control algorithm programming; unauthorized system access by a remote actor (onsite or offsite).
     - Moderate Criticality – Incident associated with **Loss of Data** or **Loss of Performance** failure; significant number of control system machines affected; wide-spread virus; virus that cannot be handled by AV software.
     - Low Criticality – Incident not impacting operations or process safety; very limited number of control system machines affected; isolated virus that can be handled with AV software;

potential theft of process or control system related data; recovery that can be handled by onsite resources.

Note - This is an initial determination based on the information known at the time; criticality can be changed at any time during the response process depending on investigation findings or change in the impacts to the control system.

4. ***High or Moderate Criticality?***

If the incident is determined to be "High" or "Moderate" criticality then proceed to item #5 now.

If the criticality is determined to be Low, contain and remediate the incident and recover process control system using onsite resources. Investigate incident and complete required reports. Incorporate learnings and remediation into site processes. Communicate incident details and learnings with Refining Cybersecurity Network (RCN) members. *<Stop response process here for Low criticality incidents.>*

5. ***Notify Site Incident Commander***

Control system administrator provides direct communication to the site Incident Commander that a cybersecurity incident is suspected (or confirmed) involving the control system and that process operations is or has the potential to be affected.

The site Incident Commander has the ability to activate the site incident command system at any time and at a level dependent on the specific situation and potential impact. The remaining response activities will be conducted as a subordinate process to the overall site Incident Command System.

Note – Items 6 and 7 can be worked in parallel by different control system responders

6. ***Contain Impacts and Restore Critical Operations***

Work to isolate, correct, or recover from an incident can begin immediately. Control system administrators do not have to wait for the activation of the incident command system or other response processes to perform needed corrective actions to immediately mitigate incident impacts. Following any immediate actions that need to be performed, subsequent activities should be coordinated through the site Incident Commander.

6a. Isolate and Contain - Isolate control systems and devices to contain and minimize impacts if needed depending on the particular cybersecurity incident; this may include network isolation and the disabling of compromised user and service accounts.

6b. Restore Critical Operations – Perform needed corrective actions to restore critical process operations and related control system functionality (e.g. process control, process view).

7. *Activate P66 and Vendor Expert Resources*

Contact and activate off-site expert resources to aid with system recovery and incident investigation. See Appendix B for internal and external resource contact information.

7a. P66 IT Response Center - Contact and activate the P66 IT Response Center and have them establish a bridge phone call (conference call) to be used by all control system resources during response and recovery efforts. The response center can activate any needed P66 IT resources including corporate cybersecurity experts, firewall team, networking support, and contacts for Microsoft, Symantec, and McAfee. The P66 IT Help Desk can also be used to activate the P66 IT Response Center. **See Appendix B - Internal and External Resource Contacts for contact information.**

7b. Honeywell Security Center of Excellence - Contact and activate the Honeywell Security Center of Excellence (or other control system vendor as appropriate) and communicate that a cybersecurity incident involving the control system is suspected. The Honeywell Security Center of Excellence is not staffed 24/7 and a delay in response may be experienced (up to a delay of 24 hours). Honeywell Technical Assistance Center (TAC) can be used to help provide system recovery assistance, but they are not cybersecurity experts. Provide Honeywell support resources with the phone bridge information and request they join the call. **See Appendix B - Internal and External Resource Contacts for contact information.**

Note – For "High" criticality incidents, it is recommended that onsite cybersecurity support from Honeywell be requested immediately. This ensures that any delay associated with an onsite response is minimized.

8. *Collect Data and Evidence*

Collect all applicable data to help determine the full scope and impact of the incident to support activities to determine corrective actions to restore normal functionality and operations. Examples of data to collect include:

- Control system change logs/reports
- Control system backups
- Windows and user logs
- Network management application logs
- Network switch logs
- Firewall logs
- Firewall and network traffic reports
- Antivirus application logs

9. *Restore All Operations and System Functionality*

Develop list of corrective actions needed to fully restore system functionality and normal operations and organize into an overall recovery plan. Considerations for recovery plan development include:

- Capture and preservation of incident data for use as evidence in investigation processes.

- The sequence of corrective actions to restore functionality and network reconnection of isolated devices, systems, areas.
- Identification of actions that will need to be coordinated with Incident Command, Operations, P66 IT, or other groups.
- Estimated duration of each action (to provide estimated time for total system recovery)
- Identification of action item owners.
- Site Management of Change (MOC) and control system change management procedures
- Version (date) of system backup copies that will be used to restore system (a date before incident).
- Review of administration, user, and service accounts and identification of any accounts that should be removed/disabled; identify account passwords that need to be changed.
- Identification of machines that need to be rebuilt. A clean machine rebuild should be considered when:
  - An intruder gained administration level access to device.
  - Back-door type access has be suspected/granted but is not readily identifiable – risk is that one back door may be found but others would go undetected.
  - System/device files were replaced by malware or directly by intruder.
  - System/device is unstable after antivirus scan/quarantine/clean.

Review recovery plan with site Incident Commander and Operations; adjust sequence as needed.

Perform actions to fully restore system functionality and normal operations. Review and monitor system to ensure normal operations and stable functionality.

10. Investigate Incident

Work with the site Incident Command System organization to fully investigate the incident and determine root cause(s) and attack vector (path) as per site policies. Identify corrective actions that are needed to prevent recurrence and develop implementation plan. Identify lessons learned to share with other P66 sites through the RCN, and to improve the incident response process.

11. Investigation Report

Complete investigation reports per site policy and implement corrective action plan.

12. End process

End the control system cybersecurity incident process at this time.

8.0 SITE-SPECIFIC PREPARATION

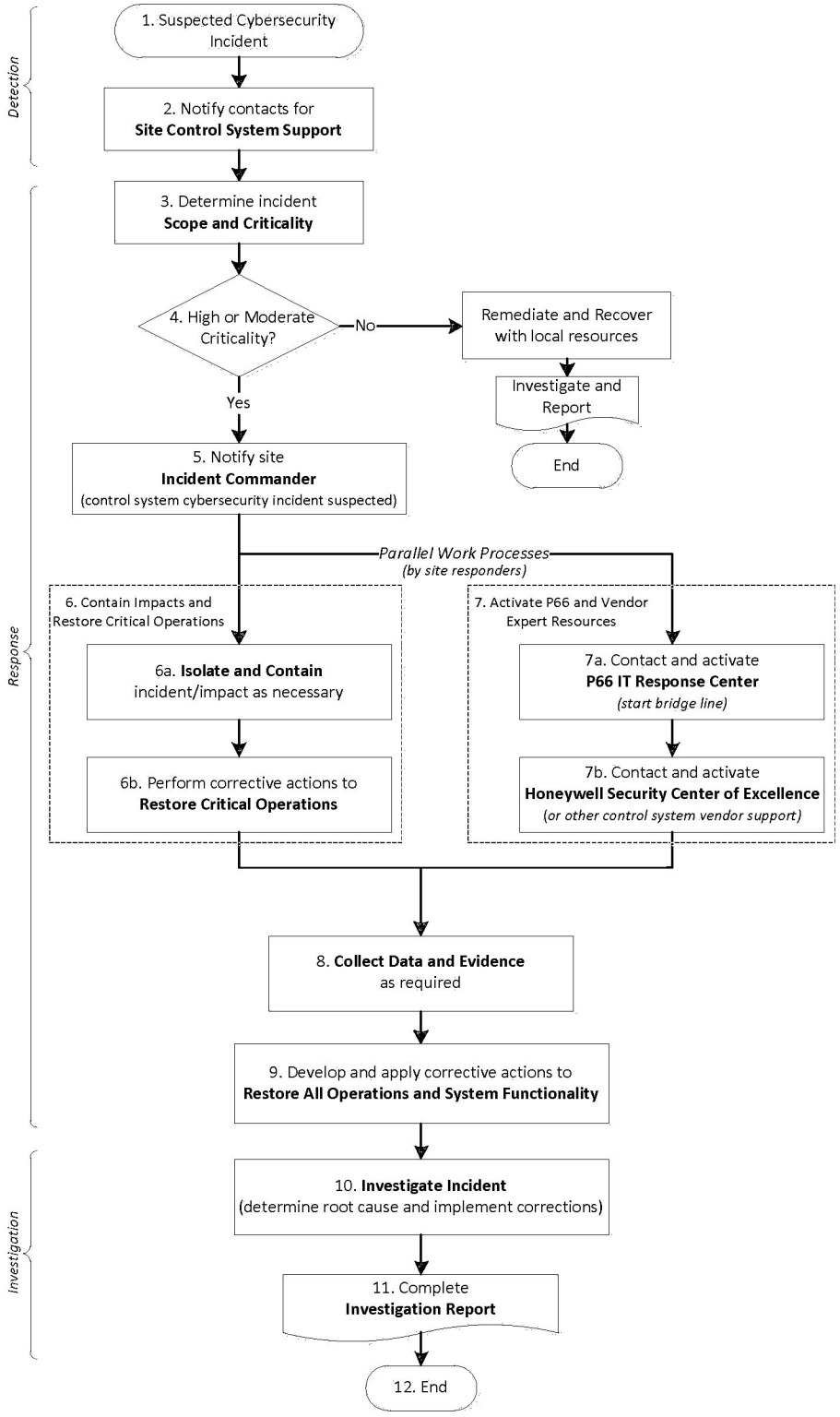
Refining site control system administrators should consider and prepare the following site-specific information in support of this incident response process:

- Identification of the site Incident Commander(s) by job title and shifts (operations shift supervisors/superintendents, daylights vs. nights/weekends, etc.).
- Review of site specific Incident Command System organization and processes.
- A predetermined site/system/area network isolation procedure with location for the process control systems.
- Communication to Operations and Incident Command of the site control system administrators and group leads that will be used for incident response.
- Understanding of emergency control system change management and MOC processes.
- Identify 24/7 contact information for control system equipment vendors.
- Understanding that response process recommends procuring emergency onsite Honeywell (or other vendor) support on T&M basis when needed given the criticality level of the incident.

9.0 REFERENCES

Reference	Description / Location
O-31-UP-10 DCS Process Control Failure Categories	Provides category descriptions of failures applicable to process control systems. Useful Practices document is located on the Process Control & Human Centered Technology knowledge sharing site, knowledge library.
Phillips 66 Corporate IT Cybersecurity Response Process (IT Response Center)	Provides the P66 IT cybersecurity response process.
Honeywell Security Center of Excellence – Cybersecurity Incident Response Process	Provides an overview of the Honeywell internal cybersecurity incident response process – located on the Refining Cybersecurity Network knowledge sharing site, knowledge library.
Site Incident Command System organization and responsibilities	Provides site response organizational specific to each refinery site – varies by site.

APPENDIX A – CONTROL SYSTEM RESPONSE PROCESS FLOWCHART



Control System Incident Response

APPENDIX B – INTERNAL AND EXTERNAL RESOURCE CONTACTS

Resource	Contact Information
P66 IT Help Desk	1-855-886-7910 1-918-977-7911 1-832-765-7911
P66 IT Response Center	918-977-7612 ResponseCenter@p66.com
P66 IT Response Center – Response Bridges	**RC Bridge 1** 888-337-0215/Local 720-514-4158 Participant (1155868), Leader (7667) **RC Bridge 2** 888-337-0215/Local 720-514-4158 Participant (8029560), Leader (5990) **RC Bridge 3** 888-337-0215/Local 720-514-4158 Participant (6182218), Leader (7065)
Honeywell Technical Assistance Center (TAC)	1-800-822-7673 (Americas)
Honeywell Security Center of Excellence	1-800-822-7673 security@honeywell.com *(indicate a suspected cybersecurity incident)*
Symantec, McAfee, Microsoft	*Use P66 IT Response Center process to contact these vendors*

APPENDIX C – INDICATORS OF A POTENTIAL CYBERSECURITY INCIDENT

1. Unusually heavy network traffic
2. Antivirus or IDS alerts
3. Creation of new user or administrator (root) accounts
4. Locked-out accounts
5. Any apparent override of safety, backup, or failover systems
6. Disabled antivirus software and other security controls
7. Unknown or unusual traffic from corporate or other network external to control systems network
8. Attempted or actual use of administrator-level accounts
9. Out of disk space or significantly reduced free disk space
10. Unusually high CPU usage
11. Accounts in use when the user is not at work
12. Cleared log files
13. Full log files with an unusually large number of events
14. Unexpected patch changes
15. Machines or intelligent field devices connecting to outside Internet Protocol (IP) addresses
16. Requests for information about the system (social engineering attempts)
17. Unexpected changes in configuration settings
18. Unexpected system shutdown
19. Stoppage or displayed error messages on a web, database, or application server
20. Unusually slow access to hosts on the network
21. Filenames containing unusual characters or new or unexpected files and directories
22. Auditing configuration changes logged on the host records, especially disabling of auditing functionality
23. A large number of bounced e-mails with suspicious content
24. Unusual deviation from typical network traffic flows
25. Erratic ICS equipment behavior, especially when more than one device exhibits the same behavior
26. Equipment, servers, or network traffic that have bursts of temporary high usage when the operational process itself is steady and predictable
27. Unknown or unexpected firmware pulls or pushes

APPENDIX D – REVISION LOG

Version	Date	Change Summary	Approved By
0	12/18/14	Initial release	K. Arnold
1.00	6/1/2019	Reviewed and revised	S. Chin

Primary NERC Compliance Manager	Aaron Jackson
Title	Product Control Business Team Leader
Signature and Date	12-20-19
CIP Senior Manager	Chris Gallo
Title	Operations Manager
Signature and Date	12-22-19

I. POLICY SUMMARY

- This policy is part of the Sweeny Cogeneration LLC – NCR10183 (Sweeny - SCLP) Internal Compliance Program – Cyber Security for Low Impact BES Cyber Systems. This procedure provides written guidance on how to respond to, classify, report, mitigate and perform exercises related to Cyber Security Incidents. This procedure serves as Sweeny's Cyber Security Incident Response Plan. This procedure is not intended to illustrate all DOE and NERC reporting thresholds, but does address those related to Cyber Security Incidents, which may include physical intrusions and threats.
- Applicability: BA, DP*, GOP, GO, IC/IA, RC, TOP, TO
    - Exemptions exist for facilities regulated by the Canadian Nuclear Safety Commission and Nuclear Regulatory Commission
    - *Applicability does not apply to all Distribution Providers
- Are actions directed by this procedure designed to address compliance with regulations, standards or requirements? Yes
- Does this procedure potentially impact the processes or procedures of other work groups outside of Sweeny? No
- If you answered yes to the above question, notification should be provided to the CIP Senior Manager.

REVISION INDEX

Revision	Section Revised	Comments	Effective Date
rev00	All	Initial Release	*07/01/2019*
rev01	Section 1 Section 3 Section 5.0 Section 12	Renamed Document to include “and CIP Exceptional Circumstances” CIP Exceptional Circumstance defined Inclusion of CIP Exceptional Circumstances section Updated from CIP-003-6 to CIP-003-8	*01/01/2020*

II. TABLE OF CONTENTS

III. DETAILED PROCEDURE

1.0 PURPOSE

The purpose of this procedure is to specify consistent and sustainable security management controls that establish responsibility and accountability to protect BES Cyber Systems against compromise that could lead to misoperation or instability in the Bulk Electric System (BES) in relationship to Cyber Security Incident Response.

2.0 REFERENCES

2.1 NERC Standard CIP-003 – Cyber Security – Security Management Controls

2.2 Phillips 66 O-33-BP-01 – Industrial Control Systems Cybersecurity Incident Response Process

2.3 SCLP-PRO-EOP-004 – Event Reporting

2.4 SCLP-DOC-CIP-002 – Categorization and Cyber Asset Matrix

2.5 Department of Homeland Security Recommended Practice: Developing an Industrial Control Systems Cybersecurity Incident Response Capability, October 2009

2.6 NERC Security Guideline for the Electricity Sector: Threat and Incident Reporting, April 1, 2008.

2.7 OE-417 Form Instructions

2.8 U.S. Department of Energy Electricity Delivery and Energy Reliability Form OE-417 – Electricity Emergency Incident and Disturbance Report

2.9 ERCOT Nodal Operating Guides Section 3: ERCOT and Market Participant Responsibilities – Section 3.2.3, Section 3.8 ***ERCOT Only***

3.0 DEFINITIONS

3.1 Emergency or BES Emergency – Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

3.2 BES Cyber Asset (BCA) – A Cyber Asset that if rendered unavailable, degraded, or misused would, within 15 minutes of its required operation, misoperation, or non-operation, adversely impact one or more Facilities, systems, or equipment, which, if destroyed, degraded, or otherwise rendered unavailable when needed, would affect the reliable operation of the Bulk Electric System. Redundancy of affected Facilities, systems, and equipment shall not be considered when determining adverse impact. Each BES Cyber Asset is included in one or more BES Cyber Systems. (A Cyber Asset is not a BES Cyber Asset if, for 30 consecutive calendar days or less, it is directly connected to a network within an ESP, a Cyber Asset within an ESP, or to a BES Cyber Asset, and it is used for data transfer, vulnerability assessment, maintenance, or troubleshooting purposes.)

3.3 BES Cyber System (BCS) – One or more BES Cyber Assets logically grouped by a responsible entity to perform one or more reliability tasks for a functional entity.

3.4 Control Center - One or more facilities hosting operating personnel that monitor and control the Bulk Electric System (BES) in real-time to perform the reliability tasks, including their associated data centers, of: 1) a Reliability Coordinator, 2) a Balancing Authority, 3) a Transmission Operator for transmission Facilities at two or more locations, or 4) a Generator Operator for generation Facilities at two or more locations.

3.5 CIP Exceptional Circumstance – A situation that involves or threatens to involve one or more of the following, or similar, conditions that impact safety or BES reliability: a risk of injury or death; a natural disaster; civil unrest; an imminent or existing hardware, software, or equipment failure; a Cyber Security Incident requiring emergency assistance; a response by emergency services; the enactment of a mutual assistance agreement; or an impediment of large scale workforce availability.

3.6 Cyber Assets – Programmable electronic devices, including the hardware, software, and data in those devices.

3.7 Cyber Security Incident – A malicious act or suspicious event that:

3.7.1 Compromises, or was an attempt to compromise, the Electronic Security Perimeter or Physical Security Perimeter or,

3.7.2 Disrupts, or was an attempt to disrupt, the operation of a BES Cyber System.

Note: Cyber Security Incidents may be identified by methods such as:

- Direct observation - finding damage to BES Cyber Systems, observing abnormal system or component behavior, etc.
- Automated Detection - network monitors, antivirus or malware monitors, intrusion alarms, Cyber System component failure alarms, etc.

3.8 E-ISAC – Electricity Information Sharing and Analysis Center.

3.9 Electronic Security Perimeter (ESP) – The logical border surrounding a network to which Critical Cyber Assets are connected and for which access is controlled.

3.10 Physical Security Perimeter (PSP) – The physical border surrounding locations in which BES Cyber Assets, BES Cyber Systems, or Electronic Access Control or Monitoring Systems reside, and for which access is controlled.

3.11 Reliable Operation – Operating the elements of the bulk-power system [Bulk-Power System] within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure of system elements.

4.0 ROLES AND RESPONSIBILITIES – RESPONSE TEAM

4.1 See O-33-BP-01 Section 4.0 Responsibilities

4.2 See O-33-BP-01 Section 6.0 Refinery Incident Command System

4.3 Reference O-33-BP-01 Appendix B – Internal and External Resource Contacts

5.0 IDENTIFICATION OF INCIDENTS

5.1 Follow O-33-BP-01 section 5.0 Control System Cybersecurity Incidents

5.1.1 Control system cybersecurity incidents are computer security situations that have actual or potential adverse impact to industrial control system functionality or to the related refinery process operations and equipment.

5.2 Reference O-33-BP-01 Appendix C – Indicators of a Potential Cybersecurity Incident

5.3 CIP Exceptional Circumstances

5.3.1 If Sweeny is experiencing an imminent or active emergency, Sweeny personnel shall determine if the classification of the Incident meets the definition of a CIP Exceptional Circumstance (see Definitions). If so:

5.3.1.1 The incident shall be declared a CIP Exceptional Circumstance for which the date and time shall be logged.

Note: In all cases, Sweeny personnel are authorized to take actions as are necessary to preserve life and property. Compliance actions are a lower priority than the emergency.

Note: CIP Exceptional Circumstance actions may be in exception to previously defined CIP related procedures and/or regulations (ex. defined escort rules for Physical Security Perimeters may be overridden, Transient Cyber Assets may be used without Malicious Code risk mitigation, etc.).

5.3.1.2 Status notifications of emergency operations and the declared CIP Exceptional Circumstance shall be made to senior management personnel as feasible.

5.3.1.3 Upon completion of any and all necessary emergency actions, assessments should be made to determine how to restore security, reliability, and compliance.

5.3.1.4 Once all mitigation activities have been resolved, the CIP Exceptional Circumstance shall be declared complete and the date and time shall be logged.

5.3.1.4.1 After completion, Sweeny personnel shall document the CIP Exceptional Circumstance (cause, timeframes, actions taken, recovery actions, etc.)

6.0 RESPONSE PROCESS

6.1 Follow O-33-BP-01 Section 7.0 Cybersecurity Incident Response Process

6.2 Reference O-33-BP-01 Appendix A – Control System Response Process Flowchart

7.0 CLASSIFICATION

7.1 Follow O-33-BP-01 Section 7.0 Cybersecurity Incident Response Process parts 3 through 5

7.1.1 "High" and "Medium" criticality Incidents will be evaluated for reporting to the E-ISAC by the Sweeny Refinery Process Controls Team.

7.2 Incidents deemed 'low' criticality do not need to be reported to E-ISAC.

8.0 REPORTABLE EVENTS

8.1 Attempts should be made to contact and consult with appropriate Management personnel prior to submitting or not submitting a potential report. In all cases, regulatory reporting criteria and timeframes must be met.

8.2 The Operations Supervisor should be notified and should help coordinate the appropriate Regulatory Reporting to NERC and ERCOT.

8.3 See Attachment 1 for a list of Reporting Agencies

9.0 DOCUMENTATION

9.1 All Cyber Security Incidents (physical and electronic) shall be documented. Documentation shall include:

9.1.1 Incident details

9.1.2 Mitigation and Response Actions taken

9.1.3 Lessons Learned

9.1.4 Post-incident analysis

9.1.5 Corrective Action Plan including planned future prevention methods

10.0 CYBER SECURITY INCIDENT RESPONSE EXERCISE

10.1 The Sweeny Refinery Process Controls Team shall perform a Cyber Security Incident Response Exercise at least once every 36 calendar months by one of the following methods:

10.1.1 Responding to an actual Reportable Cyber Security Incident

10.1.2 Using a drill or tabletop exercise of a Reportable Cyber Security Incident

10.1.3 Using an operational exercise of a Reportable Cyber Security Incident

Note: Deviations from the plan shall be documented. Any lessons learned (or absence of lessons learned) shall be documented.

Updates and Notifications

10.2 The Cyber Security Incident Response Plan (ICP-GOV-09) shall be updated and deficiencies corrected within 180 days as applicable following:

10.2.1 A Cyber Security Incident Response Exercise

10.2.2 An actual Reportable Cyber Security Incident

10.3 Personnel shall be made aware of changes to the Cyber Security Incident Response Plan as appropriate.

11.0 RECORDS

11.1 Sweeny shall ensure all documentation, procedures, logs, and compliance records are retained for a period of at least 7 years unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation or an open compliance violation.

11.2 Sweeny shall keep the last audit records and all requested and submitted subsequent audit records.

12.0 REGULATIONS, STANDARDS, AND REQUIREMENTS

12.1 CIP-003-8 (R1) Each Responsible Entity shall review and obtain CIP Senior Manager approval at least once every 15 calendar months for one or more documented cyber security policies that collectively address the following topics:

12.1.1 CIP-003-8 (R1.2) For its assets identified in CIP-002 containing low impact BES Cyber Systems, if any:

12.1.1.1 CIP-003-8 (R1.2.1) Cyber security awareness;

12.1.1.2 CIP-003-8 (R1.2.2) Physical security controls;

12.1.1.3 CIP-003-8 (R1.2.3) Electronic access controls for external routable protocol connections and Dial-up Connectivity; and

12.1.1.4 CIP-003-8 (R1.2.4) Incident response to a Cyber Security Incident.

12.2 CIP-003-8 (R2) Each Responsible Entity with at least one asset identified in CIP-002 containing low impact BES Cyber Systems shall implement one or more documented cyber security plan(s) for its low impact BES Cyber Systems that include the sections in Attachment 1.

Note: An inventory, list, or discrete identification of low impact BES Cyber Systems or their BES Cyber Assets is not required. Lists of authorized users are not required.

12.3 CIP-003-8 – Attachment 1 (Section 4) Cyber Security Incident Response: Each Responsible Entity shall have one or more Cyber Security Incident response plan(s), either by asset or group of assets, which shall include:

12.3.1 CIP-003-8 – Attachment 1 (Section 4.1) Identification, classification, and response to Cyber Security Incidents;

12.3.2 CIP-003-8 – Attachment 1 (Section 4.2) Determination of whether an identified Cyber Security Incident is a Reportable Cyber Security Incident and subsequent notification to the Electricity Sector Information Sharing and Analysis Center (E-ISAC), unless prohibited by law;

12.3.3 CIP-003-8 – Attachment 1 (Section 4.3) Identification of the roles and responsibilities for Cyber Security Incident response by groups or individuals;

12.3.4 CIP-003-8 – Attachment 1 (Section 4.4) Incident handling for Cyber Security Incidents;

12.3.5 CIP-003-8 – Attachment 1 (Section 4.5) Testing the Cyber Security Incident response plan(s) at least once every 36 calendar months by: (1) responding to an actual Reportable Cyber Security Incident; (2) using a drill or tabletop exercise of a Reportable Cyber Security Incident; or (3) using an operational exercise of a Reportable Cyber Security Incident; and

12.3.6 CIP-003-8 – Attachment 1 (Section 4.6) Updating the Cyber Security Incident response plan(s), if needed, within 180 calendar days after completion of a Cyber Security Incident response plan(s) test or actual Reportable Cyber Security Incident.

13.0 KEY WORDS

13.1 CIP Exceptional Circumstance

13.2 Cyber Assets

13.3 Cyber Security Incident

13.4 Electronic Security Perimeter

13.5 Physical Security Perimeter

14.0 ATTACHMENTS

14.1 Attachment 1: Reporting Contacts

14.2 Attachment 2: Incident Response Flow Chart

15.0 EFFECTIVE DATE / IMPLEMENTATION PLAN

(See NERC Implementation Plan for specific details and potential updates)

Requirement	Plan Language	Enforcement Date	Special Notation
CIP-003-8, Attachment 1, Section 4	**on or before**	**04/01/17**	Registered Entities shall not be required to comply with Reliability Standard CIP-003-6, Attachment 1, Section 4 until the later of April 1, 2017 or nine calendar months after the effective date of Reliability Standard CIP-003-6.

ATTACHMENT 1
REGULATORY REPORTING CONTACTS

Department of Energy

online:	http://www.oe.netl.doe.gov/oe417.aspx
email:	doehqeoc@hq.doe.gov
fax:	202.586.8485 (if e-mail unavailable)
phone:	202.586.8100 (if email / fax unavailable)

Note: Prior to submitting the form to DOE using the online OE-417 system, respondents are given a choice whether to share information collected on the OE-417 form with NERC.

Electric Reliability Organization (NERC)

email	systemawareness@nerc.net
phone	404.446.9780 option 1
fax	404.446.9770

Regional Entity (Texas RE)

phone	512.583.4900
email	rapa@texasre.org

Reliability Coordinator (ERCOT)

email	shiftsupervisors@ercot.com
alt. email	shiftsupv@ercot.com
phone	512-248-3100

Note: Typically, the QSE and/or TSP are obligated to provide required reports to ERCOT. (See ERCOT Nodal Operating Guide 3).

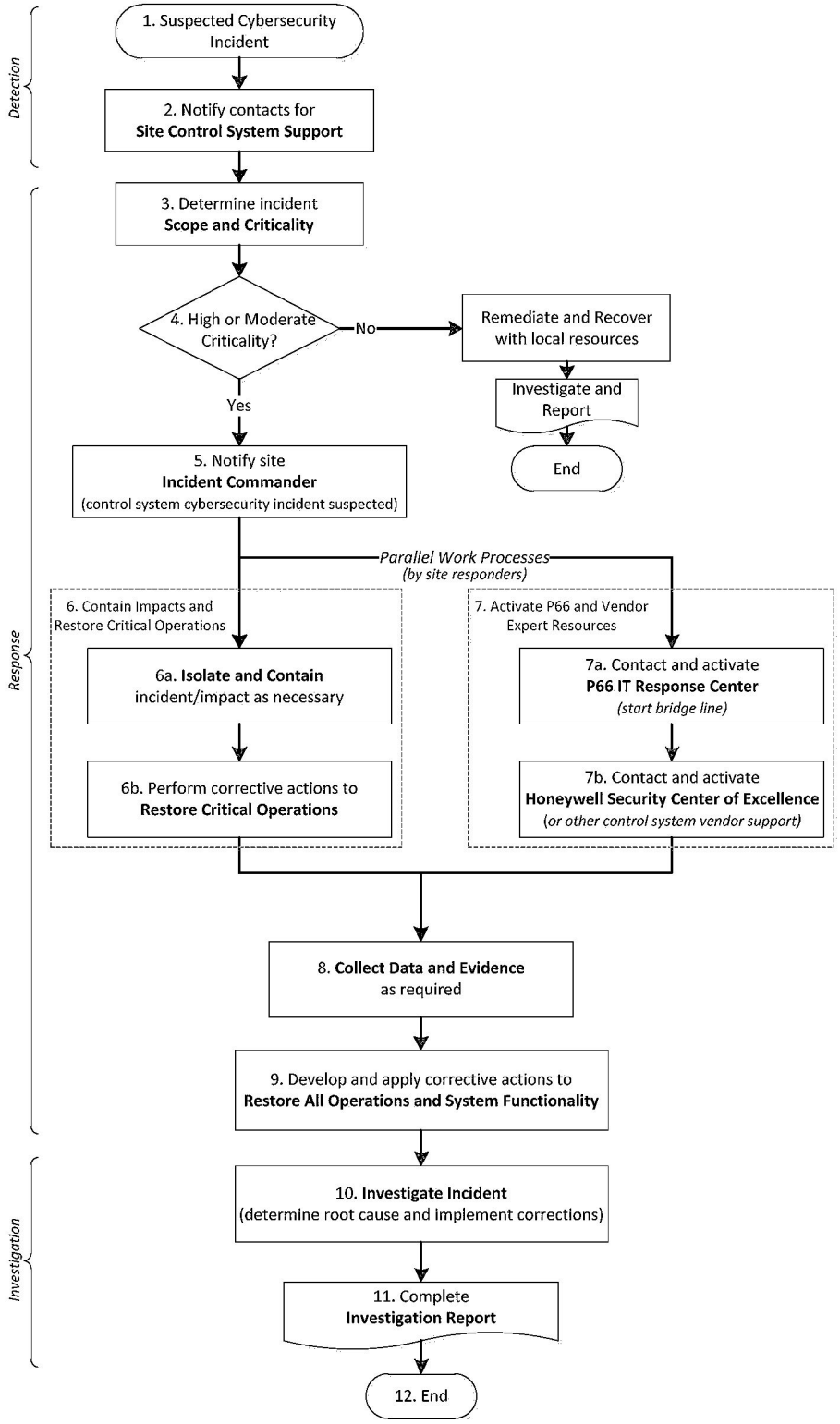
Qualified Scheduling Entity (QSE) – Tenaska ***ERCOT ONLY***

phone	817-462-1509
alt. phone	817-303-1107
email	tenaskacomm@tnsk.com

E-ISAC

portal	www.eisac.com
email	operations@eisac.com
malicious code	malware@eisac.com (zip files)
incident line	404.446.9780 option 2

ATTACHMENT 2
INCIDENT RESPONSE FLOWCHART FROM OP-33-BP-01



Power Restoration Priority List

Auto Transformers [69KV/`38KV]
- Auto Transformer-1 [13.8KV-S / 138KV-T / 69KV-U1 / 69KV-U2]
- Auto Transformer-2 [13.8KV-S / 138KV-T / 69KV-U1 / 69KV-U2]

Cogen Generator Step Up Transformers
- GSU-1 [13.8KV/138KV]
- GSU-2 [13.8KV/138KV]
- GSU-3 [13.8KV/69KV]
- GSU-4 [13.8KV/138KV]

Cogen Aux Transformers [Station Service Transformers]
Generator Braekers
Iso Phase Buses
Generator Relays & Contacts
125Vdc Station Battery System
Current Limiting Reactors

Sub 1 [60XF-1/ 60XF-4]

Transformer	Feeder
52XF-1	[3,1E]
52XF-2	[3,1E]
52XF-3	[3,1E]
51XF-1	[Tie 2, 204]

Sub 5A [60XF-9/ 60XF-10]

Transformer	Feeder
55XF-3	[503,504B]
56XF-2	[503,504B]
56XF-3	[503,504B]
52XF-4	[505,504B]

Sub 5B [60XF-11/ 60XF-12]

Transformer	Feeder
250XF-1A	[517,504B]
250XF-1A	[517,504B]
56XF-5	[517,504B]
56XF-6	[519,504B]
56XF-7	[519,504B]
56XF-8	[519,504B]
56XF-9	[519,504B]
56XF-10	[519,504B]
68XF-8	[518,504B]
68XF-9	[518,504B]
68XF-10A	[518,504B]
68XF-10B	[518,504B]

Sub 2 [60XF-2/ 60XF-3]

Transformer	Feeder
68XF-1	[205,204]
68XF-2	[205,204]
68XF-3	[205,204]
68XF-4	[205,204]
68XF-5	[205,204]
43XF-1	[205,204]

Equipment to Make BFW *[Note: Need 2000 gpm of BFW to support 1 Cogen Unit when condensate is unavailable]*

Power

Sub 1 [60XF-1/ 60XF-4] West-End Instrument/Plant Air Compressors [U52 -Water Treater & U250 Demin] [Note: Cooling water makeup to CT-1 is used by west end air compressors]
55C-21 [3450 scfm] 900 HP/4160v; **55C-101** [2600 scfm] 600 HP/480v [Note: Normal Demand with Refinery running > 11,000 scfm; 95 psig plant air; 100 psig IA]
Portable Compressors and Dryer Skids

Sub 5A [60XF-9/ 60XF-10] East-End Instrument/Plant Air Compressors [No.2 Steam Plant] [Note: Cooling water makeup to East End CTs (CT-2,3,5,6,7,9) is used by west end air compressors]
55C-28 [2850 scfm] 700 HP/480v; [Note: Normal Demand with Refinery running > 7700 scfm; 94 psig plant air; 80 psig IA]
Portable Compressors and Dryer Skids

TNP River Pumps *[Not needed in the short term]*

Reservoir Pumps

TNP 91P-4, P-4A & P-4B [Reservoir #2]

TNP 91P-2, P-2A & P-2B [Reservoir #1]

Unit 52 - Raw Water Treater

Raw Water Pumps

Sub 1 [60XF-1/ 60XF-4] **52P-1, P-1A, P-1B & P-1C [Old Side feeding BFW treatment]...** 52P-1B & 52P-1C [4000 gpm each]; 52P-1 [2000 gpm]; 52P-1A [3200 gpm]

52P-28, P-28A, P-28B, P-28C & P-28D [New Side feeding cooling tower makeup mater treatment] ...each at 3000 gpm [can tie into P-1s Discharge]

Sub 1 [60XF-1/ 60XF-4] Old side Accelators/Gravity Filters [**supporting BFW treatment** / excess to CWS]

Sub 5A [60XF-9/ 60XF-10] **52AC-1, AC-2, AC-3 & AC-4** [each designed for 2000 gpm but operated up to 2300 gpm] *[Need at least 2 to satisfy BFW demand]*
Gravity Filters 1- 8 [each designed for 1000 gpm]
Liquid Lime System [52D-9]; Liquid Lime Hose Pumps feeding Old Side Accelators [52P-20, P-20A, P-20B, P-20C & P-20D]
Chlorine
Nalco Chemicals [Nalco 8108 (polymer) [52P-47, P-47A & P47-B],
Nalco 7763 (poly mix for AC-5, AC-6, AC-7 & AC-202), Nalco 7392 (corrsion inhibitor); Nalco C-9 (Phosphate for domestic water)
CO2
Salt [Catexer Regeneration]

Sludge Pumps
52P-3 & P-3A [250 gpm each]

Filter Backwash Pumps
52P-2 & P-2A [2100 gpm each]
Low Head CW Makeup Pumps **[also used to supply backwash water to Filters from 52TK-55]**
52P-40, P-40a & P-40B [4000 gpm each]

Backwash Retention Pit Pump
52P-43 & P43A [1200 gpm]

Sub 5B [60XF-11/ 60XF-12] Demineralizer Feed Pumps
250P-100A, P100B & P100C [2000 gpm each]
[Priority - See Demineralizer Page]

Sub 1 [60XF-1/ 60XF-4] Catexer Feed Pumps
Sub 5A [60XF-9/ 60XF-10] **52P-25, P-25A & P-25B [feed "6 Series Catexers", "8 Series Catexers" and CO2 loop]**
52P-7 & P-7A [feed "Gravity Catexers"]

Catexers [Sodium Ion Exchangers] [Note: 12" Demin line is capacity is about 3900 gpm; Blended Water line MUST be used with Demin line to supply Cogen BFW needs >3900 gpm]
Catexers 6, 6A & 6B [each designed for 300 gpm]
Catexers 8, 8A & 8B [each designed for 300 gpm]
Catexers 1, 2, 3, 4 & 5 [each gravity catexer designed for 400 gpm]

Catexer Water Transfer [BFW Clear Well to Vacuum Deaerator 52T-200]

Sub 1 [60XF-1/ 60XF-4] **52P-8 & P-8A** [1400 gpm each]
Sub 5A [60XF-9/ 60XF-10] **52P-24 & P-24A** [1200 gpm each]

Vacuum Deaerator Blended Water to Heat Recovery Network [then to Steam Plant Deaerators and/or Cogen HRSG water tanks]

Sub 5A [60XF-9/ 60XF-10] **52P-55 & P-55A** [2200gpm] **[Note: 12" Demin line is capacity is about 3900 gpm; Blended Water line MUST be used with Demin line to supply Cogen BFW needs >3900 gpm]**
27P-732 & P732.1 (booster pumps) **[...100% Demin too corrosive for CS piping & equipment in Refinery Heat Recovery Network]**

Blended Water goes through 6" circuit to **27E-74, 27E-24** [FCC Slurry], 10" circuit to **27E-31** [LCO] then on through **27E-42** [Cat Gasoline Reflux]
and or through 6" circuit through **26.1E-18/18.1/18.2** [Gasoil] .. Blended Water *Booster pump in U26.1*
and or through 3" circuit through 26.2E-121 [Condensate]

Brine Pumps [Regen Catexers]

Equipment to Make BFW *[Note: Need 2000 gpm of BFW to support 1 Cogen Unit when condensate is unavailable]*

... continued

Power

Sub 5B [60XF-11/ 60XF-12]

Unit 250.52 - Deminerializer

Dual Media Filters
250D-100A, D100B, D-100C, D-100d & D-100E
Backwash Storage **250TK-105**

Filter Backwash Pumps
250P-101A & P101B

Cation Exchangers
250D-130A, D-130B, D-130C,D-130D & D-130E

Decarbonator A & Decarbonator B
Blower 118A & Blower 118B

Decarbonator Transfer Pumps
250P-140A, P-140B & P140C

Weak & Stron Anion Exchangers
250D-131A/132A, D-131B/132B, D-131C/132C,D-131D/132D & D-131E/132E

Demin Storage Tank **250TK-104**

Demin Water Transfer Pumps
250P-105A, P-105B & P-105C [2000 gpm each]

Sluice / Backwash Pumps
250P-106A, P-106B & P-106C

36% HCL
50% NaoH
Sodium Bisulfite

HCL for Cation Regenerations
250P-108A & P108B
HCL for Neutralization System
250P-109A & P109B

NaOH for Anion Regeneration
250P-110A & P-110B
NaOH for Neutralization System
250P-111A & P-111B

Primary Neutralization Tanks **250D-109A** & **D-109B**
Mixer 101A & Mixer 101B

Secondary Neutralization Sump **250D-110**
Brine Discharge Pumps *[Brine can be routed to Polishing Ponds or Outfall 11 Transfer Tank 56TK-468]*
250P-112A & P-112B
Outfall 11 Transfer Pumps
56P-102, P103 & P-103A

Cogeneration Facility *[Note: Need 2000 gpm of BFW to support 1 Cogen Unit]*

Air Compressors 1, 2, 3 & 4

HRSG Water Supply Tanks [3-150kgallon tanks]
HRSG Supply Pumps 1, 2, 3 & 4 [each designed for 2250 gpm]

Boiler Feedwater Pumps [2 per unit; 1350 - 1400 gpm each???]

Nalco Chemicals
- O2 scavenger
- Polymer Dispersants
- Neutralizing Amine

Ammonia

Sanitary Sump Lift Pumps 1 & 2 [80 gpm]

OWS Sump Pumps 1 & 2 [88 gpm]

Ammonia Pumps

Natural Gas Yard [530 psig gas/ 15-30 mmscfd per CTG]

Auto Transformers [69KV/138KV]
- Auto Transformer-1 [13.8KV-S / 138KV-T / 69KV-U1 / 69KV-U2]
- Auto Transformer-2 [13.8KV-S / 138KV-T / 69KV-U1 / 69KV-U2]

Cogen Generator Step Up Transformers
- GSU-1 [13.8KV/138KV]
- GSU-2 [13.8KV/138KV]
- GSU-3 [13.8KV/69KV]
- GSU-4 [13.8KV/138KV]

Cogen Aux Transformers [Station Service Transformers]
Generator Breakers
Iso Phase Buses
Generator Relays & Contacts
125Vdc Station Battery System
Current Limiting Reactors

Generic Hurricane Start-up Sequence
Sweeny Refinery

Updated: 5/9/17 LH

		Day 1		Day 2		Day 3		Day 4		Day 5		Day 6		Day 7		Day 8		Day 9		Notes
		Days	Nights	Days	Nights	Days	Nights	Days	Nights	Days	Nights	Days	Nights	Days	Nights	Days	Nights	Days	Nights	
Boiler #8		On-line																		Note 1
Boiler #9		On-line																		Note 1
Cogen	1st	Start-up Unit																		
	2nd		Start-up Unit		2nd Unit On-line															
	3rd			Start-up Unit		3rd Unit On-line														
	4th					Start-up Unit		4th Unit On-line												
28.1	#1 DEA						Warm-up #1 Side		Start #1 Side											Note 2
	#2 DEA							Warm-up #2 Side		Start #2 Side										
	SWS						Warm-up SWS		Start SWS											
28.2	A Claus			Warm-up A Claus					Take Acid Gas											Note 3
	B Claus				Warm-up B Claus					Take Acid Gas										Note 3
	C Claus					Warm-up C Claus					Take Acid Gas									Note 4
	U39						Warm-up D Claus					Take Acid Gas								
5,6,8								Circ 5,6,8												
30						Circulate and Warm-up Unit 30					Making Alkylate									Note 9
27.1				Warm-up Unit 27, Start Cat Circ						Oil in Unit 27										Note 8
3&4									Warm-up and start Cat Circ			Oil In								Note 8
45 (Tier III)				Warm-up and start Circ								Oil In								Note 8
9										Circulate and Warm-up Unit 9		Start Yielding Naphtha								
25.1							Start sweet circ and heat up		Start Sour	Flying Swap to 29.1		Go to Full Charge if 26C-103 is on-line								
29.1							Circulate and Warm-up 29.1			Flying Swap w/ 25.1										
29.2							Circulate and Warm-up 29.2			Start 1 Train	Start 2nd Train									
26.1				Circulate and Warm-up 26.1					Oil in		Yield Sweet GO to 99 A/B									
26.2												Circulate and Cool Down Unit 26.2				Yield H2 to Cavern/26.1				
25.2										Circulate and Warm-up 25.2		On-test Diesel								
38								Circulate and Warm-up 38			ULSD on Test									
22				Will Start-up either 33, 24 or 22 one at a time, depending on which checks out first.																
24																				Note 10
33																				Note 10
Clemens		Return Caverns to service																		
12 & 18				Start-up	Start 12 & 18															Note 5
10 ABC				Start-up 1	Start 10 ABC															Note 6
10 D				Start-up 10D		Start 10 D														Note 7
44					Start-up refrig.	Oil in. On recycle until on-test														
46 (EPU)					Start-up	Oil in. On recycle until on-test														
11							Circulate and Warm-up Unit 11		Yield to U35											
35							Circulate and Warm-up Unit 35		Take U11 Naphtha											
14 and 15									Circulate and Warm-up Unit 14		Yield to U35									
7-17																				
19																				Note 11
20																				
Freeport																				
Hydrogen Pipeline																				
Nitrogen Pipeline																				

ChevronPhillips Chemical (CPC) operated units

Crtical Maintenance Activities
Start-up Activites
On-line Unit

Notes:

1 Assumes Steam Header stays hot.
2 Need Claus Unit up to take Acid Gas before DEA circulation started.
3 Need N2 pumper truck.
4 Start C Claus once steam and N2 pumper truck are availible.
5 Need Cavern up before 12 and 18
6 Need 10 ABC up before Refinery LPG production.
7 12 and 18 must be up before 10 D
8 Need DEA/Sulfur Plant up before Oil in
9 Need Cavern or a Cat up
10 2 days are required following one Ethylene Unit start-up before the other is on-line
11 Unit 19 Availible if H2 load needed for pipeline