Drilling – Site Specific Method Statement Loch Oich	JOB No:	6702	NICOL OF SKENE LTD
Customer: Scottish and Southern Energy	Doc Rev:		

Notes:

- **Any changes in working methods, conditions or additional risks identified whilst work is in Progress shall be brought to the attention of the Drilling Manager.**
- **The Drilling Manager shall discuss the new conditions with the Customer.**
- **This Job Specific Method Statement shall be amended as necessary, reissued and the new conditions and instructions communicated to the Drilling Team through a Tool Box Talk.**

1.0	Location:	Aberchalder Swing Bridge, Invergarry, Highland, PH35 4HN
2.0	Start Date:	To be confirmed by SSE.
2.0	Drilling Team:	DRILLING MANAGER: Gordon Ellis DRILLING SUPERVISOR: TBC DRILLING RIG OPERATOR: TBC
3.0	Client Contacts:	TBC
4.0	Description of Work:	There are 2 number drills to be carried out; 1 drill under the A82 road and the other under Loch Oich. Each drill will consist of 1no 160mm Ø black HPPE SDR11 pipe. The drill under the A82 road will be approximately 75 metres long and the drill under Loch Oich will be approximately 100 metres long.
5.0	Plant & Equipment:	Ditchwitch 60AT Drilling Rig 6 Wheeled Rigid unit c/w 3 axle trailer Articulated Low Loader 180° Wheeled Excavator 360° Tracked Excavator Tractor and Trailer c/w Sludger Vacuum Tanker
6.0	PPE:	PPE shall be utilised alongside existing or devised control measures to further reduce risks as given in the Risk and COSHH assessments. PPE shall be regularly checked and replaced as necessary. In addition, there is a legal requirement under the New Roads and Street Works Act for all personnel working adjacent to the highway to wear Hi-Viz to BS EN 471 Class 2 as a minimum. **NICOL OF SKENE LTD minimum PPE requirements:** HARD HAT SAFETY BOOTS HI-VIZ VEST GLOVES SAFETY GLASSES **Life jackets must be worn within a 10m radius of the river and a lifebuoy c/w 30m of floating line to be erected either side of the river.**
7.0	Emergency Procedures:	In event of any emergency, the Emergency Procedures of NICOL OF SKENE LTD shall be followed. All operations shall cease immediately and all plant shall be shut down so as avoid further problems, injury or damage. **SSE's 30 minute reporting procedure** states that any accident/emergency situations must be reported to the SSE representative within 30 minutes. Nearest A&E department: **Belford Hospital, Belford Road, Fort William, PH33 6BS, 01397 702481** Accident Procedure: **HS-F-12 Serious Accident/Illness** Fire Procedure: **HS-F-15 Outbreak of Fire**

8.0	Environmental:	Mud and Exit Pits to be of sufficient size to hold excess amount of Water/Drilling Fluid to prevent run off. Size of pits will initially be approximately 2x2x1.5 metres; however, **NICOL OF SKENE LTD** will assess the size of the job and ground conditions which may result in the size of the pits being increased. **No entry is required into these pits and they will be securely fenced off.** Drilling Fluids and Waste shall not be allowed to get into watercourses. Drip Trays and Spill Kits shall be provided to prevent contamination of ground and watercourses. Only routes designated by the CUSTOMER shall be used for site and work access.
9.0	Method of Communication:	Primary source of communication is by mobile phone. Richard Stott [redacted] Gordon Ellis Allan Grant Gordon Martin
10.0	Welfare:	**SSE** will provide welfare complete with canteen, toilet and drying room facilities.
11.0	Permits:	**ALL PERSONNEL TO RECEIVE A SITE INDUCTION PRIOR TO WORKS STARTING** **A PERMIT TO BREAK GROUND MUST BE OBTAINED FROM THE SITE MANAGER PRIOR TO WORKS STARTING**
12.0	Sequence of Works:	1. **NICOL OF SKENE LTD** will carry out a site survey of the proposed drill and produce a "Bore Plan". The site survey information and "Bore Plan" will be included within the Work Pack and available on site. 2. **SSE** will provide an area for setting up a secure compound. The ground should be firm and stable, suitable for offloading plant and materials. The size of the compound will be agreed with **NICOL OF SKENE LTD.** 3. **NICOL OF SKENE LTD** will unload all plant and materials within the agreed compound. 4. **SSE** will provide drawings of all existing services within the vicinity of the works. The exact location and depth of all services will be provided to **NICOL OF SKENE LTD.** 5. The coil of 160mm Ø Black HPPE SDR 11 pipe will be strung out on the ground ready for pulling in. See **HS-W 35 HANDLING COILED PIPE** 6. The drilling rig will be tracked into position on the west side of the canal as per "Bore Plan / Design" ready for starting the drill. 7. A mud pit will be excavated close to the HDD entry point. The sidewalls of the mud pit are built up with the as dug material to form a bund around the mud pit. The pit will initially be approximately 2x2x1.5 metres. The level of the mud will be monitored during the drill operation and if required, the size of the pit will be increased. **NO ENTRY IS REQUIRED & PIT WILL BE SECURELY FENCED OFF** See **E-MS/RA 01 IDENTIFICATION OF SERVICES** and **G-MS/RA 17 EXCAVATION WORK ONLY** 8. The drilling operation begins by drilling a pilot hole from the Launch Pit/Area using the Drill Head and pressure injection of drilling fluid. The drilling is carried out continuously by the progressive addition of lengths of Drill Pipe. 9. During the drilling of the pilot hole the exact location is monitored by an Electronic Tracker which provides real-time information of location and depth. This information is recorded and used to produce an as-built drawing of the drill, which will include information on cover to/from existing utilities.

		10. The pilot hole drill will be stopped just prior to reaching the exit area. This is to allow the excavation of the exit pit to be carried out. The exit pit will be constructed in a similar fashion to the mud pit as mentioned in section 8 above. Once complete, the pilot hole drill will then be completed into the exit pit and up onto ground level. **NO ENTRY IS REQUIRED & PIT WILL BE SECURELY FENCED OFF** See **E-MS/RA 01 IDENTIFICATION OF SERVICES** and **G-MS/RA 17 EXCAVATION WORK ONLY** 11. When the bore is completed the Drill Head is removed, a reamer is attached to the Drill string and reaming of the bore commences, using bigger and bigger reamers, until the bore reaches the required diameter. The hardness of the ground will determine the size of the reamers to be used for successive passes. 12. Drilling Fluid is pumped under pressure through the Drill string to lubricate the reamer and remove cuttings during the enlargement of the bore. 13. When the bore hole has been reamed out to the required diameter, the back reamer is sent back down the bore one or two more times. This is to ensure that the bore hole is clear of any large debris and that the drilling mud in the bore hole is well mixed. The bore hole is now prepared for the Sleeve/Pipe to be pulled. 14. The Pulling Head is connected to the Drill String using a certified shackle and swivel. The swivel prevents the pipe from rotating during the process. The Sleeve/Pipe is connected to the back reamer and is then pulled through the bore hole. See **G-MS/RA 18 DIRECTIONAL DRILLING** **In the event that any part of the Drilling Operation is unsuccessful the work will be stopped and the problem discussed with SSE. It may be necessary to select an alternative route.**
13.0	**Drilling Fluids (General):**	1. During drilling of the hole, the drilling fluid lubricates the drill string, removes solids from the bore hole, and cools the drill bit downhole instruments. 2. The drilling fluid system design will be based on expected ground conditions, as determined by the Site Survey and Assessment and adjusted as required throughout the drilling operations. 3. In Horizontal Directional Drilling one of the primary functions of drilling mud is that it provides a very good 'filter cake'. This means that, due to the flat clay platelets and the minute size of the particles, the drilling mud soaks into the permeable and porous drilled bore hole walls, and provides a seal. 4. Mud viscosity will be varied according to the prevailing conditions and monitoring will be an ongoing operation. It is envisaged that a viscosity of 50-70sec will be maintained. Mud pump volumes and pressures will vary according to conditions and the nozzle sizes used in the tools.
14.0	**Drilling Fluids (Disposal):**	1. During the drilling of the holes, cuttings will be produced. The cuttings will be carried back along the drilled path by the drilling fluids to the mud pit. 2. The level of drilling fluid in the mud pit is monitored at all times during drilling operations. 3. The removal of all waste drilling fluid shall be carried out during the work and on completion of the HDD operation.
15.0	**Drilling Fluids (Loss of Circulation) :**	**If mud circulation is lost as drilling progresses, operations shall cease immediately.** 1. An inspection of the drilling line will be carried out so as to determine if the fluid loss is to the surface, or being lost downhole into the surrounding formation. 2. If the fluid loss is to the surface, then the drilling rods will be withdrawn from the hole to a position where "mud returns" are regained to the rig site. 3. The running back in of the drill rods not only reconditions the drilled hole but also allows time for the surface fracture to self-seal.

		4. When the hole has been reconditioned, re-running the Drill String can help to seal the fracture. New cuttings will build up and "pack off" the fracture to the surface. 5. Loss of fluid to the surface shall be minimised. Any loss shall be controlled and contained. 6. If there is fluid loss to the surrounding formation, sealing and recovery of circulation as noted above shall be implemented. 7. Maintaining 100% mud returns cannot be guaranteed in longer crossings where formations are predominantly sand and silts. The loss of the drilling fluid to the surrounding formation requires close attention to drilling parameters downhole, such as drill string torque and push/pull characteristics.

Job Specific Safe System of Work Prepared by:					
Name:	Charlie Michie	Signature:	[redacted]	Date:	10/12/2015

Accident / Incident Reporting Instructions

Notes	1.0	All Accidents / Incidents MUST be reported immediately by SITE SUPERVISORS to the NICOL Head Office	See **EMERGENCY ACTION CARDS** for Telephone Numbers.
	2.0	DEATHS, MAJOR INJURIES and INCIDENTS defined below MUST be reported immediately by telephone to the HSE Incident Contact Centre [ICC] by the most Senior Manager at the NICOL Head Office – see procedure HS-P-04 for more details.	HSE ICC Tel: **0845 300 9923**
	3.0	All other Accidents / Incidents shall be reported to HSE "online via the HSE website – www.riddor.gov.uk using the "on-line" forms appropriate to the event. – see procedure HS-P-04 for more details.	ACTION BY: COMMERCIAL DIRECTOR
	4.0	"Safety Scotland" and the H&S Advisor shall also be notified.	ACTION BY: COMMERCIAL DIRECTOR

Reportable Events

DEATHS – All deaths arising out of or in connection with work [to be reported to HSE by Telephone]

MAJOR INJURIES [to be reported to HSE by telephone – see above]

- **Fracture** – other than to fingers, thumbs or toes. NOTE: Bone fractures include a break, crack or chip. They are reportable when diagnosed or confirmed by a doctor, including when they are specified on a GP 'fit note'.
- Amputation of a limb
- Dislocation of the Shoulder, Hip, Knee or Spine.
- Loss of sight – Temporary or permanent.
- Any penetrating, chemical or hot metal burn to the eye.
- Any Injury from any source leading to unconsciousness or admittance to hospital for more than 24 hours

OVER SEVEN DAY INJURIES [to be reported to HSE "on-line"]

Any type or level of injury which results in incapacity for work for more than SEVEN consecutive days, (not counting the day of the accident but including weekends and rest days)

DANGEROUS OCCURRENCES [to be reported to HSE "on-line"]

– DO NOT REPORT THESE if an Injury resulting from such an event is being reported.

- Collapse of any excavation greater than I metre deep.
- Overturning of any major item of construction equipment
- Construction equipment making contact with overhead power lines.

DISEASES [to be reported to HSE "on-line"]

–notified to the Company by a Medical Practitioner [GP] on a Medical Cert, for example.

- Hand-Arm Vibration Syndrome [HAVS] resulting from use of Vibrating Equipment.
- Leptospirosis or Lyme Disease resulting from work in places which may be infested by rats, ticks etc.
- Skin Cancer resulting from exposure to tar, pitch, mineral oil or other chemical substances.
- Dermatitis resulting from exposure to cement or concrete.
- Any Disease or Medical Condition, notified to the Company by a Medical Practitioner, which may have resulted from work being undertaken by the Company.

SITE	SERIOUS ACCIDENT or ILLNESS	NICOL OF SKENE LTD

ACTION BY:	ACTION TO BE TAKEN
Person finding the casualty	1. Shout for assistance including First Aid Isolate any hazardous equipment (if possible) 2. Alert NICOL Job Supervisor. 3. Stay with injured person - Provide reassurance 4. DO NOT MOVE PERSON – except to move out of danger
NICOL Job Supervisor	1. Call – 999 - Ask for "Ambulance" Provide the following information: • Location of Site and Casualty • Site or Mobile Telephone Number • Your name • Name of Casualty • Nature of injury or condition. 2. Send a person to the main road to direct ambulance 3. Call NICOL office - 01224 744473 Give details of Accident or Illness If outside normal working hours call: ▪ Derek Nicol [redacted] ▪ Richard Stott [redacted] ▪ Neil Watson [redacted]
First Aider	1. Administer First Aid 2. Assist Ambulance Crew on arrival
MD/Ops Dir or most Senior Manager in the office.	Contact and Advise Next of Kin of situation.

SITE OUTBREAK OF FIRE

ACTION BY:	ACTION TO BE TAKEN
Person discovering the fire	1. Shout FIRE, FIRE, FIRE! 2. Use a Fire Extinguisher 3. Leave any building by the nearest Fire Exit 4. Alert NICOL Job Supervisor
NICOL Job Supervisor	1. Call - 999 – FIRE and AMBULANCE [if necessary] 2. Send a person to site entrance to direct services to location. 3. Go to Assembly Point – Call "roll" – note people not present and likely locations. 4. DO NOT ALLOW PEOPLE TO RE-ENTER ANY BUILDINGS. 5. Call NICOL office - 01224 744473 - give details of emergency. If outside normal working hours call: ▪ Derek Nicol [redacted] ▪ Richard Stott [redacted] ▪ Neil Watson [redacted]
All Personnel	1. Immobilise any equipment you are using. Close any windows and doors Leave buildings by the nearest Fire Exits. Do not delay by collecting personal possessions. 2. Give assistance if requested by NICOL Job Supervisor 3. Proceed to the Assembly Point – Stand quietly

KNOW WHERE YOUR NEAREST FIRE EXIT AND ASSEMBLY POINT ARE LOCATED

ENVIRONMENTAL PRECAUTIONS

HAZARD:	ACTION TO BE TAKEN
SPILLAGE OF NOXIOUS MATERIALS	1. Avoid spillage to ground by use of funnels or drip trays. 2. Clear up any spilt materials and dispose to approved waste tip in closed containers.
PUMPING OUT DIRTY WATER FROM WORK SITES.	1. Use "Sedimats" when disposing into foul water drains 2. DO NOT dispose into Watercourses.
WORKING NEAR WATERCOURSES	USE SAFE WORK INSTRUCTION HS-W-24 ▪ SEPA Emergency Hotline number 0800 80 70 60 ▪ Spills directly into a watercourse of any quantity of oil, chemical or herbicide must be immediately reported to SEPA on the above Hotline. ▪ In the event of a significant quantity of any oil, chemical or herbicide being spilled adjacent to a watercourse it must be contained using sand soil or other absorbents and the "Scottish Environmental Protection Agency" - SEPA notified immediately on the above Hotline.
ANY ENVIRONMENTAL INCIDENT	Call NICOL office - 01224 744473 Give details of ENVIRONMENTAL INCIDENT If outside normal working hours call: ▪ Derek Nicol [redacted] ▪ Richard Stott ▪ Neil Watson

MS & RISK ASSESSMENT RECORD	Ref. No. E-MS/RA E-01 Rev: 01	NICOL OF SKENE LTD

WORK ACTIVITY : IDENTIFICATION OF SERVICES	E-MS/RA CARRIED OUT BY: R Stott / T Baker	DATE: 12.12.14
CHECKLISTS USED: ----------	E-MS/RA APPROVED BY: D Nicol	DATE: 12.12.14

LIKELIHOOD = LH	
CAREGORY	DEFINITION
LOW = L	UNLIKELY
MED = M	POSSIBLE
HIGH = H	VERY LIKELY

SEVERITY OF INJURY OR DAMAGE = S			
CATEGORY	PEOPLE	ASSETS	ENVIRONMENT
LOW = L	NO INJURY	NO DAMAGE	NO DAMAGE
MED = M	FIRST AID NEEDED	MINOR DAMAGE	MINOR DAMAGE
HIGH = H	LTA INJURY	MAJOR DAMAGE	MAJOR DAMAGE

Key: O = Operator, P = Passers By, W = People Anywhere, E = Environment, A = Assets

RANKING				
SEVERITY	H	T	U	U
	M	A	T	U
	L	A	A	T
		L	M	H
		LIKELIHOOD		

U = UNACCEPTABLE
T = TOLERABLE
A= ACCEPTABLE

NOTE: All tasks are carried out using competent people and suitable equipment and within the requirements of "Safe Work Instructions" – HS-W-01, Advice to Supervisors; HS-W-02, Supervisors Work Area Checklist; HS-W-03, Responsibilities for H&S, HS-W-04, Good Housekeeping.

TASK	HAZARD DESCRIPTION [Something with the potential to cause harm when carrying out the task	POSSIBLE INJURY OR DAMAGE	RISK ANALYSIS				DESCRIPTION OF PREVENTIVE/PROTECTIVE MEASURES INCLUDING COSHH REF.	RESIDUAL RISK			
			WHO / WHAT AT RISK O.P.W.E.A	LH	S	RANK FROM TABLE		LH	S	RANK FROM TABLE	ACCEPT Y / N
Set up Site and offload equipment.	Manually handling overweight equipment and materials.	Back and other injuries	O	H	M	U	Provide lifting equipment. Use SWI – Manual Handling, HS-W-08	L	M	A	Y
	Pedestrians and Traffic entering the work area during the work.	Injury to people and damage to assets	O, P, A	H	H	U	Main contractor to provide security fencing and safe walkways	L	H	T	Y
Identify Overhead Powerlines in the vicinity of the work.	Work equipment making contact with Powerlines.	Serious injury to people and damage to assets	O, A	M	H	U	Ensure segregation of Work Equipment from Powerlines by use of Barriers and "Goalposts" – see Method Statement – HS-MS-01	L	H	T	Y
Identify / Check for underground services	Work equipment making contact with underground services	Serious injury to people and damage to assets	O, A	M	H	U	Ensure that you are provided with plans of any known underground services	L	H	T	Y
							Use a cable detector to trace electricity cables and metal pipes	L	H	T	Y
							Mark the positions of all cables and pipes using paint	L	H	T	Y
							Look for signs of service connection cables or pipes to buildings	L	H	T	Y
							Hand dig trial holes (as may be necessary) to confirm the position of services in the area of your works	L	H	T	Y

MS & RISK ASSESSMENT RECORD	Ref. No. G-MS/RA 17 Rev: 05 [OCT 2015]	NICOL OF SKENE LTD

WORK ACTIVITY : EXCAVATION WORKS ONLY	G-MS/RA CARRIED OUT BY: T Baker	DATE: 20.10.2015
CHECKLISTS USED: ----------	G-MS/RA APPROVED BY: R Stott	DATE: 20.10.2015

LIKELIHOOD = LH	
CAREGORY	DEFINITION
LOW = L	UNLIKELY
MED = M	POSSIBLE
HIGH = H	VERY LIKELY

SEVERITY OF INJURY OR DAMAGE = S			
CATEGORY	PEOPLE	ASSETS	ENVIRONMENT
LOW = L	NO INJURY	NO DAMAGE	NO DAMAGE
MED = M	FIRST AID NEEDED	MINOR DAMAGE	MINOR DAMAGE
HIGH = H	LTA INJURY	MAJOR DAMAGE	MAJOR DAMAGE

Key: O = Operator, P = Passers By, W = People Anywhere, E = Environment, A = Assets

RANKING				
SEVERITY	H	T	U	U
	M	A	T	U
	L	A	A	T
		L	M	H
		LIKELIHOOD		

U = UNACCEPTABLE
T = TOLERABLE
A= ACCEPTABLE

NOTE: All tasks are carried out using competent people and suitable equipment and within the requirements of "Safe Work Instructions" – HS-W-01, Advice to Supervisors; HS-W-02, Supervisors Work Area Checklist; HS-W-03, Responsibilities for H&S, HS-W-04, Good Housekeeping.

TASK	HAZARD DESCRIPTION [Something with the potential to cause harm when carrying out the task	POSSIBLE INJURY OR DAMAGE	RISK ANALYSIS				DESCRIPTION OF PREVENTIVE/PROTECTIVE MEASURES INCLUDING COSHH REF.	RESIDUAL RISK			
			WHO / WHAT AT RISK O.P.W.E.A	LH	S	RANK FROM TABLE		LH	S	RANK FROM TABLE	ACCEPT Y / N
Set up Site and offload equipment.	Manually handling overweight equipment and materials.	Back and other injuries	O	H	M	U	Provide lifting equipment. Use SWI – Manual Handling, HS-W-08	L	M	A	Y
	Pedestrians and Traffic entering the working area during the whole of the work.	Injury to people and damage to assets	O, P, A	H	H	U	Provide security fencing and Traffic Management - use G-MS/RA 10	L	H	T	Y
Identify Overhead Powerlines in the vicinity of the work.	Work equipment making contact with Powerlines.	Serious injury to people and damage to assets	O, A	M	H	U	Ensure segregation of Work Equipment from Powerlines by use of Barriers and "Goalposts" – see Method Statement – HS-MS-01	L	H	T	Y
Set out for excavation work	Survey Equipment making contact with overhead Cables/Powerlines.	Serious Injury	O, A	L	H	T	Use SWI – "Overhead Lines – Working Close-By" – HS-W-28	L	H	T	Y
Check for underground services in area of excavation	See E-MS/RA E-01 IDENTIFICATION OF SERVICES	-------	--	--	--	--	----------	--	-	--	--

MS & RISK ASSESSMENT RECORD	Ref. No. G-MS/RA 17 Rev: 05 [OCT 2015]	NICOL OF SKENE LTD

TASK	HAZARD DESCRIPTION [Something with the potential to cause harm when carrying out the task	POSSIBLE INJURY OR DAMAGE	RISK ANALYSIS				DESCRIPTION OF PREVENTIVE/PROTECTIVE MEASURES INCLUDING COSHH REF.	RESIDUAL RISK			
			WHO / WHAT AT RISK O.P.W.E.A	LH	S	RANK FROM TABLE		LH	S	RANK FROM TABLE	ACCEPT Y / N
Excavate to level	Making Contact with Utilities Cables or Pipes	Serious injury	O, P, E, A	H	H	U	Apply "STRIKES" SWI HS-W-37 and Action Card HS-F-39.	L	H	T	Y
	Mechanical Excavators and Dumper Trucks making contact with people in the work area.	Serious injury	O, P	H	H	U	Apply "Dumper" SWI, HS-W-17. Apply "Mechanical Excavators", HS-W-22	L	H	T	Y
	Collapse of trench sides trapping people and equipment	Serious injury	O, P, A	H	H	U	Ensure that trench sides are battered to no more than 40^0 or less if the materials slide at this angle. NOTE – Where there is not sufficient space to have sloping sides to excavations then shoring of sides using close boarding or boxes must be installed.	L	H	T	Y
							Ensure that spoil from excavation is removed to at least 1.0m from edge of excavation.	L	H	T	Y
	People falling into unguarded excavation.	Serious injury	O, P	H	H	U	Erect fence and/or warning tape around excavation area.	L	H	T	Y
Clear equipment and materials from site.	Manual Handling overweight materials	Back and other injuries	O	M	H	U	Apply "Manual Handling" SWI, HS-W-08	L	L	A	Y

MS & RISK ASSESSMENT RECORD	Ref. No. G-MS/RA 18 Rev: 07 [JULY 15]	NICOL OF SKENE LTD

WORK ACTIVITY : DIRECTIONAL DRILLING	G-MS/RA CARRIED OUT BY: T Baker [redacted]	DATE: 08.07.2015
CHECKLISTS USED: ----------	G-MS/RA APPROVED BY: R Stott	DATE: 08.07.2015

LIKELIHOOD = LH	
CAREGORY	DEFINITION
LOW = L	UNLIKELY
MED = M	POSSIBLE
HIGH = H	VERY LIKELY

SEVERITY OF INJURY OR DAMAGE = S			
CATEGORY	PEOPLE	ASSETS	ENVIRONMENT
LOW = L	NO INJURY	NO DAMAGE	NO DAMAGE
MED = M	FIRST AID NEEDED	MINOR DAMAGE	MINOR DAMAGE
HIGH = H	LTA INJURY	MAJOR DAMAGE	MAJOR DAMAGE

Key: O = Operator, P = Passers By, W = People Anywhere, E = Environment, A = Assets

RANKING				
SEVERITY	H	T	U	U
	M	A	T	U
	L	A	A	T
		L	M	H
		LIKELIHOOD		

U = UNACCEPTABLE
T = TOLERABLE
A= ACCEPTABLE

NOTES:

1. All tasks are carried out using competent people and suitable equipment and within the requirements of "Safe Work Instructions" – HS-W-01, Advice to Supervisors; HS-W-02, Supervisors Work Area Checklist; HS-W-03, Responsibilities for H&S, HS-W-04, Good Housekeeping.
2. During Drilling of Boreholes and Pulling in the Pipes, Staff at both ends of the work shall be in contact using "Two-Way" Radios.

TASK	HAZARD DESCRIPTION [Something with the potential to cause harm when carrying out the task]	POSSIBLE INJURY OR DAMAGE	RISK ANALYSIS				DESCRIPTION OF PREVENTIVE/PROTECTIVE MEASURES INCLUDING COSHH REF.	RESIDUAL RISK			
			WHO / WHAT AT RISK O.P.W.E.A	LH	S	RANK FROM TABLE		LH	S	RANK FROM TABLE	ACCEPT Y / N
Set up Site and offload equipment including unloading Directional Drilling Equipment [DDE] from specialised HGV.	Manually handling overweight equipment and materials.	Back and other injuries	O	H	M	U	Provide lifting equipment. Use SWI – Manual Handling, HS-W-08	L	M	A	Y
	Pedestrians and Traffic entering the working area during the whole of the work.	Injury to people and damage to assets	O, P, A	H	H	U	Provide fencing and Traffic Management - use G-MS/RA 10	L	H	T	Y
Identify Overhead Powerlines in the vicinity of the work.	Work equipment making contact with Powerlines.	Serious injury to people and damage to assets.	O, A	M	H	U	Ensure segregation of Work Equipment from Powerlines by use of Barriers and "Goalposts" – see Method Statement – HS-MS-01	L	H	T	Y
Set out for excavation of Launch and Reception Pits.	Survey Equipment making contact with overhead Cables/Powerlines.	Serious Injury.	O, A	L	H	T	Use SWI – "Overhead Lines – Working Close-By" – HS-W-28	L	H	T	Y

TASK	HAZARD DESCRIPTION [Something with the potential to cause harm when carrying out the task]	POSSIBLE INJURY OR DAMAGE	RISK ANALYSIS				DESCRIPTION OF PREVENTIVE/PROTECTIVE MEASURES INCLUDING COSHH REF.	RESIDUAL RISK			
			WHO / WHAT AT RISK O.P.W.E.A	LH	S	RANK FROM TABLE		LH	S	RANK FROM TABLE	ACCEPT Y / N
Check for underground services in areas of excavation	Unidentified services such as gas and electricity can be hazardous to excavation and boring works.	Injury to people and damage to assets.	O, P, A	H	H	U	Check with C.A.T the areas to be excavated for the Launch and Reception Pits and the full length of the Bore Path. NOTE: If any pipes or services are found within 2 Metres of the back face of the planned Reception Pit then a braced steel plate shall be installed across the back of the Pit extending in depth to 500mm below the pit bottom.	L	H	T	Y
Excavate Mud and Exit Pits to level	Excavators making contact with underground services	Injury to people and damage to assets	O, P, A	H	H	U	Use information from C.A.T survey and hand-dig where necessary.	L	H	T	Y
	Presence of toxic materials and hazardous gases	Loss of Life	O	H	H	U	Use "Confined Space Working" SWI – HS-W-07	L	H	T	Y
	Mechanical Excavators and Dumper Trucks making contact with people in the work area.	Serious injury	O, P	H	H	U	Apply "Dumper" SWI, HS-W-17. Apply "Mechanical Excavators", HS-W-22	L	H	T	Y
	Collapse of trench sides trapping people and equipment	Serious injury	O, P	H	H	U	Ensure that trench sides are battered to no more than 40^0 or less if the materials slide at this angle. NOTE – Where there is not sufficient space to have sloping sides to excavations then shoring of sides using close boarding or boxes must be installed.	L	H	T	Y
							Ensure that spoil from excavation is removed to at least 1.0m from edge of excavation.	L	H	T	Y

MS & RISK ASSESSMENT RECORD	Ref. No. G-MS/RA 18 Rev: 07 [JULY 15]	NICOL OF SKENE LTD

TASK	HAZARD DESCRIPTION [Something with the potential to cause harm when carrying out the task]	POSSIBLE INJURY OR DAMAGE	RISK ANALYSIS				DESCRIPTION OF PREVENTIVE/PROTECTIVE MEASURES INCLUDING COSHH REF.	RESIDUAL RISK			
			WHO / WHAT AT RISK O.P.W.E.A	LH	S	RANK FROM TABLE		LH	S	RANK FROM TABLE	ACCEPT Y / N
Excavate Mud and Exit Pits to level [Continued]	People falling into unguarded excavation.	Serious injury	P	H	H	U	Erect fence and/or warning tape around excavation area.	L	H	T	Y
Locate DDE 1.5 metres behind Launch Area - connect hydraulic hoses - attach Drill Head to first Drill Rod.	Manually handling overweight equipment and materials.	Back and other injuries	O	H	M	U	Provide lifting equipment. Use SWI – Manual Handling, HS-W-08	L	M	A	Y
Drill Pilot Borehole from Launch Area to Exit Pit checking and correcting depth and location every 3.0 metres.	Drill Head making contact with underground services.	Injury to people and damage to assets	O, P, A	H	H	U	Use information from C.A.T survey to ensure that route avoids all underground services.	L	H	T	Y
	Drilling fluids may cause skin damage	Skin damage	O	M	M	T	Apply control measures given in COSHH Assessments HS-CA-35 & 45	L	L	A	Y
Back Ream hole from Exit Pit to Launch Area to suit diameter of pipe to be installed.	Manually handling overweight equipment and materials.	Back and other injuries	O	H	M	U	Provide lifting equipment. Use SWI – Manual Handling, HS-W-08	L	M	A	Y
	Drilling fluids may cause skin damage	Skin damage	O	M	M	T	Apply control measures given in COSHH Assessments HS-CA-35 & 45	L	L	A	Y
Re-run Reamer from Launch Area to Exit Pit to clear Borehole.	Drilling fluids may cause skin damage	Skin damage	O	M	M	T	Apply control measures given in COSHH Assessments HS-CA-35 & 45	L	L	A	Y

MS & RISK ASSESSMENT RECORD	Ref. No. G-MS/RA 18 Rev: 07 [JULY 15]	NICOL OF SKENE LTD

TASK	HAZARD DESCRIPTION [Something with the potential to cause harm when carrying out the task]	POSSIBLE INJURY OR DAMAGE	RISK ANALYSIS				DESCRIPTION OF PREVENTIVE/PROTECTIVE MEASURES INCLUDING COSHH REF.	RESIDUAL RISK			
			WHO / WHAT AT RISK O.P.W.E.A	LH	S	RANK FROM TABLE		LH	S	RANK FROM TABLE	ACCEPT Y / N
Attach Towing Head to Back Reamer and to Pipe - Pull Pipe through Borehole.	Coiled HPPE Pipe may spring open violently when coil binding is cut	Serious injury and damage to assets	P, A	H	H	U	Coiled HPPE Pipe shall be loaded onto purpose built trailers and restrained before binding is cut. [See SWI – HS-W-36]	L	L	A	Y
	Manually handling overweight equipment and materials.	Back and other injuries	O	H	M	U	Provide lifting equipment. Use SWI – Manual Handling, HS-W-08	L	M	A	Y
	Drilling fluids may cause skin damage	Skin damage	O	M	M	T	Apply control measures given in COSHH Assessments HS-CA-35 & 45	L	L	A	Y
Clear DDE, hoses and other equipment from area, reload into specialised HGV and make good ground.	Manually handling overweight equipment and materials.	Back and other injuries	O	H	M	U	Provide lifting equipment. Use SWI – Manual Handling, HS-W-08	L	M	A	Y
	Drilling fluids may cause skin damage	Skin damage	O	M	M	T	Apply control measures given in COSHH Assessments HS-CA-35 & 45	L	L	A	Y

SAFE WORK INSTRUCTION TITLE – WATERCOURSES – AFFECT OF OUR WORK	Doc. Ref: HS-W- 24 Rev 04 Page 1 of 1	NICOL OF SKENE LTD

NOTE:	▪ **SEPA Emergency Hotline number 0800 80 70 60** ▪ **Spills directly into a watercourse of any quantity of oil, chemical or herbicide must be immediately reported to SEPA on the above Hotline.** ▪ **In the event of a significant quantity of any oil, chemical or herbicide being spilled adjacent to a watercourse it must be contained using sand soil or other absorbents and the "Scottish Environmental Protection Agency" - SEPA notified immediately on the above Hotline.**

Item	HAZARDS	ACTIONS
1.	Silt entering watercourses can cause damage to river life and can build up leading to flooding	• Silty water from dewatering excavations, stockpiles, plant and wheel washing and site roads should be disposed of to a foul sewer with the agreement of the sewage undertaker. Alternatively allow sediments from silty water to settle in Sedimentation Tanks before being discharged into watercourses.
2.	Fresh concrete and cement are very alkaline and corrosive and can cause serious pollution to watercourses.	• Batching must be as far away as possible from watercourses. Any "washings" from the plant must be contained and not allowed to enter watercourses. • When placing concrete or using mortar near watercourses ensure that "droppings" or surplus materials do not enter the watercourse.
3.	Oil and Chemicals can cause serious pollution to watercourses.	• Storage must be on an impermeable base with bunds to prevent loss into ground or watercourse of any spilled or leaking materials. • Any spills from refuelling must be cleaned up – a spill kit must be available. • Tanks, drums, valves, "triggers" etc must be locked and all items secured against damage from stealing or vandalism. • Where possible biodegradeable oils shall be used.

SAFE WORK INSTRUCTION TITLE – OVERHEAD LINES – WORKING CLOSE BY	Doc. Ref: HS-W- 28 Rev 04 Page 1 of 1	NICOL OF SKENE LTD

NOTE:	▪ **No work shall be started until the Local Electricity Company has been consulted and measures put in place to safeguard the Overhead Lines and any personnel and equipment which it is intended shall be working in the vicinity of the Overhead Lines.**

Item	HAZARDS	ACTIONS
1.	Equipment making contact with the Overhead Lines when working ALONGSIDE the Overhead Lines.	• Barriers and Warning Notices shall be erected in accordance with HSE Guidance Note GS6 and instructions from the Local Electricity Company.
2.	Equipment making contact with the Overhead Lines when CROSSING UNDER or working under the Overhead Lines.	• Barriers and Warning Notices shall be erected in accordance with HSE Guidance Note GS6 and instructions from the Local Electricity Company.
3.	People carrying or using metal poles, ladders or other conducting objects in the vicinity of Overhead Lines. In particular persons assisting with SURVEY WORK, carrying staffs, ranging rods and other survey equipment are at risk from contact with Overhead Lines.	• Barriers and Warning Notices shall be erected to prevent access to the area alongside and under Overhead Lines in accordance with HSE Guidance Note GS6 and instructions from the Local Electricity Company.

SAFE WORK INSTRUCTION TITLE – HANDLING COILED PIPE	Doc. Ref: HS-W- 35 Rev 05 Page 1 of 1	NICOL OF SKENE LTD

Item	HAZARDS	ACTIONS
1.	**Coiled HPPE or MDPE Pipe** of all diameters – if not constrained – will spring open violently when the binding is cut and cause serious injury to personnel and may damage equipment.	Coiled pipe of any diameter SHALL be loaded onto a purpose built Pipe Trailer and secured BEFORE the binding is CUT and removed. Pipe will be "drawn" off the trailer, laid and cut as required.
2.	**Ductile Iron and Barrier Pipe** which is delivered in up to 6 metre lengths is a Manual Handling hazard which may lead to back and other injuries.	Use purpose designed Lifting Equipment to handle overweight lengths of any type of pipe. [See Manual Handling Safe Work Instruction, HS-W-08.

SAFE WORK INSTRUCTION	Doc. Ref:	
TITLE – UTILITY MANAGEMENT – EXCAVATION WORK	HS-W- 37 Rev 02	
	Page 1 of 1	

Any work involving Excavation of any kind, where there may be any utility services in the ground, shall be carried out using the following instructions in order to minimise the chance of a cable strike.

A "Strike" is defined as making unplanned contact with any utility service.

Item	ACTIONS
1.0	**Before ANY work starts the planned area shall be examined and checked against Utility records.** **Markers, Box Covers and Manhole Lids etc. shall be used to assess the validity and accuracy of Utility Plans, where these exist.** **The resulting information shall be used to assist with CAT Scans on the planned route to identify the location of each utility.**
2.0	**After the CAT Scans are completed sections of the planned area shall be selected for initial Trial Hole excavation by hand.**
3.0	**Surfacing and subbase layer shall be removed mechanically.**
4.0	**A trial hole shall then be hand dug to a depth of no more than 300mm with a width the size of the intended excavation.**
5.0	**If NO utility services are found then the 300mm depth excavation will be repeated until the required depth of excavation is reached.**
6.0	**If NO utility services are found in the trial holes then works can proceed.**
7.0	**If a utility service is discovered during any stage of excavation of the trial holes, it will be dealt with in a safe and competent manner.**
8.0	**Should a utility strike subsequently occur, HS-P-10 Strike Control should be followed and HS-F-40 completed.**

REVIEWED; 14.10.15

Method Statement	**Working in Proximity to Overhead Obstructions**	HS-MS-01 Rev 06

REV.	DATE	DESCRIPTION	AUTHOR	REVIEWED	APPROVED
3	July 2011	Changed to cover **ALL OVERHEAD OBSTRUCTIONS**	T A Baker	R Stott	L Nicol
4	NOV 13	Reviewed for continuing suitability	T A Baker	R Stott	L Nicol
5	NOV 14	Reviewed for continuing suitability	T A [redacted]	[redacted]Stott	D NICOL
6	**OCT 15**	Reviewed for continuing suitability	T A [redacted]	[redacted]Stott	R Stott

NOTE : Text amended in the latest revision is identified by Shading.

1.0 PURPOSE

To ensure that there is a consistent method to ensure that Goal Posts and Barriers are supplied and erected safely so as to provide an effective protection against Machinery and Equipment making accidental contact with **ALL OVERHEAD OBSTRUCTIONS.**

2.0 SCOPE

This Method Statement [MS] applies to the erection of all Goal Posts and Barriers intended as protection for work being carried out in the vicinity of **ALL OVERHEAD OBSTRUCTIONS** – see **TABLE 3 for Layout.**

3.0 EQUIPMENT

3.1 Equipment which is "fit for purpose" shall be provided. **Sites Manager**

3.2 Equipment in use shall be maintained in a "fit for purpose" condition. **Site Supervisor**

4.0 TOOL BOX TALK

4.1 Before the start of any work on the site, in the vicinity of **ALL OVERHEAD OBSTRUCTIONS**, a Tool box Talk shall be carried out and recorded on form HS-F-06. The Tool Box Talk shall include the application of this Method Statement to the work. **Site Supervisor**

5.0 WORK PARALLEL TO ALL OVERHEAD OBSTRUCTIONS - METHOD STATEMENT

Activity	Description of Operation/Activity	Safety Requirement	Action by
5.1	**Provide BARRIERS in accordance with the instructions below.**	Barriers shall be provided if any work is to take place within 30 m of any **OVERHEAD OBSTRUCTION.**	Sites Manager
5.2	**For Power Lines** identify Power line Voltage	Get info from Owner of the Line	Sites Manager
5.3	Lay out 45 gall Drums, or similar, parallel to the line at approx 6 m Centres at a distance from the line in accordance with Table 1.	Drums to be painted RED and WHITE See **Tables 1 & 3** for required distances of Barriers from the line of the **ALL OVERHEAD OBSTRUCTIONS.**	Site Super
5.4	A line of coloured "bunting" approx 3.5 m above ground level shall be strung between posts set in the Drums.		Site Super

6.0	CROSSING UNDER ALL OVERHEAD OBSTRUCTIONS - METHOD STATEMENT		
Activity	**Description of Operation/Activity**	**Safety Requirement**	**Action by**
6.1	**Provide GOAL POSTS in accordance with the instructions below.**	**See Table 3 for Layout**	Sites Manager
6.2	**For Power Lines** identify Power line Voltage.	Get info from Owner of the Line	Sites Manager
6.3	Lay out 2 No. 45 gall Drums at each side and parallel to the **OVERHEAD OBSTRUCTION** at 10m max Centres at a distance from the **OVERHEAD OBSTRUCTION** in accordance with Table 1.	Drums to be painted RED & WHITE **See Table 1** for required distances and **Table 3** for layout.	Site Super
6.4	At each Drum lay out a Pole at right angles to the **OVERHEAD OBSTRUCTION**	Poles shall be of non-conductive material such as timber	Site Super.
6.5	Cross Poles shall be fastened to each pair of Poles so as to form a Goal Post.	**See Table 2** for heights of Cross Poles. Cross Poles and fastenings shall be of non-conductive material such as Timber and non-wire Rope	Site Super
6.6	Each Goal Post shall be lifted, set and secured vertically into each pair the Drums.		Site Super
6.7	**For Power Lines** install "**WARNING HIGH VOLTAGE CABLES OVERHEAD"** signs on both posts supporting each crossbar on both sets of Goal Posts.	Signs must carry the "**MAXIMUM WORKING HEIGHT" - see Table 2.**	Site Super
6.7	Plant and Equipment shall only cross under **ALL OVERHEAD OBSTRUCTIONS** using the "Goal Post" Crossing Points	Drivers shall ensure that all booms, excavator arms and similar are lowered so as to pass under the Goal Posts without making contact.	Equipment Drivers.

7.0	WORKING UNDER ALL OVERHEAD OBSTRUCTIONS - METHOD STATEMENT		
Activity	**Description of Operation/Activity**	**Safety Requirement**	**Action by**
7.1	**Work under ALL OVERHEAD OBSTRUCTIONS shall only be carried out within "Tunnels" created by Barriers across the Line with "Goal Posts" at each end.** **Barriers and Goal Posts to be constructed as noted above.**	Equipment working under **ALL OVERHEAD OBSTRUCTIONS** shall be fitted with devices to limit the height to which "arms" , booms etc can be lifted – The "safe" heights are the same as the heights of the Goal Post Crossbars – See Tables 2 & 3	Sites Manager
7.2	Working under **ALL OVERHEAD OBSTRUCTIONS.**	A "Watchman" shall be in the work area to witness all movement of equipment – the Watchman shall be in contact with the equipment driver at all times.	Site Super.

TABLE 1. – Minimum distance of Barriers from ALL OVERHEAD OBSTRUCTIONS

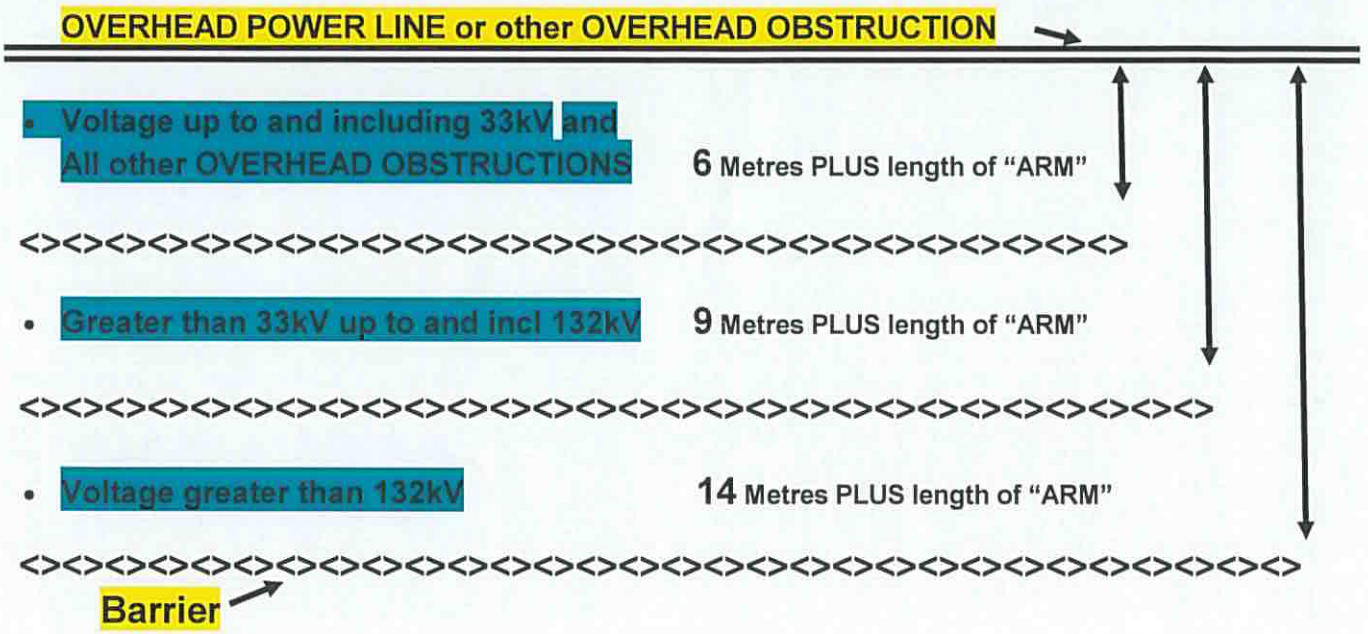


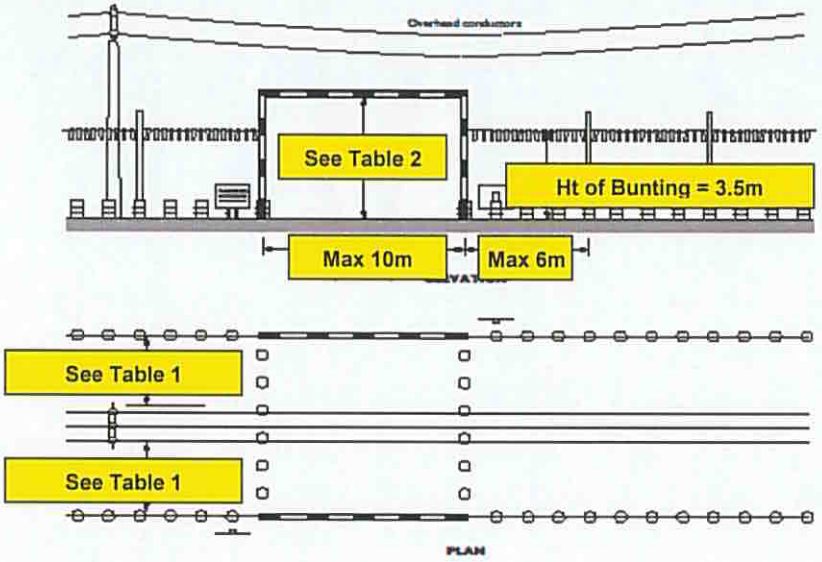
TABLE 2. – Goal Post – Crossbar Heights.

Voltage Not exceeding	33kV & other O/H obstructions	66kV & other O/H obstructions	132kV & other O/H obstructions	275kV & other O/H obstructions	400kV & other O/H obstructions
Min Height of Overhead obstruction. [per GS6]	5.2m	6.0m	6.7m	7.0m	7.3m
Max Height of Goal Post Crossbar	3.0m	3.5m	3.5m	3.5m	3.5m

NOTE: If the height of the lowest point of the overhead obstruction can be measured then the CROSSBAR heights shall be set at MEASURED HEIGHT [MH] - MINUS – THE FOLLOWING DISTANCES.					
Alternative CROSSBAR Height	MH-2.3m	MH-2.5m	MH-3.2m	MH-4.1m	MH-5.0m

Table 3

Health and Safety Executive



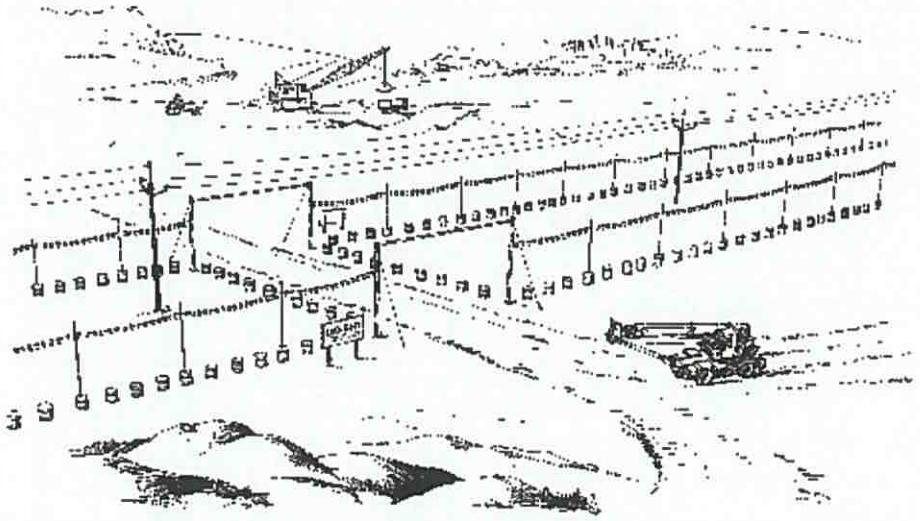


Figure 2 Sites where plant will pass under the line. Example of rigid goal posts and barriers. Similar precautions apply to lines supported on steel towers

Avoidance of danger from overhead electric power lines Page 8 of 15

Amended Extract from HSE Guidance Note GS6

[Third Edition, published 1997]

Substance: **Red Diesel – Gas Oil**	**COSHH ASSESSMENT**	
	Ref. No: HS-CA- 08	**Rev: 4**
	Date Assessed/Reviewed:	**12.10.15**

Appearance/Odour?	**Red coloured liquid**		
What is the substance used for?	On Sites	In Yard & Workshop	In Offices
	Plant and Equipment	----------	----------
What PPE should be worn when handling the substance?	Gloves **YES**	Safety Glasses **YES**	
	Overalls **YES**	Respiratory Protection **NO**	
	Other, Specify: ----------		
How should the substance be stored?	**Store in purpose designed containers away from heat and sources of ignition. Containers must be properly labelled and kept closed when not in use.**		
Special Transport Instructions:	**Transport in purpose designed containers.**		
What should be done if it is accidentally spilled?	**Remove all sources of ignition. Contain in bunding – absorb with sand or earth or other absorbent material. Prevent liquid reaching drains or waterways. Dispose via a licensed waste disposal contractor. If spillage occurs from bulk site storage call SEPA Hotline – 0800 807 060**		

Skin?	Effects:	**Repeated exposure may cause skin dryness or cracking.**
	Controls, PPE:	**Wear impervious overalls and gloves**
	First Aid Measures	**Remove contaminated clothing and wash skin thoroughly with soap and water**
Eyes?	Effects:	**Stinging or redness if accidental eye contact occurs**
	Controls, PPE:	**Safety Goggles**
	First Aid Measures:	**Wash thoroughly with large amounts of water, ensuring eyelids are held open.**
Inhalation?	Effects:	**Irritation to the nose or throat**
	Controls, PPE:	**Keep work area well ventilated**
	First Aid Measures:	**Remove to fresh air – get medical advice if symptoms persist.**
Ingestion?	Effects:	**If contamination of the mouth occurs wash out with water.**
	Controls, PPE:	**NONE**
	First Aid Measures:	**If significant quantities are swallowed – do not induce vomiting – get medical advice.**
If the substance is on fire how do you put it out?	**For major fires call Fire Service – use foam, dry powder or water fog – DO NOT USE WATER JETS**	
How should the substance be disposed?	**Dispose via a licensed waste disposal contractor.**	

Made by:	**BP and others**	Supplied by:	**Scottish Fuels and others**
MSDS Ref:	**SUK2102 Rev dated 15.05.00**	MSDS Date:	**Issue date 14.06.02**

Assessed / Reviewed By:	**T Baker** [redacted]	Date: **12.10.15**	Approved For Use By:	**R Stott**	Date: **12.10.15**

Substance: **ECO BORE – Drilling Bore Lubricant**	**COSHH ASSESSMENT**	NICOL OF SKENE LTD
	Ref. No: HS-CA- 35 Rev: 04	
	Date Assessed/Reviewed: 13.10.15	

Appearance/Odour?	**Odourless White/Cream Powder to be mixed with water to form a Lubricant for Drilling.**				
What is the substance used for?	On Sites		In Yard & Workshop		In Offices
	Used as a Drilling Bore Lubricant		----------		----------
What PPE should be worn when handling the substance?	Rubber Gloves **YES**		Safety Goggles or Mask **YES**		
	Overalls **YES**		Respiratory Protection	**Only when mixing**	
	Other, Specify: **NONE**				
How should the substance be stored?	**Keep in a Dry Cool place**				
Special Transport Instructions:	**NONE**				
What should be done if it is accidentally spilled?	**Collect powder into containers for disposal – wash away remaining traces with plenty of water. NOTE: This material MAKES SURFACES VERY SLIPPERY**				
Skin?	Effects:	**Repeated exposure may damage skin**			
	Controls, PPE:	**Wear impervious overalls and gloves**			
	First Aid Measures	**Remove contaminated clothing and wash skin thoroughly with soap and water**			
Eyes?	Effects:	**Stinging or redness if accidental eye contact occurs**			
	Controls, PPE:	**Safety Goggles**			
	First Aid Measures:	**Wash thoroughly with large amounts of water, ensuring eyelids are held open. – Consult a Doctor**			
Inhalation?	Effects:	**Irritation to the nose or throat**			
	Controls, PPE:	**When mixing with water wear face mask and keep work area well ventilated**			
	First Aid Measures:	**Remove to fresh air – get medical advice if symptoms persist.**			
Ingestion?	First Aid Measures:	**Drink plenty of water – Do not induce vomiting Immediate – Consult a Doctor.**			
If the substance is on fire how do you put it out?	**All common types of extinguishing media are suitable**				
How should the substance be disposed?	**See notes above for Accidental spillage**				

Made by:	**Fisher Environmental ltd CW10 9JP**		Supplied by:	**Fisher Environmental ltd CW10 9JP**	
MSDS Ref:	**ECO BORE**		MSDS Date:	**02/04/01**	
Assessed / Reviewed By:	**T A B** [redacted]	Date: **13.10.15**	Approved For Use By:	**R Stott**	Date: **13.10.15**

Substance:	COSHH ASSESSMENT	
HYDRAUL-EZ **[Contains NO hazardous ingredients]**	**Ref. No: HS-CA- 45**	**Rev: 03**
	Date Assessed / Reviewed:	**10.13.15**

NICOL OF SKENE LTD

Appearance/Odour?	**Tan or Beige to light Gray coloured Powder or Granules - odourless**

What is the substance used for?	On Sites	In Yard & Workshop	In Offices
	Bentonite drilling Fluid	---------	---------- -

What PPE should be worn when handling the substance?		
	Gloves **YES**	Safety Glasses **Wear safety glasses**
	Overalls **YES**	Respiratory Protection **YES**
	Other, Specify: **NONE**	

How should the substance be stored?	**Store in a cool dry place**
Special Transport Instructions:	**NONE**
What should be done if it is accidentally spilled?	**Vacuum or Sweep up dry materials - Absorb wet material with absorbent granules – wash down area to eliminate slip hazard. – do not flush into surface water or sewer systems.**

Skin?	Effects:	**May cause irritation –or chapping of the skin from prolonged contact.**
	Controls, PPE:	**Wear plastic / rubber gloves**
	First Aid Measures	**Wash contact areas with soap and water**
Eyes?	Effects:	**May cause irritation and soreness due to dust particles**
	Controls, PPE:	**None necessary**
	First Aid Measures:	**Flush with water**
Inhalation?	Effects:	**Excessive inhalation of the dust may cause irritation.**
	Controls, PPE:	**Use a FACE MASK if working in confined space.**
	First Aid Measures:	**NONE**
Ingestion?	First Aid Measures:	**No evidence of adverse effects**

If the substance is on fire how do you put it out?	**Non flammable**
How should the substance be disposed?	**Non hazardous material – disposal in accordance with local regs.**

Made by:	**CETCO EUROPE LTD**	Supplied by:	**DITCHWITCH**
MSDS Ref:	**69001 EC**	MSDS Date:	**25 APRIL 2002**

Assessed By: [redacted]		Date: **13.10.15**	Approved For Use By:	**R Stott**	Date: **13.10.15**