BP FUELS NORTH AMERICA RETAIL - HIGH RISK SAFETY POLICIES

The following BP safety policies for select work activities are to be applied in conjunction with API RP 1646, Federal and State OSHA, and any other regulations. ***Where there is inconsistency between the BP Policy (outlined below) and API 1646 Edition 2 or other codes, the contractors are required to comply with the most stringent requirements.*** API 1646 is written to conform to the following standards, and these documents are hereby incorporated as reference:

- API RP 1604, *Closure of Underground Petroleum Storage Tanks*
- RP 1615, *Installation of Underground of Petroleum Storage Systems*
- RP 1631, *Interior Lining and Periodic Inspection of Underground Storage Tanks*
- OSHA (The references below may be obtained at OSHA's website: http://www.osha.gov/index.html.)
- 29 *CFR* 1926.650
- 29 *CFR* 1926.651
- 29 *CFR* 1926.652

The following work activities have a BP Policy that supplements API 1646 and is detailed below:

1. **Confined Space**
2. **Hot Work**
3. **Work at Heights**
4. **Ground Disturbance / Excavation**
5. **Lifting Operations**
6. **Forklifts**

1. Confined Space

- ENTER ONLY AFTER ALL OTHER OPTIONS TO AVOID HUMAN ENTRY HAVE BEEN RULED OUT!
- As per BP policy, all tank top sumps are Permit Required Confined Spaces, regardless of depth. As per BP policy, sumps cannot, under any circumstances, be reclassified as “non-permit required”. Contractor will follow OSHA PRCS procedures for any sump entry. (“Entry” is when any body part breaks the plane of the sump). Prior to any tank top sump entry, contractor will ensure, at minimum, that the following conditions are satisfied and meet minimum requirements.
    - Post sign (DANGER -- PERMIT-REQUIRED CONFINED SPACE)
    - PPE requirements/barricading (see API 1646 section 8)
    - Pre-entry Internal Atmosphere Testing (Oxygen content, flammable gasses, vapors, potential toxic air contaminants)
    - Continuous forced air ventilation shall be used (exception: not required in excavation confined spaces)
    - Continuous atmospheric testing
    - Provide at least one attendant outside the space for the duration of entry operations
    - Means of communication must be in place
    - Have a plan for summoning emergency services
    - Designated entry supervisor
    - Retrieval system
    - In addition, contractors must complete Job Clearance Form, JSA, and work permit as outlined in API 1646 for Confined Space Work.
- BP GDP 4.5 Confined Space is more strict than OSHA Standard 29 CFR 1910.146 in that, under BP GDP 4.5, a Permit Required Confined Space cannot be reclassified. All other requirements apply.

2. Hot Work

The following guide summarizes some of the basic safety requirements for Hot Work being performed Inside and Outside Classified Areas (Class 1 Div 1 and Div 2) based on the type of "spark potential".

Requirement	Hot work INSIDE classified area	Hot work OUTSIDE classified area	Hot work *spark potential* INSIDE classified area	Hot work *spark potential* OUTSIDE classified area
Job Safety Analysis (JSA)	Yes			
Permit-to work	Yes			If dictated by JSA
Emergency response plan/procedures	Yes		If dictated by JSA	
Remove or isolate hazardous/combustible materials	Yes		If dictated by JSA	
Gas Monitoring	Initial & Continuous	Initial & Periodic	Initial & Continuous	If dictated by JSA
Fire extinguisher	2-10 lb. each		Yes - but no size requirement	
Fire watch for the duration and 30 minutes after	Yes		If dictated by JSA	
Additional controls as per JSA	Yes			

Additional references: NFPA 51B, NFPA 30A

Definitions:

- **Hot work**--any work that has a continuous/uncontrolled heat source capable of igniting flammable materials. Examples of hot work are: burning, welding, grinding, air arcing, soldering, open flame, stress relieving, preheating and any similar activity that creates an uncontrolled ignition source
- **Hot work sparks potential**--any task that has the potential to generate sufficient heat and sparks in a classified hazardous area. Examples are battery-powered equipment such as electrical test equipment, cordless drills, scissor lifts, air powered equipment that may generate a friction spark, opening live electrical equipment in a classified hazardous area, cell phones, and cameras.
- ***Exception:*** At construction sites where there are not flammable vapors present at the work premises (no gasoline, fuel, chemicals, gases, etc.) then follow the guidelines listed under "Hot Work *Spark Potential* OUTSIDE classified area".

3. Work at Heights

- Any work performed at heights 6 feet* or more requires a Fall Protection System (i.e. temporary or permanent OSHA compliant guard rail system or parapet wall), Personal Fall Arrest System (PFAS), or Fall Restraint System. The following is also required, which may exceed OSHA regulation
- Anyone performing work on a ladder whose feet are 6 feet* or more above the ground must use a Personal Fall Arrest System. (This does not apply to cases where the ladder is used for access only).

- When using ladders for temporary access whose feet are 10 feet or more above the ground shall require a Personal Fall Arrest System.
- First Climb Situations
    - For first climbs where fall protection anchors have not yet been installed, it will be necessary to make the first climb so as to install fall protection for subsequent climbs.
    - A worker undertaking a first climb shall have a risk assessment authorized and approved by a person at a level higher in the organization than the worker completing the task.
    - The risk assessment shall implement additional controls such as:
        - Prior to the work being executed, reviewing whether the work can be performed without using a temporary ladder.
        - A physical review of the worksite to determine if there are any other hazards or risks that could affect the climbing activity.
        - Additional worker(s) to hold the ladder secure while worker is on ladder and not connected with fall protection equipment.
        - Once the worker ascends the ladder, worker to connect first to an existing structure, a secure point or install fall arrest anchorage before approaching edge to then tie off the top of the ladder.
        - If necessary, install / connect fall protection equipment prior to beginning work for others to climb or if worker will be descending and ascending the ladder repeatedly (this may include the installation of anchor points or lifelines where none exist).
        - Worker not carrying tools while climbing (use of rope and bag if tools are needed).
- A fall protection system or fall restraint/arrest systems shall be used when working on a low slope roof at elevations of 6 feet or more.
    - The use of a safety monitor as fall protection for low slope roof (defined by OSHA) work is not allowed.
- A dual lanyard system shall be utilized to ensure that at least one connection point is always maintained when the work method requires employees to detach and re attach at height.
- While ascending and descending a ladder, the worker shall face the ladder and have both hands available to climb.
- Extension ladders shall not exceed 30 feet.
- Extension ladders shall not be used to access a canopy or double story building.
- Whenever possible, platform ladders shall be used in place of extension or straight ladders to perform work.
    - Platform ladders shall be used on level ground with support for all four sides of the base, not moved while someone is on it, not used on ice, snow, or slippery surfaces unless suitable means to prevent slipping is employed.
- Discuss and review potential Pinch Point hazards while performing tasks, review Job Safety Analysis for task including mitigation methods. Ensure personal protective equipment is correct for identified hazards. If you cannot see your hands – they are at risk.

* Contractors shall adhere to more stringent state safety laws when applicable (i.e. the minimum work at heights is set at 4 feet instead of 6 feet)

4. Ground Disturbance / Excavations

The Ground Disturbance Policy for BP U.S. Retail applies to excavations 3 inches or deeper. Contractors are required to comply with all the provisions, policies, and procedures outlined below in the policy below and API 1646 Edition 2, section 11.

Ground Disturbance permit and checklist completion is required for all trenching and excavation work 3" or deeper.

Underground Obstruction Identification

- A ***Private*** underground locate will be coordinated by BP prior to all ground disturbance work. This includes NTI construction, Raze and Rebuild, tank replacement, tank removal, piping replacement projects, well borings and other projects as agreed on between the BP PM and the General Contractor. The private underground locate is meant to identify all the private and public pipes and conduits, in addition the public utility lines. *This private locate is in addition to the legally required public utility locate (i.e. 811) that is required prior to excavation.*
- For sites that are in the design phase when the private locate is requested, the resulting locate site map will be provided to the A&E firm for creating the overall site layout and design.
- A site map showing underground locates will be provided to the Contractor by BP in advance of job start
- The Contractor is responsible to notify BP of the project start date so sufficient time (2 weeks minimum) is available to coordinate a second private underground locate and repaint locate markings as needed.
- **The GC is responsible to notify BP's PM and A&E firm of any conflicts between public utility locates, private underground locates, and construction drawings.**
- **If there is any inconsistency between drawings, public utility locates and private underground locates, all ground disturbance work shall stop. The discrepancy shall be escalated to the General Contractor, Project Manager, BP Construction Lead & BP Safety Manager. Collectively, a proposed action plan will be developed prior to resuming ground disturbance work. This action plan will evaluate methods to address the inconsistency which may include requesting that utility locates, public and/or private, are recompleted. Alternative safe ground disturbance techniques such as hand digging, use of an air knife, use of hydro-excavation equipment, etc. will also be evaluated to complete potholing or further excavation to confirm the location of underground utilities.**
- If unexpected utilities are discovered during excavation; excavation activities shall stop immediately, made safe, and the discrepancy escalation process described above must be followed. The A&E firm shall be contacted immediately to provide assistance in identifying the utility and redlining the appropriate drawings

Underground Energy Isolation

- All electrical lines feeding site power and site equipment, and all product and utility piping in the area of the ground disturbance **shall** be de-energized, locked out and tagged out as per OSHA standards.
- When there is concern that energy isolation (LOTO) creates a greater risk, then a risk assessment must be completed and approved by the BP Marketing & Sales Safety Manager prior to proceeding.

Overhead Energy Clearance and Isolation

- Safe electrical energy clearances are defined in API RP 1646 for aerial electric power sources. If those clearances cannot be obtained, do not proceed until a risk assessment is completed and approved by the BP Marketing & Sales Safety Manager.

  NOTE: Alternative energy clearance techniques that may be considered include temporarily de-energizing the power lines (outages), using insulating sleeves over the power lines, and revising the project design, but these must be approved by the BP Marketing & Sales Safety Manager after a risk assessment. Additionally, a specific lift plan must be developed and approved.

Excavation Techniques

- Use of heavy equipment (saw cutting, jackhammering, etc.) is permitted to break and remove the surface layer of concrete and pavement after locates are completed.
- Hand digging is **required** (shovels, vacuum, air knife, hydraulic)
  - Within 10 ft. from all active pump islands, UST, vents, etc.
  - Within 2 ft. of marked utility locates
- If undermining of existing foundations has to be carried out, the Contractor must first inform the BP Project Manager. A suitable work method (which could include underpinning) must be approved by the Marketing & Sales Safety Manager prior to beginning work.

Protective Systems

- For all excavation protective systems, the contractor must assume all soil is type "C" unless a geotechnical analysis is available
- All excavations 4' deep or greater are permit required confined spaces
    - For excavations 4' to 10' in depth the contractor is responsible to design a suitable protective system (shoring, benching, or sloping)
    - For all excavations deeper than 10 ft. (such as UST excavations), the only approved protective systems are steel sheet pile shoring, slip shoring, and premanufactured trench boxes/shields. Any exception to this requirement must be approved by the Marketing & Sales Safety Manager

Excavation Competent Person

- An excavation competent person shall conduct and **document** inspections daily and before the start of each shift for evidence of a possible cave-in, failure of protective systems, hazardous atmospheres, and other hazardous conditions when there is a worker exposure. These documented inspections **shall** also occur when any of the following conditions exist:
    - after every rainstorm
    - after other events that may increase hazards such as snowstorm, thaw, earthquake, dramatic change in weather, etc.
    - when fissures, tension cracks, sloughing, undercutting, water seepage, bulging at the bottom, or other similar conditions occur
    - when there is a change in the size, location, or placement of the spoil pile
    - when there is any indication of change or movement in adjacent structures.

Excavation Entry Requirements

- Continuous air monitoring is required while workers are in the trench/excavation
- Metal ladders shall not be used when utilities are present
- No workers may be in the excavation while backfill is added (or must be a minimum 25 ft. away from the point of adding backfill) or while UST's are being lowered
- Pea gravel backfill must be arranged around tanks prior to disconnecting the rigging to prevent the tanks from rolling

Rescue Plans

- Use of a lanyard by excavation entrants shall be determined according to the task risk assessment
- If the Rescue Plan stipulates calling local rescue personnel (Ex. Fire department) then documentation of notification of entry to the Fire Department must be on site.
- Documentation must include confirmation that the local Fire Department is equipped and certified to handle Permit Required Confined space/excavation rescue for the days of excavation entry (plan cannot be to "just call 911").

5. Lifting Operations

- A documented lift plan shall be in place prior to executing the lift.
- The load shall be less than 75% of the dynamic and/or static capacities of the lifting equipment.

6. Forklifts

- Service provider shall use forklifts that have sequential seat-belt/ignition interlocks, lap seat belts, speed limiters, reversing beepers, and strobes/warning lights.