**Attachment A**

Checklist for Line Stop Installations

This checklist is to be used by the Line Stop contractor as a planning worksheet and progressive sign off on listed steps accomplished during the line stop procedures. This completed form to be presented to HRSD, or acting site representative, at the conclusion of each line stop installation.

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| --- | --- | --- | --- |
| **√** | **Pre-installation and Site Review** | **Technicians sign off** | **Inspectors sign off** |
|  | Force main pressure (psi at intended line stop time) |  |  |
|  | Force main pipe material |  |  |
|  | Force main pipe outside diameter |  |  |
|  | Force main schedule / classification |  |  |
|  | Force main flow rate (gpm at intended line stop time) |  |  |
|  | Verification of minimum distance needed from pipe joint or observed fittings. |  |  |
|  | Verification of egress requirements |  |  |
|  | Verification of rigging and equipment support requirements |  |  |
|  | Verification of line stop insertion time of day and date |  |  |
|  | Determination of need for shift crews to complete job |  |  |
|  | Verification that necessary work permits acquired |  |  |
|  | Verification of handling / disposal plan for any sanitary sewage discharge from the pipe when line stop is removed |  |  |
|  | Verification of line stop pressure withdrawal equalization procedures |  |  |
|  | Verification of completion plug equalization procedures |  |  |
|  | Inspect hot tap machine, cutter size, pilot length, line stop machine and verify all measurements prior to commencing the hot tap. |  |  |
|  | Inspect all pre-assembled joints for integrity |  |  |
|  |  |  |  |
| **√** | **Equipment / Materials** | **Technicians sign off** | **Inspectors sign off** |
|  | Hot tap fitting |  |  |
|  | Full opening valve |  |  |
|  | Line stop fitting |  |  |
|  | Service valve |  |  |
|  | Hot tapping machine |  |  |
|  | Line stop cutter and pilot assembly |  |  |
|  | Hot tap adapter with vent valve and pressure gauge port |  |  |
|  | Hydraulic power unit and hoses |  |  |
|  | Line stop machine |  |  |
|  | Line stop housing with pressure gauge port |  |  |
|  | Line stop head |  |  |
|  | Completion plug holder |  |  |
|  | Hand tools |  |  |
|  | Pressure gauge and needed piping |  |  |
|  | Soapstone and indicator collet |  |  |
|  | Extra varying sized stopple gaskets |  |  |
|  | Properly sized HDPE bypass pipe (if bypass flow through the housing body is required) |  |  |
|  |  |  |  |
| **√** | **Installation Procedures** | **Technicians sign off** | **Inspectors sign off** |
|  | Verify HDPE pipe has been properly fused together along with required fittings, that proper length has been measured between line stop housings, and that pipe has been successfully hydrostatically tested if a bypass system using through the line stop housing is to be utilized for required work. |  |  |
|  | Verify alignment of the valve bore with the inside diameter of the fitting after installation of the service valve on the line stop fitting. |  |  |
|  | Verify inspection of service valve and fitting for foreign materials, proper operation and bore size. |  |  |
|  | Verify installation of the hot tap machine, centering it to the service valve. |  |  |
|  | Verify marking for the “Lower In” on the hot tap machine using soapstone or indicator collet. |  |  |
|  | Verify lowering of the boring bar into position. |  |  |
|  | Verify the “Lower In” distance. |  |  |
|  | Verify joint integrity test on final makeup. If joint integrity test is greater than 1.1 times the operating pressure, retract the boring bar and close the hot tap valve. |  |  |
|  | Verify marking the “Pilot To Cutter” and “Cutter On Pipe” using soapstone. |  |  |
|  | Verify marking the “Maximum Cut Out” on the hot tap machine using an indicator collet. |  |  |
|  | Verify the gauge on the air caddy indicates the minimum air pressure (or hydraulic pressure) to operate hot tap machine. |  |  |
|  | Verify pilot penetrates the pipe prior to lowering the “Cutter on Pipe”. |  |  |
|  | Verify the “Pilot to Cutter” |  |  |
|  | Verify cutter is tight with a measuring rod when the machine is off. |  |  |
|  | Verify cut out by extending the cutter to the “Maximum Cut Out” mark after cutter has reached the “Book Cut Out” mark. |  |  |
|  | Verify the “Maximum Cut Out” distance has not been exceeded. |  |  |
|  | Verify the boring bar has been retracted and service valve has been closed following completion of tap. |  |  |
|  | Verify the tap has been depressurized prior to removing the hot tap machine. |  |  |
|  | Verify venting fluids have been collected for proper disposal. |  |  |
|  | Record the wall thickness of the removed pipe coupon and present this information along with the coupon to the Inspector. |  |  |
|  | Tag pipe coupon and complete Coupon Data Collection Form |  |  |
|  | Verify the pipe wall thickness is consistent with wall thickness that line stop based upon prior to installing the line stop machine. |  |  |
|  | Verify a joint integrity test performed on final makeup. |  |  |
|  | Verify with the Owner’s representative that flow in the pipe is as per approved plan for successful line stop insertion. |  |  |
|  | Verify the line stop head is in the proper set position. |  |  |
|  | Verify proper seal and depressurize downstream of the line stop head. |  |  |
| **√** | **Installation Procedures** | **Technicians sign off** | **Inspectors sign off** |
|  | Install HDPE pipe between line stop units if design specifies a bypass through the line stop housing to accomplish required work downstream of line stop(s). |  |  |
|  | Verify completion of required work downstream of the line stop head prior to equalizing pressure on the downstream side of the line stop. |  |  |
|  | Verify equalization of pressure on each side of the line stop plug using a pressure gauge following completion of necessary pipe work. |  |  |
|  | Verify closure of service valve following retracting line stop head. |  |  |
|  | Verify depressurization of line stop machine prior to removing. |  |  |
|  | Verify proper installation of the completion plug into the hot tap adapter following removal of line stop machine. |  |  |
|  | Verify joint integrity test performed on final makeup following attachment of the hot tap machine to the service valve. |  |  |
|  | Verify pressure equalized on the top of the completion plug following opening of the service valve. |  |  |
|  | Verify the completion plug is in the proper set position by measurements. |  |  |
|  | Verify the recommended tightening procedures have been completed prior to attempting to extend and retract plug, assuring completion plug properly set. |  |  |
|  | Release tapping machine from completion plug and retract boring bar. |  |  |
|  | Verify completion plug seal by depressurizing the hot tap machine. |  |  |
|  | Fully retract boring bar and remove hot tap machine. |  |  |
|  | Verify removal of service valve and completion plug holder. |  |  |
|  | Verify proper installation of blind flange to the fitting. |  |  |