

SURFACE TRACKLESS MOBILE PLANT HIF AUDIT - 17/06/2003 03:02:06 PM

1. REGISTER

Point	Standard	Guideline
1.1	There is a Register of Mobile Equipment.	Intent: To verify that there is a register for mobile equipment. Personnel: Manager or Engineering Personnel. Method: View register of mobile surface trackless units.
1.2	The Register covers all mobile equipment.	Intent: To ensure that the register covers all mobile equipment. Personnel: Manager or Engineering Personnel Method: View register and relevant documents. Check system to include contractor's equipment.
1.3	The Register is current with up to date recordings.	Intent: To verify that the register contains up to date recordings. Personnel: Plant Manager or Service Engineer Method: View Register of mobile surface trackless units and correlate against recent purchases.

2. SELECTION OF EQUIPMENT

Point	Standard	Guideline
2.1	A review has been carried out to determine the type of equipment that is required on site.	Intent: To verify that a review has been carried out to determine the type of equipment that is required on site. Personnel: Manager or Engineering Personnel. Method: Observe review documents, consider configuration of primary haulage units, water trucks, service trucks etc which may not be suitable to open pit conditions. Interview transport/engineering management.
2.2	The mobile plant is sourced according to the findings of the review.	Intent: To verify that plant is sourced according to the findings of the review. Personnel: Purchasing Officer. Senior Engineers. Method: View supply documents, Interview Purchasing Officer
2.3	The mobile plant is used within its design specifications.	Intent: To verify that the mobile plant is compatible with existing open pit design etc. Personnel: Manager, Engineering Personnel. Method: View suppliers specifications re. road widths, gradients, curves etc and compare with the existing conditions. Usually road widths will be governed by the haul units. Other equipment to be considered will be items such as water or service trucks especially on road designs. Verify by taking a sample of the largest truck and a service unit.
2.4	The suitability of mobile plant used by short term contractors is reviewed by a competent person.	Intent: To confirm that there is a system that reviews the use of mobile plant operated by short term contractors. Personnel: Engineering Management. Method: Review relevant documents.

3. OPERATIONAL DOCUMENTATION

Point	Standard	Guideline
3.1	Manufacturers operational manuals are provided for mobile plant.	Intent: To verify manufacturer’s operational manuals are provided for mobile plant. Personnel: Senior Engineers or Plant Supervisors Method: Observe manufacturer’s manuals, interview plant operators
3.2	There is a procedure to report operational faults on mobile plant.	Intent: To verify that there is a procedure to report operational faults on mobile plant. Personnel: Plant Maintenance Engineers and plant operators. Method: View work request forms and interview plant operators.
3.3	There is a procedure to identify plant faults which would require the plant to be taken out of service.	Intent: To verify that there is a system which removes plant from service when major faults are identified. Personnel: Engineering management and plant operations. Method: Review relevant system documents and interview personnel.
3.4	The procedure provides information and ownership on the rectifying of faults found on mobile plant.	Intent: To ensure that the procedure provides information and ownership on the rectifying of faults found on mobile plant. Personnel: Senior Engineers and plant operators. Method: Observe written procedure and interview maintenance personnel.
3.5	The faults are rectified in an acceptable time frame.	Intent: To verify that faults are rectified in a reasonable time frame. Personnel: Engineers and plant operators. Method: View work request forms and service records.
3.6	There is a document to show that pre-start checks are carried out for mobile plant.	Intent: To verify that there are pre-start checklists. Personnel: Plant Engineers and operators of mobile plant. Method: View mobile plant re-start checklists.

4. OPERATIONAL TRAINING

Point	Standard	Guideline
4.1	Vehicle operation training documents are provided for mobile plant.	Intent: To verify that vehicle operational training documents are provided. Personnel: Senior Engineers and Training Officer Method: View operational training documents and interview training officer.
4.2	The training documents are reviewed when new equipment is supplied.	Intent: To verify if training documents are reviewed when new equipment is supplied. Personnel: Senior Engineers, Training Officer and Plant operators. Method: View amended records, interview Training Officer and Engineers.
4.3	The training document covers pre-start checks of mobile plant.	Intent: To verify that the training document covers or includes pre-start checks of mobile plant. Personnel: Training Officer and Engineers. Method: Interview Training Officer and view plant pre-start checklists.
4.4	The training document covers site-limiting conditions.	Intent: To verify that the training document covers site-limiting conditions. Personnel: Training Officer, Senior engineers and Plant operators. Method: Review training documents and inspects site conditions.

4.5	The training document covers emergency driving conditions.	Intent: To verify that the document covers, emergency driving conditions. Personnel: Training officers, Senior Engineers and Plant Pperators. Method: View document and interview Plant Operators.
4.6	The training involves emergency driving conditions.	Intent: To verify that the training involves emergency driving conditions. Personnel: Training Officer, Engineers and Plant operators. Method: Interview Training Officer and Plant operators.
4.7	The operators are assessed for competency after training by a designated person.	Intent: To verify that operators competency assessments are carried out. Personnel: Training Officer and operators. Method: View assessment records.
4.8	The training records are retained.	Intent: To verify that training records are retained. Personnel: Training Officer and Senior engineers Method: View training records and observe all dates of entries.
4.9	Only authorised and approved operators are permitted to operate surface trackless mobile plant.	Intent: To verify that only approved operators operate trackless mobile plant. Personnel: Plant operators. Method: View documents and interview operators.

5. MAINTENANCE

Point	Standard	Guideline
5.1	There is a maintenance programme for mobile equipment.	Intent: To verify that there is a maintenance programme for mobile plant. Personnel: Senior Engineers and maintenance personnel. Method: View written programme and interview engineering personnel.
5.2	The maintenance document is in accordance with the recommendations of the equipment manufacturer.	Intent: To verify that the maintenance document is in accordance with the manufacturer's recommendations. Personnel: Senior Engineers Method: Compare manufacturer's maintenance recommendations with operator's maintenance procedures.
5.3	The maintenance document covers all operational functions of the mobile plant.	Intent: To verify that the maintenance document covers all operational functions of the mobile plant. Personnel: Senior Engineers and maintenance personnel. Method: View maintenance documents and interview engineering personnel.
5.4	The maintenance document covers all non-operational functions of the mobile plant.	Intent: To verify that the maintenance programme covers all non-operational functions of the mobile plant. Personnel: Senior Engineers and maintenance personnel. Method: View maintenance documents and interview engineering personnel.
5.5	The maintenance programme is reviewed when new equipment is brought to site.	Intent: To verify that the maintenance program is review when new equipment is brought to site. Personnel: Senior Engineers Method: Sight review document records, interview senior engineers.
5.6	Replacement parts and components are selected in accordance with the mobile plant manufacturer's specifications.	Intent: To verify that the replacement parts or components are selected in accordance with the mobile plant manufacturer's specifications. Personnel: Senior Engineers and maintenance personnel. Method: View maintenance documents and interview engineering personnel.

5.7	A competent person is appointed to supervise maintenance.	Intent: To verify that a competent person supervises plant maintenance. Personnel: Plant Supervisor Method: Interview maintenance supervisor.
-----	---	---

6. MAINTENANCE OF OPERATIONAL EQUIPMENT

Point	Standard	Guideline
6.1	Documents are provided to ensure the integrity of the mobile plant structure.	Intent: To verify that documents are provided to ensure the integrity of the mobile plant structure. Personnel: Senior engineers Method: View relevant documents and drawings.
6.2	The ROPS where fitted is not damaged.	Intent: To verify that the ROPS where fitted is not damaged. Personnel: Engineering Personnel. Method: Interview engineering person or view structures.
6.3	The ROPS repair is required it is carried out in accordance with manufacturer's specifications.	Intent: To verify that if repairs are performed that they are to manufacturer's specifications. Personnel: Engineering Personnel Method: Interview engineering person and view manufacturer's documents
6.4	Mobile plant brakes are inspected and repaired or replaced in accordance with the manufacturer's recommendations.	Intent: To verify that mobile plant brakes are maintained in accordance with the manufacturer's recommendations. Personnel: Senior Engineers and maintenance personnel. Method: View makers service documents and operator's service records.
6.5	Mobile plant steering components are inspected and repaired or replaced in accordance with the manufacturer's recommendations.	Intent: To verify that the steering components are inspected, repaired or replaced in accordance with the manufacturer's recommendations. Personnel: Senior Engineers and maintenance personnel. Method: View service sheets and manufacturer' service recommendations.
6.6	Mobile plant emergency operational equipment is checked and recorded.	Intent: To verify that mobile plant emergency operational equipment is checked and recorded. ie – brakes and steering etc. Personnel: Senior Engineers plus maintenance personnel. Method: View plant records and interview maintenance engineering personnel.
6.7	Mobile plant lighting is inspected and repaired or replaced when found defective.	Intent: To verify that mobile plant lighting is inspected, repaired or replaced when found defective. Personnel: Maintenance personnel and operators. Method: View plant service records and interview maintenance personnel plus operators of plant.
6.8	Mobile Plant audible and visual warning devices are fitted and maintained.	Intent: To verify that audible and visual warning devices are fitted. Personnel: Engineering personnel. Method: View relevant documents such as plant checklists and interview operators.
6.9	Mobile plant seats are suitable for the operational conditions.	Intent: To verify that mobile plant seats are suitable for operational conditions. Personnel: Senior Engineers plus plant operators. Method: Interview engineers, plant operators and inspect plant seats

6.10	Mobile plant is provided with seat belts.	Intent: To verify that mobile plant is equipped with a seatbelt. Personnel: Senior Engineers, maintenance and plant operators. Method: View maintenance records. Inspect a sample of plant seatbelts and interview operators.
6.11	Mobile plant wheels and rims are regularly maintained.	Intent: To verify that plant wheels and rims are maintained. Personnel: Senior Engineers, maintenance personnel. Method: View wheel service records and interview engineering personnel.
6.12	Mobile plant tyres are regularly inspected and maintained.	Intent: To verify that mobile plant tyres are inspected and maintained. Personnel: Service Engineers plus maintenance personnel and operators Method: View tyre service sheets plus inflation, inspection sheets. Interview maintenance engineering personnel also operators.

7. MAINTENANCE OF ANCILLIARY EQUIPMENT

Point	Standard	Guideline
7.1	Mobile plant windscreens and other glass panels are not cracked or broken.	Intent: To verify that windscreens and windows are not cracked or broken. Personnel: Maintenance engineers and plant operators. Method: Interview plant operators and inspect mobile plant.
7.2	The mobile plant has a fire extinguisher fitted.	Intent: To verify that a fire extinguisher is fitted to the mobile plant. Personnel: Maintenance personnel and plant operators. Method: View fire extinguishers, policy, and interview plant operators.
7.3	The fire extinguisher on the mobile plant has maintenance checks.	Intent: To verify that there is a system to check fire extinguishers for maintenance purposes and serviceability. Personnel: Senior Engineers plus plant operators. Method: View fire fighting policy and interview engineers plus plant operators.
7.4	The access to the operating cabin from the ground on mobile plant is free of hazards and is maintained.	Intent: To verify access to operator's cabin from the ground is free from hazards and is maintained. Personnel: Senior Engineers, maintenance personnel and plant operators. Method: Interview plant operators and view service records of mobile plant.
7.5	Radio communication is provided for use in the mobile plant.	Intent: To verify that radio communication is provided for use in mobile plant. Personnel: Senior Engineers and plant operators. Method: Interview maintenance engineers and plant operators.
7.6	The radio communication system is maintained.	Intent: To verify that radio communication systems are maintained. Personnel: Senior Engineers, maintenance personnel and plant operators. Method: View radio service records and interview maintenance personnel and plant operators.
7.7	There is a system in place should the radio communication system fail.	Intent: To verify that there is a system in place should the radio communication system fail. Personnel: Senior Engineers and plant operators. Method: View communication policy and procedures documents. Interview plant operators.
7.8	Outriggers where fitted are maintained.	Intent: To verify that outriggers where fitted are maintained. Personnel: Maintenance personnel Method: View service records.

7.9	Warning decals are legible.	Intent: To ensure that warning decals where required are legible. Personnel: Maintenance supervisors. Method: Check manufacturer's manuals for the required decals and ensure they are fitted.
7.10	All controls are labelled.	Intent: To ensure all controls are labelled. Personnel: Maintenance supervisors and operators. Method: Interview maintenance personnel and operators.

8. MAINTENANCE FACILITIES

Point	Standard	Guideline
8.1	There is a facility available for the maintenance of mobile plant.	Intent: To verify that there is maintenance facility for the maintenance and servicing of mobile plant. Personnel: Senior Engineers – maintenance personnel. Method: View facilities and interview maintenance personnel.
8.2	Mobile plant maintenance equipment is selected and compatible with the equipment being serviced.	Intent: To verify that mobile plant maintenance equipment is selected and compatible with the equipment being serviced. Personnel: Senior Engineers, maintenance personnel. Method: View equipment and interview maintenance personnel.
8.3	Mobile plant maintenance equipment is maintained.	Intent: To verify that mobile plant maintenance equipment is maintained. Personnel: Senior Engineers – maintenance personnel. Method: View maintenance equipment, service records and interview maintenance personnel.
8.4	There is an area suitable for the jacking and support of mobile plant.	Intent: To verify that there is a hard standard area for jacking and servicing mobile plant. Personnel: Senior Engineers and maintenance personnel. Method: Interview maintenance personnel and sight hard standing area.
8.5	There is an area available for the washing down of mobile plant.	Intent: To verify that there is a mobile plant wash down area. Personnel: Maintenance engineers. Method: View wash down area.
8.6	The wash down equipment has been reviewed to ensure associated hazards have been addressed.	Intent: To verify that the wash down area and equipment hazards have been addressed. Personnel: Senior Engineers plus maintenance personnel. Method: Interview maintenance engineers and personnel plus view wash down area.
8.7	The persons who use the wash down equipment have been trained.	Intent: To verify that the wash down personnel have been trained. Personnel: Training officer, engineers and maintenance personnel. Method: View training records and interview maintenance personnel.
8.8	There is an area for mobile plant refuelling	Intent: To verify that there is a mobile plant re-fuelling facility. Personnel: Senior Engineers and plant operators. Method: View plant refuelling facilities and interview engineers plus plant operators.
8.9	The refuelling area has protection for fuel spills.	Intent: To verify that the refuelling area has protection for fuel spills. Personnel: Senior Engineer, maintenance personnel and plant operators. Method: View re-fuelling area and interview engineers. Check that there is a procedure to contain fuel spills.

8.10	Fire extinguishing equipment is available at refuel area.	<p>Intent: To verify that there are fire extinguishers at the re-fuelling facilities.</p> <p>Personnel: Senior Engineers, Plant operators.</p> <p>Method: View extinguisher at re-fuelling areas and interview maintenance engineering personnel.</p>
------	---	---

9. RETRIEVAL OF MOBILE EQUIPMENT DUE TO BREAKDOWN

Point	Standard	Guideline
9.1	A procedure is available for the retrieval of mobile plant due to breakdown.	<p>Intent: To verify that there is a procedure for the retrieval of mobile plant due to breakdown.</p> <p>Personnel: Senior Engineer, maintenance personnel and plant operators.</p> <p>Method: View mobile plant breakdown recovery procedure document and interview maintenance personnel plus plant operators.</p>
9.2	The procedure has addressed the possible risks.	<p>Intent: To verify that the procedure has addressed the possible risks.</p> <p>Personnel: Senior Engineer and maintenance personnel.</p> <p>Method: View recovery procedure document and interview maintenance personnel.</p>
9.3	The equipment used for the retrieval process has been designed and selected for that purpose.	<p>Intent: To verify that the equipment used for the recovery of mobile plant has been designed and selected for that purpose.</p> <p>Personnel: Senior Engineer, Maintenance personnel.</p> <p>Method: View recovery equipment and recovery procedures.</p>
9.4	Persons are trained in the retrieval methods.	<p>Intent: To verify that persons are trained in retrieval of mobile plant methods.</p> <p>Personnel: Senior Engineer, maintenance personnel and plant operators.</p> <p>Method: View mobile plant retrieval procedure documents and interview maintenance personnel and plant operators.</p>