PLANT RISK ASSESSMENT WORKSHEET (PRA)

Assessment Number: 00001 **Assessment Date:** 01 Jul 2015

Plant Type: 30 Tonne Excavator **Plant Make:** KOMATSU **Plant Model:** PC300-7

Asset/Fleet/Rego No: 03-126 **Plant Serial No.** J20119

Assessment Facilitated by: Tahir Ahmed – WHS Representative

Assessment Participants: Michael Moit – Director
George Saliba – Mechanic
Tony Moit - Director

Plant Owner Name: N Moit and Sons (NSW) Pty Ltd

Initial Assessment ☐ **Follow up Assessment** (See below) ☐

Follow up based on change to: **Use of plant** ☐ **System of work** ☐ **Plant Environment** ☐ **New or additional information** ☐ **Plant through modification** ☐

Risk Matrix

Consequences	Likelihood or Probability				
People	**Almost Certain** (expected)	**Likely** (will probably occur)	**Moderate** (might occur – has happened)	**Unlikely** (could occur – known to happen)	**Rare** (practically impossible)
No Incident or First Aid Injury	**High** 15	**Medium** 19	**Low** 22	**Low** 24	**Low** 25
Medical Treatment	**High** 10	**High** 14	**Medium** 18	**Low** 21	**Low** 23
Alternate Work or Lost Time Injury	**Extreme** 6	**High** 9	**High** 13	**Medium** 17	**Medium** 20
Serious or Permanent Injury	**Extreme** 3	**Extreme** 5	**Extreme** 8	**High** 12	**High** 16
Fatality	Extreme 1	**Extreme** 2	**Extreme** 4	**Extreme** 7	**High** 11

Any hazard assessed as presenting a low and/or medium risk level will be controlled using a combination of controls as appropriate.

Any hazard assessed as presenting a high risk level must be controlled using a combination of at least one engineering control and lower level controls as appropriate. Where this is not possible, Workplace Manager consultation must take place.

Any hazard assessed as presenting an extreme risk level will be controlled using elimination and engineering as the primary source of controls. Where this is not possible, Workplace Manager consultation must take place.

Is the plant designed to perform the task?	Yes ☒	No ☐	
Has the plant been modified from the original condition?	Yes ☐	No ☒	
Is the plant in good working condition and free of weeds & mud?	Yes ☒	No ☐	
All identified action items closed out/addressed (plant checks)?	Yes ☒	No ☐	
Is the plant safe to operate? (On completion of PRA and action closure)	Yes ☒	No ☐	Date: _____ Signature: _____

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Potential Hazards	Hazard			Describe Hazard	Controls Currently In Place on Plant	Current Risk Level	New or Additional Controls Required on Plant	Final Risk Level	New or Additional Controls Action By: (Name and Date)	Action Verified as Complete: (Name and Date)
	Y	N	N/A							
1. Are there any specific warnings or conditions (manufactures or other) relating to potential hazards from the operation of the item of plant? ▪ Refer to technical or operating manuals, SOPs, safe use instructions ▪ List any relevant safety warning hazards & controls				Improper use of machinery Movement of machinery Overhead power lines Falling from windows Swinging machinery	Protective equipment and clothing Decal stickers warning of potential hazard Operator experience and qualification	24	Nil	24		
2. Are there any <u>COMMUNICATION</u> requirements in relation to the safe operation of the plant? ▪ Active signalling processes. ▪ Point to point communications. ▪ Whistle ▪ Spotter (with/without whistles) ▪ Flag signalling ▪ Labels and signage					Point to point communications Labels and signage Horn warnings from cabin UHF Radio communication	25	Nil	25		

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	Y	N	N/A							
3. Can anyone be <u>ENTANGLED</u> in the plant? ▪ Hair or other body parts caught in moving parts ▪ PPE caught in moving parts ▪ Isolation devices ▪ Warning decals ▪ Guarding ▪ Rotating parts ▪ Emergency stops				Moving components in operating engine compartment. Prestart Check	Only Competent Licensed Operators to operate Excavator.	23	Nil	23		

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	Y	N	N/A							
4. Can anyone be CRUSHED or TRAPPED? *(e.g. through unexpected movement, lack of capability for plant or equipment to be slowed, stopped or immobilised, plant tipping or rolling, being thrown from plant)* ▪ Emergency stop (E Stop) ▪ Service or parking brake ▪ Battery isolator ▪ ROPs/FOPs ▪ Being crushed between moving parts ▪ Unexpected movement ▪ Neutral Start ▪ Reversing/travel alarm ▪ Warning horn ▪ Amber flashing beacon ▪ Rear swing warning lights ▪ Pedals non slip surface ▪ Appropriate controls ▪ Rear view mirror ▪ Seat belt ▪ Door inter locks ▪ Crush zone decals ▪ Guarding devices				Crush points in turning area, bucket attachment & between load & ground. Crush point between Excavator movement & stationary & other moving objects or plant. Uncontrolled movement of Excavator during maintenance operations.	Nil	3	Only Competent Licensed Operators to operate. Spotter to observe/ direct movements if required by Risk Assessment & restrict pedestrian movement within 3m around or under Excavator operations.	16		

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	Y	N	N/A							
5. Can anyone be CUT, STABBED or PUNCTURED? ▪ Flying objects ▪ Moving parts ▪ Pinch points ▪ Sharp edges ▪ Isolation devices ▪ Warning decals ▪ Guarding										
6. Can SHEARING occur? ▪ Between two moving and rotating parts ▪ Between fixed and moving parts ▪ Warning decals ▪ Guarding				Between slew radius area & carrier/tracks At hydraulic ram and pinch point areas.	Only Competent Licensed Operators to operate Excavator. Isolation of plant and personnel during operation No persons allowed within 3m whilst in operation	16		16		
7. Can ABRASION, TEARING or STRETCHING occur? ▪ Continuous contact with moving parts ▪ Warning decals ▪ Guarding ▪ Pulling/pushing										

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	Y	N	N/A							
8. Can anyone be STRUCK whilst operating the plant? ▪ Plant disintegrating ▪ Mobility of plant travelling ▪ Reversing/travel alarm ▪ Amber flashing beacon ▪ Work pieces thrown out ▪ Moving parts ▪ Warning decals ▪ Guarding				Personnel being struck by moving parts Worn or faulty components breaking, disintegrating or ejected. Lack of maintenance. Personnel struck by bucket of excavator	Warning decals Reversing alarm Amber flashing beacon	16	Nil	16		
9. Can a hazardous PRESSURE be produced? ▪ Hydraulic hoses ▪ Radiator ▪ Come into contact with fluids under high pressure				Hydraulic hose blowing	Maintenance of machinery Keeping clear of machinery whilst operating	22	Nil	22		
10. Can an ELECTRICAL hazard be created? ▪ Lack of insulation ▪ Contact with electrical conductors ▪ Poor earthing ▪ Water near equipment ▪ Lack of isolation ▪ Warning decals				Poor earthing	Warning decals Maintenance of machinery Minimum working distances to be observed, 6m (HV) & 3m (LV).	16	Nil	16		

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	Y	N	N/A							
11. Can an EXPLOSION or LOSS OF CONTENTS occur? ▪ Gas emission, ▪ Dusts ▪ Vapours, lubricants ▪ Fuel tank ▪ Storage of Hazsub's/DG's near plant ▪ Warning decals ▪ Ejection of workpiece ▪ Collapse or fragmentation				Fuel or gas leak / spill.		3	Operator to conduct daily plant pre start checks and document on plant logbook.	20		
12. Can anyone using or near the plant SLIP, TRIP or FALL? ▪ Uneven surface ▪ Fall from a height ▪ Weather conditions ▪ Slippery surfaces				Uneven surfaces Slippery surfaces	Experienced operators Protective clothing	9	Good housekeeping to be maintained in operating area	20		

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	Y	N	N/A							
13. Are there ERGONOMIC - MANUAL HANDLING hazards associated with the plant? ▪ Poor posture ▪ Repetitive or sustained movements ▪ Awkward positions ▪ Strained movements ▪ Poorly designed seating ▪ Access and egress ▪ Access for maintenance ▪ Routine inspections and adjustments										
14. Are there ERGONOMIC - OPERATING CONTROL hazards associated with the plant? ▪ Difficult to understand ▪ Inappropriate colouring ▪ Function not identified ▪ Inappropriate controls & switches ▪ Access and egress ▪ Labelling of controls and indicators ▪ Variation in operators ▪ Operation by two or more persons										

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	Y	N	N/A							
15. Are there specific requirements for ISOLATION of energy sources? ▪ Hydraulic pressure ▪ Compressed gases ▪ Electrical feeds/capacitors ▪ Motive power systems ▪ Suspended loads ▪ Operation by two or more persons										
16. Can unplanned LOSS of POWER create a hazard? ▪ Engine shutdown ▪ Loss of electrical supply ▪ Loss of steering systems ▪ Ability to apply brakes and stop ▪ Ability to lower suspended loads										
17. Can anyone be SUFFOCATED? ▪ Lack of oxygen ▪ Contaminated atmosphere ▪ Confined spaces ▪ Spaces where air flow is inadequate										

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	Y	N	N/A							
18. Does operation of the plant cause extreme TEMPERATURE changes? ▪ Fire ▪ Burns through conduction ▪ Convection ▪ Cryogenic burns ▪ Operation in extreme heat or cold										
19. Can a FIRE occur? ▪ Friction ▪ Ingress of materials/fluids ▪ Build-up of materials/lubicants ▪ Fuels ▪ Fire extinguisher										

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	Y	N	N/A							
20. Can certain WEATHER conditions create a hazard? ▪ Hypothermia / extreme cold ▪ Heat stroke / extreme hot ▪ Wet conditions ▪ Electrical storms ▪ Dirt & mud on roads at egress points				Wet conditions	Experienced operators	25	Nil	25		
21. Does VIBRATION of the plant create a hazard? ▪ Plant becomes unstable ▪ Causes physical problems for the operator whilst operating ▪ Vibration of equipment ▪ Operation could cause unacceptable vibration levels in nearby structures				Vibration of equipment	Regular maintenance of equipment and servicing	22	Nil	22		

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	Y	N	N/A							
22. Can the plant emit toxic FUMES or VAPOURS? ▪ Exhaust fumes ▪ Chemicals ▪ Hazsub's/DGs				Exhaust fumes	Operating machinery with cabin windows and door closed	23	Well ventilated	25		
23. Carry out the NOISE survey on page 9. Is the plant noisy? ▪ Emit >85 dBA at the operator ▪ Effects operator communication ▪ Noise impacts on community during out-of-hours work (including reversing beepers)										

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	Y	N	N/A							
24. Carry out the LIGHT survey on page 9. Is there poor visibility ▪ At the controls ▪ At the task ▪ Darkens surrounding areas ▪ Light impacts on community or sensitive natural environment during out-of-hours work										
25. Does the plant emit RADIATION? ▪ Eg X-rays ▪ EMR ▪ Laser										

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	Y	N	N/A							
26. Can operation of the plant create DUST? ▪ Explosive atmosphere ▪ Breathing hazard ▪ Reduced visibility ▪ Nuisance dust at nearby community				Nuisance dust at nearby community Breathing hazard	Wetting down of material Operation of machinery with cabin door closed and windows closed Personal protective equipment for personnel wetting the material down.	21	Nil	21		

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	Y	N	N/A							
27. Can the plant become UNSTABLE during operation? ▪ Working on uneven / unstable ground ▪ Shifting load ▪ Lack of plant support ▪ Outriggers				Work on uneven ground	Experienced operators	24	Nil	24		
28. Could LOSS of LOAD occur? ▪ Failure of ropes/slings ▪ Overloading ▪ Entanglement in surrounding structures ▪ Maintenance requirements				Items falling from bucket.		5	The operator is to ensure all carried objects are suitably secured & stowed at all times.	20		

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	Y	N	N/A							
29. Is there anything in the SURROUNDING ENVIRONMENT that may produce a hazard? ▪ Power lines ▪ Low ceiling ▪ Other plant ▪ Storage areas ▪ Co-located equipment ▪ Isolation requirements ▪ Potential for flash flooding if operating adjacent to waterways ▪ Operating in known areas of weeds, pathogens or contamination ▪ Operating in sensitive environments requiring protection from offsite weeds/pathogens or spills				Striking scaffold or site containers in working area.	Nil	9	Only Competent Licensed Operators to operate Excavator. Loose stacked items to be secured, boxed or palletised.	20		
30. Can CHEMICALS create a hazard? ▪ Leaking from plant ▪ Splashing ▪ Explosion ▪ PPE considerations ▪ Spill kit considerations										

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	Y	N	N/A							
31. Operator TRAINING / QUALIFICATIONS? ▪ Training requirements ▪ Qualification requirements ▪ Competency assessments ▪ Documentation ▪ Operators manual ▪ Equipment experience ▪ Product knowledge				Operator error	Experienced and qualified operator Product knowledge	17	Ensure operators take required OH&S breaks	24		
32. Are there ANY OTHER potential hazards generated by or during the use of this item of plant and/or any attachments?										

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ALL OPERATORS OF THE PLANT OR EQUIPMENT MUST BE BRIEFED ON THE PLANT HAZARD ASSESSMENT (PHA) PRIOR TO FIRST TIME USE.
ANY RELEVANT CONDITIONS WHICH MAY IMPACT ON THE OPERATION OF THIS ITEM OF PLANT OR EQUIPMENT MUST BE TRANSFERRED TO THE AMS/TRA.

Strike out if not applicable

NOISE REPORT

Equipment Type:	Serial/Asset No.
Make:	Model:
Test by *(print)*:	Date:
Signature:	
Sound Level Meter Unit Used:	
Manufactures specified noise level:	dBA
Background level:	dBA

Results – Operator's Station

dBA	High Idle	dBA	Low Idle

(Equipment Operating)

Comments:

Results – Bystander Position:

Front	dBA
Rear	dBA
Left	dBA
Right	dBA

At 7 metres from side of equipment – Equipment Operating (High Idle)

Comments:

Strike out if not applicable

LIGHTING REPORT

Test by *(print)*:	Date:
Signature:	
Lux Meter used:	

Results – Operator's station

At controls	Lux
At emergency control	Lux
In front/over task	Lux
Left side task	Lux
Right side task	Lux

Comments:

Results – Surroundings:

Clearly seen by others?	□ Yes	□ No
Decrease lighting in walkways?	□ Yes	□ No
Decrease lighting to other workstations?	□ Yes	□ No

Comments:

COMMENTS: