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Model Procedure for Mechanical and Low Voltage Isolation

IMPORTANT: It is vital that isolation procedure, the reasons for it and the underlying approach are fully understood by everyone concerned with the operation of a quarry. While this is a written procedure to provide basic guidance for people working in quarries, the actuality of procedure is in people's understanding and total compliance to safe operation. The procedure must be considered in detail by fully competent persons, good quality equipment obtained and full and ongoing training provided for anyone who may need to use it.

If the company does not have fully competent expertise (e.g. from high quality apprenticeship), this must be brought in from a reliable source. Where such a procedure does not exist, it will be necessary to review the site and to plan carefully for isolation points, appropriate equipment, good training, etc.

DEFINITIONS

LOW VOLTAGE: An installation wherein the voltage does not normally exceed 1,000V a.c. or 1,500V d.c. between conductors, or 600V a.c. or 900V d.c. between conductors and Earth.

EQUIPMENT: Work equipment that utilises or stores *energy* of any type.

ENERGY: Electrical, Mechanical, Pneumatic, Hydraulic, Kinetic, Gravitational or any other form of *energy.*

MULTI-CLASP: A device that allows more than one padlock to be attached to the isolator.

PERSONAL ISOLATION PADLOCK: A unique, identifiable padlock issued to one individual by an authorised person for the purpose of isolation.

SIMPLE ISOLATION: Requiring two isolation points or less to make the working area safe.

COMPLEX ISOLATION: Requiring three isolation points or more to make the working area safe.

MASTER PADLOCK: A unique, identifiable padlock issued by an authorised person for use when *equipment* is left unsafe to use after the end of the work period on the individual isolation point or complex isolation system.

PLANT LOCK: Individual key per lock, used to isolate the plant at each point in a complex isolation.

SYSTEM MANAGEMENT

- Each padlock used must have a unique number and be allocated to a single person. These numbers must be registered to enable the owner to be easily identified.
- Only one key per padlock shall be issued. Locks shall be checked to confirm that no key opens more than one personal isolation padlock. An effective procedure must be in place to control spare keys so that they are not accessible without the authority of the site manager. Any further keys shall be destroyed.
- Under no circumstances may an individual's padlock be removed, other than by that owner, unless fully authorised and supervised by the competent site manager.
- This procedure must be read, understood and fully explained with active demonstration for anyone who may need to use it. Signed records of attendance at these demonstrations shall be taken and maintained. Refresher training will be appropriate from time to time.

THIS PROCEDURE IS MANDATORY AND MUST BE CARRIED OUT IN FULL .

If in doubt – *ASK!* The only stupid question is the one that is never asked!

PROCEDURE

(*Italics* refer to definitions on page 2)

1. Prior to locking off, check the risk assessment and method statement / procedure / system of work. Check if a permit-to-work is required.
2. When any *equipment* has to be isolated, a *multi-clasp* must be fitted, to which each person working on that *equipment* must attach his/her own *personal isolation padlock.*
3. Before proceeding, ensure that you are aware of which *equipment* and *energy* sources require isolating to ensure a safe working environment.
4. Identify any items of plant that may require discharging of stored *energy* prior to isolation (e.g. Air cannons or other pneumatic controls, electrical capacitors, eccentric shafts, hydraulic or gravity systems).
5. When isolating the power to any plant, ensure that the isolation switch number is the same as the plant isolation number (where these exist).
6. For *simple isolation*, each person must attach his/her own *personal isolation padlock* to a *multi-clasp* on each isolation point.
7. For *complex isolation*, a further procedure specifically designed for the site situation shall be created, with a sequence to ensure fully safe and understood working.
8. Immediately after isolating, confirm that all isolated *equipment* will not operate.
9. If the *equipment* remains unsafe to use at the end of the work period, a *master padlock* must be left attached to each *multi-clasp*. The key and a note explaining the state of the job shall be left with the competent site manager, who will keep them securely, or passed to a competent person on an incoming shift if this is appropriate.
10. The person removing the final padlock shall ensure that the *equipment* is safe to use and that no one is in a position of danger before doing so.

IMPORTANT NOTES: Always ensure that the key to your *personal isolation padlock* remains in your possession and is never passed between people except under the close supervision of the site manager (e.g. changes of job role).

No one shall use a *personal isolation padlock* allocated to another person.

The site manager shall ensure that all contract employees working on site are appropriately provided and trained and are subject to the same rigour.

If you discover a situation on site that is not subject to isolation but should be, raise the issue. It is better to raise too many safety issues than too few.