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Overview:

References: 49 CFR, sections 195.402(c)(7), 195.406

General: If a pipeline leak is suspected and/or indicated by ATMOS LDS , shutdown 16” pipeline.

The drawdown section of this procedure is specific to the San Pedro Bay Pipeline 16” and would only be used in the event of an emergency and by authorization of Beta Offshore management.

NOTE:

DRAWDOWN OF THE PIPELINE IS TO BE PERFORMED ONLY BY AN EXPERIENCED PIPELINE OPERATOR FULLY FAMILIER WITH THE OPERATIONS OF BETA PUMP STATION

In the event of a indicated or suspect pipeline leak, the San Pedro Bay Pipeline is to be isolated by closing Shutdown Valve SD 5-02B-1 at Platform Elly, ML-4 at the Queen Mary Vault and V-520 and V-530 at the Beta Pump Station. After initial isolation, valve ML-1 and ML-3 will be closed. Depending on the type of leak or report from the field, evaluate if a drawdown of the pipeline is needed. To quickly reduce or stop the flow of crude into the water and instead draw sea water into the pipeline, a drawdown of the pipeline from Beta Pump Station is possible.

Scope: Using existing booster pump at Beta Pump Station to pull directly from 16” pipeline instead of Beta Shipping Tank. This can be performed by “Shipping” as usual out of Beta Station preceded by an adjustment of CV-4 and manual adjustment of valve V01.

BETA Offshore has the sole responsibility for complying with applicable Federal, State and local laws and requirements. The Department of Transportation (DOT) and “Bureau of Safety and Environmental Enforcement” (BSEE) will be the primary governing contacts

Safety:

To prevent accidental injury, personnel must be fully familiar with the inherent dangers and appropriate safeguards associated with this specific procedure.

Annually simulate this process in this procedure and review with all personnel that could possibly be involved.

- **Review and discuss safety and scope of operation of procedure.**
- **Make note of any changes in this procedure that need addressing.**
- **Required PPE and Safety Equipment:**
 - Standard Personal Protective Equipment PPE (hard hat, hearing protection, steel toe shoes, safety glasses or goggles) when outside of Control Room or on Beta Pump Station grounds.
 - Cell Phone

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- **Training:**
 - All pipeline operators must be OQ trained and certified per the Beta Offshore OQ Plan.
- **Operational Setting:**
 - Review dynamics of equipment with personnel that would perform task.

Roles and Responsibilities:

- **Pipeline Superintendent:**
 - Responsible for implementation of procedure.
 - Responsible for annual review and training of procedure with personnel.
 - OQ training of pipeline operators.
- **Pipeline Tech:**
 - Operation of all Beta Pump Station operations.
- **Safety:**
 - Responsible for safety oversight.
- **Control Room Operator:**
 - In charge of monitoring and relaying pipeline conditions to Beta Station.
- **Crimson Control Center:**
 - Has authority over Crimson Pipeline
 - Grants permission to ship.
 - Has capability to shutdown shipping pipeline.

Associated Hazards:

- **Special or Unique Hazards:**
 - Pressure up to 1152 PSI
 - High noise level around pumping equipment
 - Rotating equipment

Required Tools and Equipment:

- **Equipment needed for operation and monitoring of pipeline:**
 - SCADA Operating system.
 - Landline and Cell phone.
 - Continuous communication with Elly Control Room.
 - Continuous communication with field operation, i.e.; Personnel at leak site.
 - Radio communication

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Pre-Start Up Conditions Check List:

Note:

**Refer “Valve Chart” drawing C-5709C for location of equipment at Beta Station.
 “Drawing on last page”**

Isolate Pipeline:

1. Elly - Close valve SD 5-02B-1. This will isolate pipeline from Elly S02B
2. Elly - Close valve ML-3.
3. Elly - Close valve ML-1.
4. Onshore – Close valve ML-4 at Queen Mary Vault
5. Onshore – Close valve V-520 at Beta Station
6. Onshore – Close valve V-530 at Beta Station

Determine Leak Location:

1. Offshore?
2. Onshore?

Is a Drawdown Beneficial?

1. Is drawdown beneficial? If crude is coming out of pipeline –YES. If not -- NO

Preparing for Drawdown:

1. If leak is offshore, line up pipeline for possible drawdown.
 - i. Open valve ML-4
 - ii. Open valve V-530
2. If leak is onshore, line up pipeline for possible drawdown.
 - i. Open valve V-530

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Procedure:

Pipeline Start up:

1. Verify that the Beta Station Shipping tank has a minimum of 9’ of inventory.
2. Unlock Valve number V01 at Shipping Tank.
3. Request “Permissive” from Crimson Pipeline Control Center.
4. On SCADA monitor “Main Pipeline” screen, use the mouse and click “LOGIN”
 - a) A grey popup screen will appear with a name list.
 - b) Chose and click on your name from popup list.
 - c) Enter in the “Enter Password” box your issued password.
 - d) Click the “OK” box. Your name will now appear in blue in the upper right of the screen.
5. Set shutdown level for Beta Shipping Tank “Auto Shipping Shutoff Level” to 7’-0”
6. Click on Control Valve “CV-4” and set to 650psig max and specified BPH.

Note:

When a request to ship occurs the Control Center may need to adjust downstream conditions before enabling the permissive to Beta Shipping, this make take a few minutes. Never attempt to initiate a start up until granted permission by the Control Center.

7. Permission granted for start up, Control Center enables Beta Shipping Line 2 or 3 for startup. Station Status LACT 2 or LACT 3 will be flashing in green “Ready”.
8. In the Main Pipeline screen in the “Auto Shipping Detail” box select “LACT 2 Line 2 or LACT 3 Line 3”
9. In the Main Pipeline screen in the “Auto Shipping Detail” box select “Start”, a second popup screen will appear in order to confirm your command. Click “Start Auto Shipping”
 - a) Valve V722 or V732 will begin opening.
 - b) When V722 or V732 is fully open, Booster BP01 or BP02 will start up.
 - c) Once suction pressure reaches predetermined level, Mainline Shipping pump # 1 or #3 will start.
9. Let BPH rate stabilize, this should take 2-3 Minutes.
10. Adjust BPH rate by adjusting CV4 to 400 BPH. (This will extend shipping time)
11. Stage operator with radio at Integrity Meter.
12. With shipping up and running, slowly close valve V01, do not completely close.

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13. As soon as flow begins through Integrity Meter, check Integrity Meter rate.
14. Unless specified by pipeline supervision, target 60 BPH through Integrity Meter.
15. Advise emergency personnel of pipeline status.
16. Continue shipping out of Beta Station until either the Beta Shipping Tank falls to 7’-0” or field personnel have verified that leak site has stopped releasing oil.
17. Once shipping out of Beta Station has stopped, close valve ML-4 at the Queen Mary Vault.

Pipeline Shutdown:

18. On SCADA monitor “Main Pipeline” screen, use the mouse and click “LOGIN”
 - a) A grey popup screen will appear with a name list.
 - b) Chose and click on your name from popup list.
 - c) Enter in the “Enter Password” box your issued password.
 - d) Click the “OK” box. Your name will now appear in blue in the upper right of the screen.
19. On the Main Pipeline screen in the “Auto Shipping Detail” box select “Stop”, a second popup screen will appear in order to confirm your command. Click “Stop Auto Shipping”
 - a) Booster and Mainline pumps will stop running.
 - b) Valve V722 or V732 will begin closing.
 - c) Notify Crimson Control Center and Elly Control Room of shut down.

Note:

The Beta shipping Line is an automated system that is designed to shutdown automatically for the following reasons:

- **When the Beta Shipping Tank reaches the low gauge of 7’-0”**
- **A malfunction triggers an alarm.**
- **A request from the Control Room or Control Center for a shutdown.**

12. Set “Auto Shipping Shutoff Level” to 7’-0”
13. Click on Control Valve “CV-4” and set to 650psig max and specified BPH in anticipation of next pipeline shipment

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Abnormal Operating Conditions:

Emergency Shutdown:

1. Please note the locations of ESD (Emergency Shut Down) switch before performing any operational task at the Beta Pump Station.
 - At Beta Pump Station just outside the of the front MCC room door there an ESD button painted red.

2. If any of the following abnormal operating conditions occur, shutdown shipping immediately and notify the Platform and Pipeline Supervisors
 - Pipeline leak in facility
 - High discharge pressure (Over 700 psi)
 - No flow, pumps on but no flow indication

