

BP HUSKY – TOLEDO REFINERY

	Refinery Wide	Procedure No.: SAF 102
Effective Date: June 20, 2011	Developing Isolation Plans	Rev. No.: 2 MOC#: M20113000-001
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SCOPE	This procedure describes development and use of Isolation Plans. Isolations Plans support and enhance the LOTO process.
HEALTH Special PPE & Special Hazards	Any energy source that may cause unexpected movement of equipment or release of hazardous energy during maintenance.
SAFETY	Appropriate personal protective equipment needed to protect against exposures.
REFERENCE DOCUMENTS	SAF 037 Control of Hazardous Energy (Lock Out/Tag Out) Procedure Toledo Control of Work Policy Toledo Isolations Policy
SPECIAL MATERIALS & EQUIPMENT	Pre-determined Isolation Plans and Isolation Confirmation Certificates (Equipment Specific) Isolation Plan Template ICC Template
QUALITY	Annual Auditing of Program
ENVIRONMENTAL	N/A

OVERVIEW

Isolation Plans and Isolation Confirmation Certificates (ICC's) are provided to assist operating personnel in achieving a consistent safe work practice that protects people, equipment, property and the environment.

Isolation Plans and ICC's, when consistently applied:

- Will make the isolation easier for the operator to optimize time utilization
- Builds rigor into our approach
- Helps maintain a high level of process and personnel safety
- Keeps us in compliance with OSHA Regulation 1910.147

The Isolation Plan and ICC's when used with Control of Work and established operations procedures provides a complete system to safely apply Lock Out/Tag Out (LO/TO) objectives resulting in a safer facility.

The Isolation Plan document:

- Identifies the equipment to be worked on.
- List and details isolation points (e.g. blank list) and/or marked up PID's or drawings.
- Sequence of isolation and de-isolation.
- Includes information on verifying the isolations (e.g. rod out, push stop/start buttons, or voltage test)
- Describes returning to service and any other reinstatement activities.

The operational issues that involve shutdown/cleaning/start up of a system or particular piece of equipment should be directed by operating personnel and established procedures/guidelines.

<p>1.0 Definitions</p>	<ul style="list-style-type: none"> - Energy control is the use of isolating devices to control and restrain energy sources in order for work to be safely done on that equipment or system. - An energy source is any source of energy that can be harmful to people. For example, but not limited to: chemical or hydrocarbons, including engulfment and displacement of oxygen, electrical, thermal, mechanical, springs, pneumatic, hydraulic, pressure, gravity and radiation. - Isolation device is a mechanical device that physically prevents the transmission or release of energy, including items such as: manually operated circuit breaker, a disconnect switch, line valves, or other similar devices that block energy. Push buttons, selector switches and other control circuit type devices are not isolation devices.
<p>2.0 Purpose</p>	<p>2.1 The purpose of this policy is to ensure the safety of all personnel by systems, processes and capabilities to ensure compliance with legal requirements and the Toledo Isolations Policy. Routine adherence to pre-defined points will enable operations and maintenance personnel to achieve a high degree of safety, consistency and reliability during maintenance operations. The Isolation Plan also establishes documentation required by OSHA and Control of Work.</p> <p>2.2 This directive details:</p> <ul style="list-style-type: none"> • The key responsibilities of all personnel involved in the use

	<p>of the Isolation Plan and the Isolation Confirmation Certificate (ICC).</p> <ul style="list-style-type: none"> • The control and management of Isolation Plans including future revisions • Action to take if equipment does not have a pre-determined Isolation Plan
<p>3.0 Isolation Plans</p>	<p>3.1 BP Husky Refining in Toledo has developed Isolation Plans for process equipment in each section of the refinery.</p> <p>3.2 The Isolation Plan is a document that defines where locks and tags are to be placed in order to properly isolate each piece of equipment in the COW process. Each Isolation Plan is specific to the piece of equipment listed by: the Maximo location number, location description, purpose for isolation, and the isolation diagram.</p> <ul style="list-style-type: none"> • For work on equipment that has a pre-determined Isolation Plan, the specific Isolation Plan can be found on the Operations Page under Resources. • For work on equipment that does not have an Isolation Plan, the Isolation Plan Template can be found in Operations Page under Resources.
<p>4.0 Responsibilities</p>	<p>4.1 Key Responsibilities</p> <p>Unit Isolating Authority (Unit Operators) –</p> <ul style="list-style-type: none"> • Knows the location of the Isolation Plans including the sketch or drawing of the equipment and how to obtain a paper copy or an electronic copy of the Isolation Plan or Isolation Plan Template. • Reviews the scope and accuracy of all Isolation Plans used. • Determines the level of isolation needed. • Risk assesses the isolation plan prior to putting the isolation in place. • Isolates equipment in accordance with an approved isolation plan. • Tracks isolation with Isolation Plan and ICC. • Develops an Isolation Plans for equipment that does not have a pre-determined Isolation Plan, including a sketch of equipment. • Notifies the Unit Shift Supervisor that the Isolation Plan is developed. • Notifies supervision of any administrative changes to approved Isolation Plans. <p>Unit Shift Supervisors –</p> <ul style="list-style-type: none"> • Reviews and field validates the Isolation Plan for accuracy and content. • Notifies the Unit Isolating Authority (UIsA) that an Isolation Plan needs developed. • Verifies and approves changes with the UIsA to an already approved Isolation Plan. • Notifies the Unit Operations Coordinator of changes to the approved Isolation Plan.

	<ul style="list-style-type: none"> • Notifies the Unit Operations Coordinator to the original Isolation Plan has been developed, reviewed, and approved by the UIsA and the Unit Shift Supervisor. • Approves / sanctions an Isolation Plan to be carried out in emergency situations. <p>Unit Operations Coordinator (Asset Coordinator)–</p> <ul style="list-style-type: none"> • Reviews and approves any new Isolation Plans and any changes or modifications to existing Isolation Plans. • Notifies the Process Safety Management (PSM) Coordinator that a new or existing Isolations Plan is ready to be added to the library. • Tracks the status of the Isolation Plan for readiness. <p>Process Safety Management (PSM) Coordinator</p> <ul style="list-style-type: none"> • Create the revision history on the last page of the Isolation Plan, to document changes to an approved Isolation Plan. • Library the approved or modified Isolation Plan to the share point site. • Ensure all drawings/sketches are converted into Visio. • Ensure actions from MOC's are incorporated into the Isolation Plan. <p>Site Engineering</p> <ul style="list-style-type: none"> • Coordinate the development of Isolation Plans for new projects with the Area Authority.
5.0 Use	<p>5.1 Modification of an approved Isolation Plan</p> <ul style="list-style-type: none"> • Any modification of the approved Isolation Plans will be done either by using the coordination process described in 4.0 with the UIsA, Shift Supervisor, and Operations Coordinator or by using the MOC process, except for administrative changes. It is the responsibility of the MOC initiator to determine the necessary participants and assign action items. Administrative changes may be done through the PSM Coordinator. Administrative changes are approved by the Unit Operations Coordinator after review by the Shift Supervisor and Unit Operator. <p>5.2 Isolation Plan for Piping Work</p> <ul style="list-style-type: none"> • Since piping in the process areas is not identified by a Maximo location number, and some work (i.e. replace a spool piece) may require LOTO, there is no approved Isolation Plan for that work. An Isolation Plan may be created using the current Isolation Template and guidance document from the Operations homepage.

<p>6.0 Control</p>	<p>6.1 Control of Isolation Plans</p> <p>Isolation Plans will be controlled using management systems already in place at Toledo:</p> <ul style="list-style-type: none"> ➤ All Isolation Plan changes must be approved by the Operations Coordinator after review by the Shift Supervisor and UIsA or by completing the MOC process. ➤ The Isolation Plans should be reviewed prior to their use by the UIsA and Shift Supervisor to ensure accuracy. ➤ For new projects, a Process Safety Startup Review is required before commissioning equipment. The PSSR should require that related Isolation Plans be identified, developed, reviewed, and updated before startup.
<p>7.0 Management of ECP's and New Isolation Plans</p>	<p>7.1 Management of Isolation Plans</p> <ul style="list-style-type: none"> • Isolation Plans are maintained in Microsoft Word and Visio form. All Isolation Plans for one unit are contained and are accessible on that unit's web site under the heading "ECP's and Isolation Plans". Any approved changes to the documents should be posted by the assigned PSM Coordinator and will only be done after approval by the Operations Coordinator (after review by Shift Supervisor and UIsA) or after the completion of the MOC approval process.
<p>8.0 Non-process areas</p>	<p>8.1 Isolation Plans may need to be developed for areas where there is no Unit Operator, Shift Supervisor or Operations Coordinator (such as fire field or POW). People would need to be assigned to fill each role in developing and approving the Isolation Plan or ICC. The people acting as Unit Isolating Authority, Shift Supervisor and Operations Coordinator, for the purpose of Isolation Plans and ICCs, would all need to be trained as Isolating Authorities.</p>