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Job Safety and Environmental Analysis (JSEA) / Risk Assessment / Job Hazard Analysis (JHA)

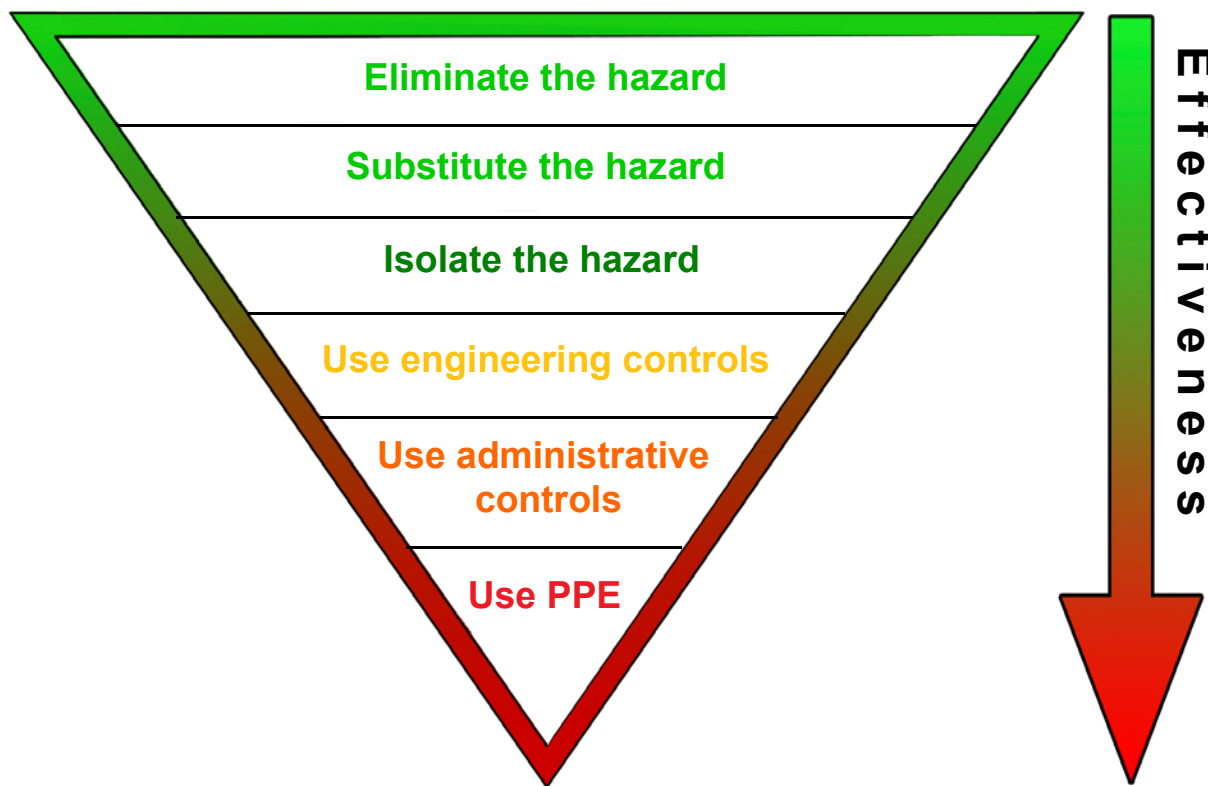
Sample Co Ltd

| Part 1: Project and Task Identification | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------|--------------|-------------------------------------|-------------------------------|
| <p>Process Initiators of JHAs are responsible for consulting the Project Supervisor, Quality OSH Manager or other persons directly in charge of the work and other personnel involved in the execution of the task (as appropriate) for input into the JHA. Other persons may be consulted for technical advice or review of the JHA to see that proposed measures are effective and workable. The task is to be broken up into steps. For each step, the safety hazards are identified. For each of the hazards identified, corrective action, precautions, equipment are identified to reduce the hazard. All involved in the task must review and sign this JHA form.</p> | | | | | |
| Client: TotalTrack LLC | | | | | |
| Site: ABC Building, 1200 Sample St Colorado Springs CO 80921 | | | | | Job ID: TT982023 |
| Contact Name | Job Title | Phone | Mobile | FAX | Email |
| B Safe | Safety Manager | | 719 555 4444 | | b.safe@totaltrack.com |
| Will B. Watchin | Supervisor | | 719 555 5555 | | will.b.watchin@totaltrack.com |
| Scott LeBlanc | Project Manger | 719 309 0380 | | | scott.leblanc@totaltrack.com |
| JHA Initiated By _____ Ben Workin | | Date: | | JHA No. 12 | Rev: 0 |
| Supervisor Review _____ (Responsible for monitoring JHA compliance) B Watchin | | Date: | | Work Locations/Areas: All | |
| Management Review _____ Steady Walker | | Date: | | | |
| Description of Work to be Undertaken: | Excavation and Installation of Dual Wall Polypropylene storm drainage pipe | | | | |

First, identify and assess the risks, then decide the best way to control them by applying the Hierarchy of Control as follows:

| LEVEL | CONTROL | DEFINITION |
|---------|-------------------------------|---------------------------------------------------------------|
| Level 1 | Elimination | Controlling the Hazard at source |
| Level 2 | Substitution | Replacing one substance or Activity with a less hazardous one |
| | Isolation | Separating the hazard from the person |
| | Engineering | Installing Guards on machinery |
| Level 3 | Administration | Implementing policies and procedures for safe work practices |
| | Personal Protective Equipment | Use of safety glasses, hardhats, protective clothing, etc. |

Hierarchy of Controls



| Job Safety and Environmental Analysis (JSEA) / Risk Assessment | | | | Job Hazard Analysis (JHA) | | |
|----------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------|
| Step No. | Process Steps List the steps needed to do the job in the sequence to be done. | Potential Hazard(s) / Risk Against each step list potential hazards that could cause injury when the job is done. | Risk Rating | Hazard Control Measures For each hazard, identify control measures to eliminate or minimise the risk of injury. | New Risk Rating | Action By |
| 1 | Site Orientation/ Induction | | | | | |
| 1.1 | Report to client's reception | Entering restricted areas | 19 | Follow posted signs and go directly to reception | 1 | All |
| 1.2 | Undertake a site induction | Unfamiliarity with emergency procedures | 14 | Listen and ensure you obtain information and site emergency and evacuation procedures | 1 | All |
| | | Unawareness of site specific hazards | 14 | Listen and ensure you obtain information about any and all site hazards | 1 | All |
| | | Unawareness of restricted areas | 18 | Listen and ensure you obtain information about any restricted areas | 1 | All |
| | | Unawareness of other operations or hazardous activities being undertaken on site | 9 | Listen and ensure you obtain information about any other activities being undertaken on site | 5 | All |
| 2 | Claim Work Area | | | | | |
| 2.1 | Access the site | Breaching minimum site PPE requirements | 13 | HI visibility clothing must be worn at all times whilst on site | 1 | All |
| | | | | Steel toe safety boots must be worn at all times whilst on site | 1 | All |
| | | | | Safety glasses must either be worn or carried at all times whilst on site | 1 | All |
| | | Breaching site rules or requirements | 13 | NO SMOKING on site-designated smoking area will be available and ALL butts to be placed in bin | 1 | All |
| | | | | Progressive housekeeping clean as you go | 1 | All |
| 2.2 | Establish safe perimeter | People entering work area | 21 | Controlled by Site Manager | 5 | Site Manager |
| | | | | Establish an exclusion zone and have clearly defined areas to keep pedestrians separate from mobile plant during all mobile plant operations. | 2 | Site Manager |
| 3 | Working where there is movement of powered mobile plant | | | | | |
| 3.1 | Enter the work area where powered mobile plant is or will be operating | Being hit or runover by powered mobile plant | 22 | All team members must wear Hi-Visibility vests or clothing | 5 | All |
| | | | | Ensure constant communication with all personnel in the immediate area | 5 | Everyone working in the area of the plant |
| | | | | Never assume the plant operator has seen you or knows where you are | 5 | Everyone working in the area of the plant |
| | | | | Establish eye contact with the operator | 3 | Everyone working in the area of the plant |
| | | | | Communicate your intentions with the plant operator via radio or hand or head signals and ensure an appropriate response | 3 | Everyone working in the area of the plant |

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| | | Crushing | 23 | Never stand or traverse between the machine and a fixed structure at any time | 3 | Everyone working in the area of the plant |
| | | | | Never assume others have seen or are aware of any impeding obstacle | 6 | Everyone working in the area of the plant |
| | | Tripping hazard | 12 | Be aware of surroundings, risers and set downs | 3 | All |
| 4 | Safety check and operation of Excavator for trenching and excavations | | | | | |
| 4.1 | Safety check of unit. Fill out Pre-trip/ Daily Inspection | Faulty equipment machine failure | 14 | Check for dents, cracks and faulty welds | 3 | Operator |
| | | | | Check all hydraulic rams and lines, controls for leaks | 3 | Driver |
| | | | | Check all safety devices | 3 | Operator |
| | | | | Check for leaking Fluids | 1 | Operator |
| | | | | Check tracks for tightness and rollers, idlers, and sprockets for damage | 3 | Plant Operator |
| 4.2 | Boarding the machine | Falling from Ladder | 23 | Ensure 3 points of contact | 3 | All |
| 4.3 | Operating / traveling with or without a load | Injury to people, damage to product or equipment from running into or over | 13 | Only trained and authorised employees may operate this equipment | 3 | All |
| | | Thrown out of cab or against cab interior | 13 | Always wear seatbelt | 1 | Plant Operator |
| | | Personal Injury | 20 | Allow no one to ride outside of the cab | 1 | Plant Operator |
| | | | | Never use the basket or other attachments as a staging platform for workers | 1 | Plant Operator |
| | | Tipping over | 19 | Be alert for trenches, open cuts, sump holes and pits | 2 | Driver |
| | | | | Keep the machine as level as possible when operating | 3 | Operator |
| | | Electrocution | 25 | Always check for overhead power lines | 1 | Driver |
| 4.4 | Dig | Digging up underground services | 18 | Any suspected services should be uncovered by hand digging and clearly marked so as to be visible to plant operators on site | 2 | Site Supervisor |
| | | | | Obtain service location from property owner | 3 | Supervisor |
| | | | | Dial 811 before you dig | 3 | Site Manager |
| | | Ground collapse | 22 | If excavations exceed 5 feet (1.5m) no persons should work in the trench without support | 2 | All |
| | | | | Plant is not to travel up to 3 feet (1m) from edge of trench unless the trench is only 3 feet (1m) deep (zone of influence) | 2 | Plant Operator |
| | | | | All stockpile materials must be "put out of the zone of influence" | 3 | Operator |
| | | Environmental - Disturb Cultural Heritage Sites | 9 | Stop all works if sub-surface archaeological | 1 | All |

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| | | | | deposits are discovered | | |
| | | Environmental - Spreading of Weeds and pests | 4 | Contain weeds if present for disposal | 3 | All |
| | | Environmental - Dust | 16 | Wet down area in dry dusty conditions | 1 | All |
| 4.5 | Load the truck | Running over someone | 15 | Be aware of everyone's location in the work area | 5 | Plant Operator |
| | | Dropping material on cab and driver | 9 | Do not move bucket near cab of truck. | 3 | Plat Operator |
| | | Uneven loading may affect control of truck | 13 | Load truck evenly | 5 | Plat Operator |
| 4.6 | Backing up | Reversing/ Running over people and equipment and not very good visual | 22 | Make sure that your back up alarm is working | 5 | Driver |
| 5 | Working in open trench | | | | | |
| 5.1 | Gain access to trench via a ladder | Ground collapse | 22 | Inspect excavation daily for water, ground movement, undermining collapses and any other changes from previous day. | 3 | All trench workers |
| | | | | Ensure all team members have read and understand the Trench and Excavations Incident Emergency Response Procedure | 6 | Site Manager |
| | | | | If excavations exceed 5 feet (1.5m) no persons should work in the trench without support | 2 | All |
| | | | | If excavations exceed 5 feet (1.5m) undertake benching , battering or shoring | 2 | Site Manager |
| | | Falling from Ladder | 23 | Ensure firm ground support | 3 | Installer |
| | | | | Ensure correct slope of ladder (4m up - 1m out) | 1 | All |
| | | | | Do not face away from the ladder when going up or down | 6 | User |
| | | | | Materials or tools must not be carried while climbing the ladder—use a tool belt or side pouch | 3 | User |
| 5.2 | Working in trench | Restricted entry or exit | 22 | Provide ladder access points required every 32 feet (10m) | 2 | All persons working on or in trench |
| | | Unauthorized access | 18 | Remove ladder if no one is working in excavation | 1 | All persons working on or in trench |
| 6 | Dumping/Unloading load on ground using a tip truck/ dump truck | | | | | |
| 6.1 | Inspect area to accept load | Electrocution | 25 | Always check for overhead power lines | 1 | Driver |
| | | Tipping over | 19 | Be alert for trenches, open cuts, sump holes and pits | 2 | Driver |
| | | | | Ensure firm ground support | 5 | Driver |
| | | | | Ensure gradient/slope within safe limits | 1 | Driver |
| 6.2 | Reverse vehicle to position | Reversing/ Running over people and | 22 | Make sure that your back up alarm is working | 5 | Driver |

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| | | equipment and not very good visual | | Use a spotter when reversing in the vicinity of other people or in congested areas | 2 | Driver |
| 6.3 | Dump load | Obstructing access or egress | 15 | Do not block access or egress to site | 1 | Driver |
| | | | | Do not unload in close proximity to other vehicles. Ensure sufficient space between dump sites if several loads being dumped at same time | 1 | Driver |
| | | Personal Injury | 20 | Ensure that you have received training in safe use of the equipment | 1 | Driver |
| | | | | Driver to remain in cab with seatbelt on during unloading | 1 | Driver |
| | | | | Ensure that bottom hinge pin is in place | 2 | Driver |
| | | | | Ensure that tailgate release controls have been activated | 1 | Driver |
| | | | | Tailgate must not be operated when there is a load bearing against it | 1 | Driver |
| | | | | Do not leave cabin with engine running. Turn off and apply park brake before exiting cabin | 1 | Driver |
| | | | | Do not enter the box to clear remaining load. Use long-handled implements to nudge any product from side of box (high side if on slope) | 2 | Driver |
| | | | | Ensure gate is closed and locked before leaving site | 3 | Driver |
| 7 | Spreading soil with Shovel and Rake | | | | | |
| 7.1 | Spread with rake or shovel | Faulty or unsafe hand tools | 13 | Inspect rake or shovel for defects or damage (e.g., splintered, loose, bent, or cracked tool handles, loose connections, and damaged tines or blade) | 3 | All |
| | | | | If a rake or shovel fails your inspection, remove it from use | 3 | All |
| | | Muscle strain - musculoskeletal disorders | 13 | Do not over reach | 3 | Operator |
| | | | | Use a rake or shovel that is comfortable for your height and strength | 3 | Operator |
| | | | | Do not use a rake or shovel that is too long or heavy for you | 3 | Operator |
| | | | | Never twist your trunk when raking or moving a shovel load. Always turn your feet and body in the direction where you wish to pile leaves or spread or drop the shovel load. | 3 | All |
| | | | | Never overextend your arms or shoulders to load a shovel | 3 | All |
| | | | | Shovel loads should not be thrown above about | 3 | All |

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| | | | | 4 feet or further than about 3 Feet | | |
| | | Injury from using hand tools | 13 | All personnel are to be trained in the safe operating procedure of hand tools | 3 | All |
| | | | | Be on the lookout for signs of repetitive stress. Early detection might prevent a serious injury | 6 | All |
| | | | | When raking, stand upright and use the rake to pull leaves or dirt towards you | 3 | Operator |
| | | | | Before shoveling, inspect the area for obstructions such as cables and pipes | 3 | Operator |
| | | | | When shoveling, stand upright and bend your knees so your legs carry most of the load | 2 | Operator |
| | | | | Push the shovel blade into the soil or material to obtain a shovel load | 3 | Operator |
| | | | | Keep your arms and elbows close to your body when handling a shovel load | 3 | All |
| | | | | When digging, use the ball of your foot to push the shovel blade into the ground | 3 | All |
| | | | | When raking or shoveling for long periods, vary your arm and leg positions and movements | 6 | All |
| | | | | Never lay a garden rake down with the teeth pointing up – the teeth should always be pointing down | 3 | All |
| | | Back injury | 13 | Lift the shovel load by straightening your legs | 5 | All |
| | | hand injury | 18 | Wear gloves | 1 | All |
| | | Striking foot | 8 | Wear safety boots | 1 | All |
| 8 | Dig/ Clean trenches and setting grade by hand | | | | | |
| 8.1 | Dig into ground with Shovel | Digging up underground services | 18 | Dial 811 before you dig | 3 | Site Manager |
| | | Muscle strain - musculoskeletal disorders | 13 | Do not over reach with shovel | 3 | Operator |
| | | | | Stand firmly in braced position before exerting force | 5 | Labourer |
| | | Environmental - Disturbance to Plants or animals - removal of vegetation | 17 | Ensure fragile vegetation is removed carefully for reinstatement | 1 | All |
| | | Environmental - Dust | 16 | Wet down area in dry dusty conditions | 1 | All |
| | | Environmental - Spreading of Weeds and pests | 4 | Contain weeds if present for disposal | 3 | All |
| 8.2 | Check gradient and setting level | Moving Machinery | 21 | Ensure constant communication with co-workers | 5 | Operator |
| | | | | Wear Hi visibility clothing | 1 | All |
| | | Falling into trench | 13 | Be aware of loose edges | 2 | All |

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| | | | | An additional JHA must be developed for shaft or trench with an excavated depth of greater than 5 feet | 5 | Site Manager |
| | | Incorrect installation procedure | 20 | All pipe systems must be installed in accordance with ASTM D2321 Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications | 1 | Installer |
| 9 | Acceptance of delivery to site for pipe and fittings | | | | | |
| 9.1 | Establish area to accept delivery | Other trades and or persons wanting to use area | 11 | Communicate with other site personnel to establish availability of area | 2 | All |
| | | Uncontrolled movement | 22 | Choose flat areas for pipe storage with safe vehicle access and ensure that it is possible to safely unload the pipes and fittings | 2 | Site Manager |
| 9.2 | Direct vehicle to appropriate area | Running into objects and or persons | 13 | Place "spotter" to watch path of truck | 3 | Site Supervisor |
| 9.3 | Untie load | Load tipping or falling | 12 | Release straps slowly to ensure load does not move | 3 | Driver |
| 9.4 | Unloading | People entering work area | 21 | Establish an exclusion zone and have clearly defined areas to keep pedestrians separate from mobile plant during all operations | 2 | Site Manager |
| | | Damage to product | 13 | Sockets should be protected from distortion during storage by ensuring all the sockets are placed at alternate ends and raised clear from ground and each other. | 1 | Person accepting the load |
| 10 | Lift pipes/ members into trench using an excavator | | | | | |
| 10.1 | Sling the Member | member may slide from slings | 13 | Ensure the sling is firmly choked around the member | 5 | Installer |
| 10.2 | Lift member to desired location | Objects / other trades obstructing lifting path | 17 | Prior to lifting ensure no other objects/ trades are in the lifting path, do visual checks | 3 | Installer |
| | | Uncontrolled load movement | 24 | Keep load as low as possible, just able to clear obstacles | 3 | Lifting Crew |
| | | | | Conduct a trial lift | 2 | Lifting Crew |
| | | | | Ensure all equipment is in good working order prior to all lifts being performed | 3 | Lifting Crew |
| | | | | Position hook/lifting assembly over load to prevent load swinging on take off | 2 | Lifting Crew |
| | | Rigging equipment failure | 22 | Ensure equipment is inspected before use, tagged and in date | 3 | Rigger |
| | | | | Rigger to ensure attachments points are adequate for job | 3 | Rigger |

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| | | | | Ensure the weight of the load does not exceed the Safe Work Load (SWL) of the lifting jib | 1 | Operator |
| 10.3 | Unslung Member | Uncontrolled load movement | 24 | Ensure load is secure and stable prior to unslunging load | 3 | Lifting Crew |
| 11 | Jointing of Polypropylene storm drainage pipe | | | | | |
| 11.1 | Clean the pipe socket and spigot grooves, making sure both are free of soil and foreign material. | System failure from incorrect fitment | 18 | Ensure all surfaces are free of soil and foreign material | 1 | Installer |
| 11.2 | Clean the rubber ring seal and ensure the ring is free from any soil and foreign matter. Install the rubber ring by stretching it over the spigot in the second trough from the end of the pipe. | System failure from incorrect fitment | 18 | Ensure the rubber ring sits evenly inside the trough by running your hands and fingers around its full circumference. | 1 | Installer |
| 11.3 | Apply pipe jointing lubricant liberally to the inside of the socket and lead-in flare | Skin irritation | 7 | Refer to manufacturers Safety Data Sheet (SDS) prior to commencement | 1 | All |
| 11.4 | Insert the leading edge of the spigot into the socket mouth. | System failure from incorrect fitment | 18 | It is essential that pipes are aligned in a straight line before attempting to make the joint. | 1 | Installer |
| 11.5 | Push the pipes together applying force evenly on a timber-bridging piece protecting the end of the pipe using a crowbar. | Muscle strain - musculoskeletal disorders | 13 | Stand firmly in braced position before exerting force | 5 | Installer |
| | | Pinch point injury | 14 | Ensure hands are well clear | 2 | Installer |
| 12 | Back Fill trench using excavator with sand and rubble | | | | | |
| 12.1 | Boarding the machine | Falling from Ladder | 23 | Ensure 3 points of contact | 3 | All |
| 12.2 | Operating / traveling with or without a load | Injury to people, damage to product or equipment from running into or over | 13 | Only trained and authorised employees may operate this equipment | 3 | All |
| | | Thrown out of cab or against cab interior | 13 | Always wear seatbelt | 1 | Plat Operator |
| | | Personal Injury | 20 | Allow no one to ride outside of the cab | 1 | Plant Operator |
| | | | | Never use the basket or other attachments as a staging platform for workers | 1 | Plant Operator |
| | | Tipping over | 19 | Be alert for trenches, open cuts, sump holes and pits | 2 | Driver |
| | | | | Keep the machine as level as possible when operating | 3 | Operator |
| Electrocution | 25 | Always check for overhead power lines | 1 | Driver | | |
| 12.3 | Fill the trench | Running over someone | 15 | Be aware of everyone's location in the work area | 5 | Plant Operator |
| | | | | Stop work immediately if the exclusion zone has been breached | 5 | Plant Operator |

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| | | Crushing | 23 | Check for services (tap stands, stormwater pipes etc) | 1 | All |
| | | | | Ensure rocks and sharp objects are not in contact with pipes | 2 | Plant Operator |
| | | Digging up underground services | 18 | Ensure warning tape is placed in the trench when it is halfway back filled | 2 | Plant Operator |
| 12.4 | Backing up | Reversing/ Running over people and equipment and not very good visual | 22 | Make sure that your back up alarm is working | 5 | Driver |
| 13 | Compact area using a gasoline powered leg rammer | | | | | |
| 13.1 | Carry the machine to the work area | Muscle strain - musculoskeletal disorders | 13 | Ensure correct manual handling procedures | 3 | Installer |
| | | | | Ensure adequate personnel is utilised to distribute the load | 3 | All |
| 13.2 | Perform prestart inspection | Faulty equipment machine failure | 14 | Check for dents, cracks and faulty welds | 3 | Operator |
| | | | | Check and top up fuel levels | 1 | Operator |
| | | | | Check all hoses for cracks and leaks | 1 | Operator |
| | | | | Check for leaking Fluids | 1 | Operator |
| | | | | Check oil levels | 1 | Operator |
| | | | | Do not operate unit that has faulty parts or equipment. If a problem is found, contact supervisor to initiate repairs of any damage or abnormalities | 2 | Operator |
| 13.3 | Start the machine | Inhalation of toxic and noxious fumes | 25 | Ensure adequate ventilation | 1 | All |
| | | | | Never start the machine indoors. Exhaust fumes can be dangerous if inhaled. | 1 | Operator |
| | | Damage to machinery and personal injury from incorrect operation | 21 | The operator must have received instruction and training in the safe operation of the equipment | 1 | Operator |
| | | Hearing damage | 18 | Use correct PPE - Ear Muffs / Ear Plugs | 2 | Operator |
| 13.4 | Operate the machine | Runaway machinery | 13 | Do not let go of the handle | 1 | Operator |
| | | Striking foot | 8 | Wear safety boots | 1 | All |
| | | Vibration | 13 | Do not exceed the maximum hours of daily exposure as per the manufacturers recommendations | 1 | Operator |
| 14 | Monitoring and review of JHA | | | | | |
| 14.1 | Monitor the JHA | Ineffective JHA | 13 | Review the JHA at a minimum of 3 monthly intervals | 2 | Supervisor |
| | | | | Monitor and complete an inspection of a minimum of 2 task observations | 3 | Supervisor |

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| | | JHA Failure | 18 | Stop Work | 1 | All |
| | | | | In conjunction with workers and all involved, review and formulate a new JHA | 1 | Supervisor |
| | | | | Implement new controls | 1 | All |
| | | | | Conduct a toolbox meeting with all personnel involved with work activity | 1 | Supervisor |

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| | | | | | | |

| Personal Qualifications and Experience Required To Carry Out the Works: | Duties and Responsibilities of Personnel Completing the Task: | Formal or Specialized Training or Licenses Required to Complete Work or Operate Specific Plant or Equipment: |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Plant Operator | Maintain adequate house-keeping on site | Commercial Drivers License |
| The ability to work unsupervised and part of a team | Reporting of any injuries / incidents to your Project Supervisor | Training and Competency in the Safe Operating Procedure of the selected power tools |
| Plumber | Take reasonable care for your own health and safety | Heavy Equipment Training |
| | Take reasonable care for the health and safety of others | |
| | Comply with any reasonable instruction by the employer | |
| | Cooperate with any reasonable policies and procedures of the employer | |
| | Operate safely and perform daily pre-shift inspections | |
| | Adherence to company's and the site's OSH policies and procedures | |

JHA Sign Off – Your signature below indicates that you have been consulted in development of the JHA and accept and will implement the requirements of the JHA and control measures

| No. | Name | Classification | Employed By | Signature | Date |
|-----|---------------|-------------------|---------------------------|-----------|------|
| 1 | Ben Workin | Journeyman | Sample Co Ltd | | |
| 2 | Dirt Dog | Plant Operator | Sample Co Ltd | | |
| 3 | Will Shoveler | Laborer | Sample Co Ltd | | |
| 4 | De Plumador | Plumber | Go with the Flow Plumbing | | |
| 5 | Humpty Dumpty | Dump Truck Driver | Dumper Of The Day LLC | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |

Reference and Detail Applicable Sections of:

- Legislation
 Codes Of Practice
 Project WHS
 Site WHS
 Manufacturer Or Supplier Recommendations

ANSI/ASSP A10.12-1998 Safety Requirements For Excavation

ASTM D2321 Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications

Code of Federal Regulations (CFR): 1926 For Construction Subpart C - General Safety and Health Provisions

Occupational Safety and Health Regulation under the US Occupational Safety and Health Act of 1970

| Plant and Equipment to be used for task: | Plant, Equipment and Area Safety Inspections: |
|-------------------------------------------------|------------------------------------------------------|
| Warning signs and bunting as required | Excavator Pre Operational Checks |
| Excavator | Gasoline Powered Tools Pre- Operational Checks |
| Ladder | Hand Tools Pre Operation Check |
| Shovel and Rake | Hand Tools Pre- Operational Checks |
| Rigging slings and chains | Rigging slings and chains Pre Operational checks |
| Hand Tools | |
| Tip Truck/ Dump Truck | |
| Gasoline powered Leg Rammer | |



Eye Protection



Gloves



Hard Hats



Hearing Protection



Hi Visibility Vests or Clothing



Safety Boots

FREQUENCY

RISK MATRIX

| | | | | | |
|----------------|----------------|---------------|---------------|----------------|---------------|
| Almost certain | MODERATE 11 | HIGH 16 | EXTREME 20 | EXTREME 23 | EXTREME 25 |
| Likely | MODERATE 7 | HIGH 12 | HIGH 17 | EXTREME 21 | EXTREME 24 |
| Occasionally | LOW 4 | MODERATE 8 | HIGH 13 | HIGH 18 | EXTREME 22 |
| Unlikely | LOW 2 | LOW 5 | MODERATE 9 | HIGH 14 | HIGH 19 |
| Rare | LOW 1 | LOW 3 | LOW 6 | MODERATE 10 | HIGH 15 |

| CONSEQUENCE | | | | | |
|---------------|-------|------------|----------|----------|-------------|
| Safety | Minor | Medical | LTI | PTD | Fatality |
| Environmental | Minor | Negligible | Marginal | Critical | Catastrophe |
| | Low | Moderate | High | Extreme | |

Acronyms and Abbreviations:

- LTI - Lost Time Injury
- PPE - Personal Protection Equipment
- PTD - Permanent and Total Disability