

Scenario A Transformer replacement

Number	High-Energy Hazard Description	High-Energy Hazard Icon	Direct Control Description	Direct Control?	Classification	Score
1	Suspended load lateral swing (Motion and potential for pinch point)	Motion: Other	No exclusion zone with hard barricade	No	Exposure	0
2	Suspended load (Gravity and potential for fall/crush)	Gravity: Suspended load	Proper rigging	No	Exposure	0
3	Electrical conduit	Electrical: Electrical contact with source \geq 50 volts	De-energization	Yes	Success	1
4	Potential for arc flash	Electrical: Arc flash	De-energization	Yes	Success	1
5	Fall into 8 ft vault	Gravity: Fall from elevation > 4 ft	No barricade	No	Exposure	0
6	Traffic passing by work zone	Motion: Mobile equipment/traffic with workers on foot	Machinery & work vehicles barrier	Yes	Success	1

HECA score 50%

Scenario B Feeding a pipe underground

Number	High-Energy Hazard Description	High-Energy Hazard Icon	Direct Control Description	Direct Control?	Classification	Score
1	Fall into hole 6 ft deep	Gravity: Fall from elevation \geq 4 ft	No hard barricade	No	Exposure	0
2	Unsupported excavation	Pressure: Excavation of trench \geq 5 ft	No trench box or other support	No	Exposure	0
3	Moving excavator	Motion: Mobile equipment/traffic with workers on foot	No hard barricade	No	Exposure	0
4	Traffic passing by work zone	Motion: Mobile equipment/traffic with workers on foot	No hard barricade	No	Exposure	0

HECA score 0%

Scenario C Welding on a scaffold

Number	High-Energy Hazard Description	High-Energy Hazard Icon	Direct Control Descption	Direct Control?	Classification	Score
1	Work at 23 feet of height	Gravity: Fall from elevation \geq 4 ft	No proper fall protection	No	Exposure	0
2	Heat from the weld	Temperature: High temperature \geq 150* F	Full FR clothing, face shield, and gloves	Yes	Success	1

HECA score 50%

Scenario D Live-line electrical work

Number	High-Energy Hazard Description	High-Energy Hazard Icon	Direct Control Description	Direct Control?	Classification	Score
1	Work at height in bucket	Gravity: Fall from elevation \geq 4 ft	Proper fall arrest system	Yes	Success	1
2	Live electrical lines	Electrical: Electrical contact with source \geq 50 volts	Sleeves	Yes	Success	1
3	Potential for arc flash	Electrical: Arc flash	Proper arc-rated PPE	Yes	Success	1
4	Suspended load lateral swing	Motion: Other	Rigging is not a DC, no exclusion zone w/ hard barricade	No	Exposure	0
5	Suspended load	Gravity: Suspended load	Rigging is not a DC, no exclusion zone w/ hard barricade	No	Exposure	0
6	Side boom tracking	Motion: Mobile equipment/traffic with workers on foot	No energy mitigation, and operation was vulnerable to human error.	No	Exposure	0
7	Traffic with worker on foot	Motion: Mobile equipment/traffic with workers on foot	Roadway closed with hard barricades	Yes	Success	1
8	Truck tipping	Mechanical: Heavy Rotating Equipment	Outriggers	Yes	Success	1
9	Fall from height into the pole hole	Gravity: Fall from elevation \geq 4 ft	No coverage or barrier	No	Exposure	0

HECA score 56%

Scenario E Underground electrical work at generation facility

Number	High-Energy Hazard Description	High-Energy Hazard Icon	Direct Control Description	Direct Control?	Classification	Score
1	Excavation	Pressure: Excavation of trench > 5 ft	Shoring is incomplete	No	Exposure	0
2	Arc flash	Electrical: Arc flash	Grounded / De-energized lines	Yes	Success	1
3	Electrical contact	Electrical: Electrical contact with source \geq 50 volts	De-energized lines	Yes	Success	1
4	High surface temperature	Temperature: High Temperature	No isolation below ground	No	Exposure	0
5	Fall into hole 7 ft deep excavation	Gravity: Fall from elevation \geq 4 ft	No hard barricade	No	Exposure	0

HECA score 40%

Scenario F Supporting broken pole with the truck boom

Number	High-Energy Hazard Description	High-Energy Hazard Icon	Direct Control Description	Direct Control?	Classification	Score
1	Suspended load (Gravity and potential for fall/crush)	Gravity: Suspended load	Pole claw/grabber is not a DC	No	Exposure	0
2	Potential for arc flash	Electrical: Arc flash	Grounded / De-energized lines with 0V	Yes	Success	1
3	Electrical contact	Electrical: Electrical contact with source ≥ 50 volts	Grounded/ De-energized lines with 0V	Yes	Success	1
4	Work at height (sitting on the truck top)	Gravity: Fall from elevation > 4 ft	No barricades	No	Exposure	0
5	Work at height (in bucket)	Gravity: Fall from elevation > 4 ft	Fall arrest system	Yes	Success	1
6	Truck tipping	Mechanical: Heavy rotating equipment	Outriggers placed	Yes	Success	1
7	Traffic with workers on foot	Motion: Mobile equipment/traffic with workers on foot	No hard barricade	No	Exposure	0
8	Tension in lines (due to pulling pole)	Pressure: Other - Tension	No protection for snap	No	Exposure	0

HECA score 50%

Scenario G Tree removal activity using a bucket truck

Number	High-Energy Hazard Description	High-Energy Hazard Icon	Direct Control Description	Direct Control?	Classification	Score
1	Potential for arc flash	Electrical: Arc flash	AR clothing appropriate	Yes	Success	1
2	Electrical contact	Electrical: Electrical contact with source \geq 50 volts	Energized with no control	No	Exposure	0
3	Suspended limbs (Controlled falls into the fall zone)	Gravity: Suspended load	No barricades or control	No	Exposure	0
4	Suspended load (Chainsaw)	Gravity: Suspended load	Tethered	Yes	Success	1
5	Work at height (in bucket)	Gravity: Fall from elevation > 4 ft	Fall arrest system	Yes	Success	1
6	Truck tipping	Mechanical: Heavy rotating equipment	Outriggers placed	Yes	Success	1
7	Traffic with workers on foot	Motion: Mobile equipment/traffic with workers on foot	No hard barricade	No	Exposure	0
8	24" Chainsaw Operations	Mechanical: Heavy rotating equipment	No protection for snap	No	Exposure	0

HECA score 50%

Number	High-Energy Hazard Description	High-Energy Hazard Icon	Direct Control Description	Direct Control?	Classification	Score
1	Potential for arc flash	Electrical: Arc flash	De-energized	Yes	Success	1
2	Electrical contact	Electrical: Electrical contact with source \geq 50 volts	De-energized	Yes	Success	1
3	Suspended limbs (Controlled falls into the fall zone)	Gravity: Suspended load	No barricades or control	No	Exposure	0
4	Work at height (climbed on tree)	Gravity: Fall from elevation > 4 ft	Fall arrest system	Yes	Success	1
5	High surface temperature	Temperature: High Temperature	No isolation between the hot tree trunks and worker	No	Exposure	0
6	Traffic with workers on foot	Motion: Mobile equipment/traffic with workers on foot	No hard barricade	No	Exposure	0
7	12" Chainsaw Operations	Mechanical: Heavy rotating equipment	No protection for snap	No	Exposure	0

HECA score 43%

Scenario I Trench box installation

Number	High-Energy Hazard Description	High-Energy Hazard Icon	Direct Control Description	Direct Control?	Classification	Score
1	Potential for arc flash	Electrical: Arc flash	Energized but there is no control	No	Exposure	0
2	Electrical contact	Electrical: Electrical contact with source \geq 50 volts	Energized but there is no control or specialty PPE	No	Exposure	0
3	Suspended load lateral swing (Motion and potential for pinch point)	Motion: Other	No exclusion zone with hard barricade	No	Exposure	0
4	Suspended load (trench box)	Gravity: Suspended load	Rated rigging not considered a DC, no barrier.	No	Exposure	0
5	Fall from elevation (into trench)	Gravity: Fall from elevation > 4 ft	No fall restraint or arrest system	No	Exposure	0
6	Truck tipping	Mechanical: Heavy rotating equipment	Outriggers placed	Yes	Success	1
7	Traffic with workers on foot	Motion: Mobile equipment/traffic with workers on foot	No hard barricade	No	Exposure	0
8	Unsupported excavation	Pressure: Excavation of trench \geq 5 ft	No trench box or other support	No	Exposure	0

HECA score 13%