


JOB SAFETY ANALYSIS (score: 40)		
JSA No.: 20200318-001		
Job/Operation Title: Well Demolition		Date: 03/18/2020
Department/Division/Section: Field Services		Developed By: Nicole Wolters
Location(s): ABCD Manufacturing		Reviewed By: Nicole Wolters
Person(s) Performing This Job: Bryan Tallant		Supervisor: Kathy Winsor
Start Date: 04/30/2020		Duration: Two work days

Task/Step	Potential Hazards	Recommended Safe Job Procedures	Score
1. Demolition	1. Automobiles and light trucks 2. Containers (drums, roll-off, super sac) 3. Vibration 4. Wires, cables, hoses	<ul style="list-style-type: none"> * Use hand signals, eye contact, buddy system and common sense * Use proper ergonomics when clearing debris * Watch out for spiders, rats, nails * Watch all pinch points * Do not stand in reach length area of demolition equipment; backhoe, dozer or other * Use proper nitrile/latex and leather work gloves * Use buddy system to lift equipment, materials or items of excess weight * Use common sense * Use dust suppression and/or dust mask/respirator if necessary * Wear proper PPE; steel toed boots, reflective vest, long-sleeved shirts, long pants, eye and hearing protection, hard hats 	16



Task/Step	Potential Hazards	Recommended Safe Job Procedures	Score
2. Equipment decontamination	<ol style="list-style-type: none"> 1. Automobiles and light trucks 2. Containers (drums, roll- off, super sac) 3. Wires, cables, hoses 	<ul style="list-style-type: none"> * Remove and put all the equipment on decontamination area * Use chemical splash shields and heat resistant outer gloves while steam cleaning * Carefully inspect all decon equipment for wear and tear and mechanical failures * Start the generator and steam cleaner and decontaminate all purging and sampling equipment * Run cold water through the heating coil before switching off the steam cleaner to avoid pressure build up in the coil * Use common sense * Use buddy system to lift and carry augers 	12



3. Demobilization	<ol style="list-style-type: none"> 1. Automobiles and light trucks 2. Containers (drums, roll- off, super sac) 3. Wires, cables, hoses 	<ul style="list-style-type: none"> * Ensure all equipment is put away and out of area of work * Ensure all areas are clean and decontaminated prior to leaving the work site * Use good housekeeping * Use buddy system for lifting to ensure fatigue does not take over * Use hand signals to ensure the drill rig mast and equipment is down and secure prior to leaving site * Use safe and defensive driving techniques 	12
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Score Total: 40

POTENTIAL PHYSICAL HAZARDS OF THIS JOB

Hazards	Prob.	Sev.	Consequences
Automobiles and light trucks	2	2	Awkward or static position
Containers (drums, roll-off, super sac)	4	1	Caught in or between a stationary/moving object
Elevated loads	2	2	Collision between moving vehicles and/or equipment
Empty drums	2	2	Cuts and abrasions Electrocutation or shock
Falls	3	2	Excessive lifting, twisting, pushing, pulling, reaching, or bending
Floor equipment (vacuums, buffers, sweepers)	2	2	Exposure to excessive light (welding)
Hot or cold surfaces	3	1	Exposure to excessive vibrations Falling (< 6 feet), tripping, or slipping Fatigue
Ladders (portable, fixed)	4	2	Fungal infections caused by excessive wetness Heat exhaustion
Stepladder	2	2	Heat stroke Overturning equipment
Test	3	1	Struck by moving vehicle or equipment
Vibration	2	2	Struck by uncontrolled pressure release test
Wires, cables, hoses	2	2	Thermal burns

POTENTIAL CHEMICAL HAZARDS OF THIS JOB

Chemical Hazards	Description/Health Hazards
LIQUEFIED PETROLEUM GAS (115-11-7)	<p>Isobutylene is a colorless gas with a faint petroleum-like odor. For transportation it may be stench. It is shipped as a liquefied gas under its own vapor pressure. Contact with the liquid can cause frostbite. It is easily ignited. Its vapors are heavier than air and a flame can flash back to the source of leak very easily. The leak can either be a liquid or vapor leak. It can asphyxiate by the displacement of air. Under prolonged exposure to fire or heat the containers may rupture violently and rocket. It is used in the production of isooctane, a high-octane aviation gasoline. (REACTIVITY, 2003)</p> <p>Inhalation of moderate concentrations causes dizziness, drowsiness, and unconsciousness. Contact with eyes or skin may cause irritation; the liquid may cause frostbite. (USCG, 1999)</p>
BENZENE (71-43-2)	<p>A clear colorless liquid with a petroleum-like odor. Flash point less than 0°F. Less dense than water and slightly soluble in water. Hence floats on water. Vapors are heavier than air. (REACTIVITY, 2003)</p> <p>Dizziness, excitation, pallor, followed by flushing, weakness, headache, breathlessness, chest constriction, nausea, and vomiting. Coma and possible death. (USCG, 1999)</p>

POTENTIAL CHEMICAL HAZARDS OF THIS JOB

Chemical Hazards	Description/Health Hazards
METHANOL (67-56-1)	<p>A colorless fairly volatile liquid with a faintly sweet pungent odor like that of ethyl alcohol. Flash point 54°F. Density 6.6 lb./gal. The vapors are slightly heavier than air and may travel some distance to a source of ignition and flash back. Any accumulation of vapors in confined spaces, such as buildings or sewers, may explode if ignited. Used to make chemicals, to remove water from automotive and aviation fuels, as a solvent for paints and plastics, and as an ingredient in a wide variety of products. (REACTIVITY, 2003)</p> <p>Exposure to excessive vapor causes eye irritation, head- ache, fatigue and drowsiness. High concentrations can produce central nervous system depression and optic nerve damage. 50,000 ppm will probably cause death in 1 to 2 hrs. Can be absorbed through skin. Swallowing may cause death or eye damage. (USCG, 1999)</p>
1,2-DIBROMO-3-CHLOROPROPANE (96-12-8)	<p>A colorless liquid. Denser than water. Flash point 170°F. Boiling point 195°F. Toxic by ingestion and inhalation. Used as a pesticide and fumigant.</p> <p>Excerpt from ERG Guide 159 [Substances (Irritating)]:</p> <p>Inhalation of vapors or dust is extremely irritating. May cause burning of eyes and flow of tears. May cause coughing, difficult breathing and nausea. Brief exposure effects last only a few minutes. Exposure in an enclosed area may be very harmful. Fire will produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may cause pollution. (ERG, 2016)</p>

POTENTIAL BIOLOGICAL HAZARDS OF THIS JOB

Hazards	Prob. Sev.	Consequences
Blood borne pathogens	3 3	Infection
Raw sewage	3 2	Reaction to venom
Reptile bites - venomous (snakes, gila monsters)	2 2	Waterborne pathogens

POTENTIAL RADIOLOGICAL HAZARDS OF THIS JOB

Hazards	Prob.	Sev.	Consequences
Alpha emitting particles (inhalation ingested, or absorbed)	4	2	Acute Radiation Syndrome (ARS) Biological effects
Electrical and magnetic field exposures	2	1	Effects on the Eyes – Cataracts Effects on the Skin - Burns
Infrared (IR)	4	2	
Laser	2	2	
Neutron emitting sources	3	2	

HAZARD CONTROL MEASURES USED FOR THIS JOB

<p>Administrative Controls: Audits (site or job) Competent person Dust control program Equipment maintenance and servicing manual Ergonomic procedure Fire protection program Heat Illness Prevention Program Inspections (ongoing) work areas, equipment, tools, etc. Licensed operators Monitoring (hazardous atmospheres) Operating instructions (equipment) Procedures and/or guidelines (general) Procedures and/or guidelines (job or activity) Safety and health plan (site specific) Safety and health program Two-man task Underground utilities (e.g., use Dig Alert, Dig-Safe) Work practices</p>	<p>Required Training: Ergonomics General Safety Hazard Communication (HAZCOM) Hazardous waste operations (HAZWOPER) Hearing protection Personal protective equipment (PPE) Emergency Response Use of Hand Tools</p>
<p>Engineering Controls: Air filtration Chemical reduction Enclosures</p>	<p>Required PPE: Air-purifying respirator - see step-by-step instructions for cartridge type Safety glasses Boots - steel toe and shank, appropriate soles Clothing - long pants Clothing - long sleeve shirt Gloves - work gloves Gloves inner - chemical-resistant Hard hat Hearing protection High visibility safety vest Respirator</p>

HAZARD CONTROL MEASURES USED FOR THIS JOB

Required Permit(s):

Demolition Permit
Ground Disturbance
Permit to Work

Other Information:

Bob's Drilling Company is contracted to perform the well abandonment. Utilities Unlimited is contracted to perform the underground utility clearance.

The gate code to access the property is ABCDE.

JSABuilder Chemical Description/Health Hazards is from the CAMEO database maintained by the U.S. EPA, NOAA, and the U.S. Coast Guard (www.cameochemicals.noaa.gov). The creator of this JSA is responsible for any edits to this information.

Probability	Severity
1 - None	1 - Low
2 - Low	2 - Medium
3 - Medium	3 - High
4 - High	