	RECORD OF RISK ASSESSMENT	

Premises:	Assessment Ref.: Revision : A	Assessment Leader: **A. Nutman**	Assessment Date: 2012
Location, process, activity, product, part of other subject assessment: **Scope of Works – Integrity Testing**	Person(s) Group at Risk: **Company employees, sub-contractors & others in area**	Property at Risk: **N/A**	
Aspects of Environmental Risk: **N/A.**	Next Review Date or earlier date in which a change in knowledge or circumstances occurs which may affect validity:		

1.0 SCOPE OF WORKS

i) To Integrity Test the Enclosure which is protected by gaseous fire suppression system. To verify if it can effectively retain the extinguishing agent, & to test / verify the actual retention time achieved to allow the evaluation of the suppression systems effectiveness.

2.0 GENERAL

2.1 Working Hours **"To Be Agreed 2012" 09.00 – 17.00**

2.2 **Security**

a. All personnel will be required to sign in and out whenever entering or leaving an enclosure / site on each day.
b. Where areas exist for which permits are required, before undertaking any works the necessary permits etc. will be obtained **prior** to starting said works.
c. Site staff to advise of any particular / specific requirements, Fire requirements / procedures these are to be issued as appropriate. An associated site induction is to be given to each operative prior to commencement of any works.
d. No doors to be forced or left open during the works or during breaks.

Note: a certified approved pass should be issued to a responsible team leader for each site, to allow unrestricted access to the working areas when required.

2.3 **Personnel**

Richard Aldham, Garry Watkins, Dale Watkins, Tony Blanchfield, Scott Caborn

2.5 **Relevant Documents**

A Test will be conducted and an appropriate Certificate will be issued (specific to the characteristics of the enclosure) for future reference and records.

COSHH data sheets are to be provided for all relevant materials used where appropriate, this however is only necessary when specific sealing works are being conducted; the test itself involves no hazardous materials.

2.6 **Variations**

No variations will be undertaken without prior written authority from a site representative. Based upon the original test/s, site survey undertaken all works are considered to have been included for as part of the sub-contract agreement, this assumes no alterations have occurred since the original tests took place.

2.7 Modifications

Any modifications effecting the final certification will be discussed with the site representative prior to implementation.

Please Note

Structural alterations made by the client, which could impact upon the enclosures integrity will need to be investigated to ensure that the parameters can still be met, (e. g. the addition of door ways, windows, un-sealable openings etc).

Increasing the required protected height (new equipment cabinets, taller equipment etc) **will** impact upon the enclosures ability to achieve the integrity, if this is to happen proposed modifications will need to be assessed before the works can be suitably undertaken.

3.0 SEALING (Not Applicable

4.0 INTEGRITY TESTING

4.1 General

This test is performed to confirm whether the enclosure in question will satisfy the requirements of current legislation in respects to the retention of extinguishing agent in the event of a discharge.

4.2 Method/Works

a. The enclosure details are made available and inspected, volume and volume actually protected (if different) quantity and type of extinguishant, required protected height, (pressure relief, extract, suitability).

The blower fan and panel will be fitted to the appropriate door to perform the test. It is essential to simulate conditions that would exist in the event of a discharge; therefore this should be (if possible) put in place.

The Integrity test will last for approximately 15 minutes; the room assessment will be longer.

b. The testing will consist of both pressurising and de-pressuring the enclosure so as suitable air pressure and flow rates can be gained in order to calculate an average overall leakage result for the area under test. The test pressures are to be equivalent to that exerted by the extinguishant should it ever be discharged.

c. In order for the enclosure to pass the test an extinguishing agent level capable of effectively suppressing a fire must be retained at a height specified within the programme software for a minimum of 10 minutes.

The specified (interface) height will generally be 75% of the protected enclosure height **or** the tallest piece of equipment requiring protection, whichever is the highest or adopted by the insurer / end user (equipment present is utilised).

d. Once all testing is complete, the door panel and blower fan will be removed and the enclosures normal operating conditions re-instated.

e. Should any doubts or concerns arise as to the enclosures / equipment temperature the test equipment can be rapidly removed to allow normal operation to be re-instated at very short notice

f. Under **no** circumstances are the supplies from the equipment cabinets to be utilised. Permission will be obtained prior to use of any sockets, this needs to be advised in advance if possible etc.

5.0 PLANT AND EQUIPMENT

5.1 Tools

a. Only hand tools will be required for the sealing works.

b. For pressure testing, the 240vac-power source shall be drawn from an agreed source (non UPS).

5.2 Access Equipment (if required)

a. In areas of electrical hazard only, wooden steps/ladders will be used.

b. In areas of no electrical hazard, class 1 aluminium steps/ladders may be used if acceptable or wooden ladders if not.

All work on ladders or at height will comply with the latest working at height regulations and HSE working with ladders guide lines.

6.0 WORK PROCEDURES / SAFETY

6.1 Personal Protective Equipment (PPE)

Pressure Test Ltd will provide all necessary PPE to operatives, suitable PPE shall be worn at all times and shall be as follows:

1. Overalls - to be worn as advised.
2. Boots/Working Shoes - to be worn as advised.
3. Hard Hat - to be worn as advised.
4. Goggles - to be used (when required) during drilling.
5. Gloves - to be worn when handling any sharp or
6. Dust Mask - to be used in areas of high dust or dirt
7. Warning Signs - Where applicable post warning signs to all associated areas and entrance doors
8. Power Tools - Power Tools either 110 V or Battery all to be in good order
9. Drilling etc - Where drilling has to take place, use the appropriate tool and ensure that it has been suitably tested.

6.2 **All** accidents, etc. will be reported directly to the office that will record all events within the company accident register and copy all details within 24 hours.
6.3 C.O.S.H.H. sheets will be provided where required.
6.4 All health and safety information relevant to the project will be copied to Site.
6.5 Permits to work will be obtained where necessary.
6.6 Ensure that when site is vacated all parts are left clean and tidy as observed when arriving on site. Ensure no damage has occurred to equipment on site and report all findings to the site representative.
6.7 Ensure the fire watch facilities are suitably maintained at all times, and if for any reason these have to be removed it is essential that they be re-instated when leaving site at any time.
6.8 Particular care is to be taken at all times when working in close proximity to equipment or possible live supplies. If any doubts arise a site representative will need to be consulted and a safe procedure adopted. Any particular hazards will be identified by the Site Representative prior to commencing work.
6.9 As always adopt a policy of if in doubt ask, if this can't be done then **stop** until adequate answers can be obtained.

GENERAL COMMENTS

Site specific engineers / operatives need to make our engineers aware of site facilities and fire protection systems that are in place.

All Engineers / contractors to sign in / out each day on site

Only NON UPS supplies shall be used.

All power tools/equipment shall be 110vac, centre tapped via transformer or 230VAC with additional protection. Please note unless purposely specified the test equipment will 240 V

All applicable power equipment shall be PAT tested and have a validation certificate.

Warning signs applicable to the works shall be provided and suitably positioned by the area in which works are being conducted.

Extreme care must be taken to ensure that no damage to other services and equipment occurs.

Any drilling or other works which will generate dust must be notified to the site supervising engineer **prior** to commencing work. During drilling (if required) a vacuum shall be used at the drill bit to reduce the amount of dust dispersed into the environment.

The Test Engineers shall ensure that personnel on site are aware of work being performed and control / protection measures are taken to eliminate the risk of injury to the third party.

When working in an area where false floor tiles are removed suitable warning notices shall be positioned to ensure the safety of others.

Upon completion of works the area will be clean and tidy prior to leaving site.

REGULATION REFERENCES

- Health & Safety at Work, etc., Act 1974;
- Management of the Health & Safety at Work Regulations, 1999;
- Lifting Operation and Lifting Equipment Regulations (L.O.L.E.R) 1998.
- Noise at Work Regulations 1989
- Provision and Use of Work Equipment Regulations (P.U.W.E.R) 1998
- Personal Protective Equipment at Work Regulations (P.P.E) 1992
- Construction (Health, Safety and Welfare) Regulations 1996
- Fire Precautions (Workplace) Regulations 1976
- H.S.E Directive – Working from Height
- Manual Handling Operations Regulations, 1992;
- Work at Height Regulations 2005;
- COSHH Regulations 2002;
- The Electricity at Work Regulations 1989;
- BS7430: 1998 Code of Practice for Earthing; (Formerly CP 1013: 1965)
- BS7671:1992 Requirements for Electrical Installations (Incorporating Amendments 1, 2 and 3);
- The Construction (Design and Management) Regulations 1994.

ALL other Statutory or Advisory instruments associated with the design, construction, and installation, testing / commissioning and setting to work of Electrical systems, services, plant and equipment.

ALL details and arrangements of the Works shall be such as to facilitate servicing, maintenance.

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Hazard	Hazardous Effect	Initial Risk			Risk Control Measures	Residual Risk		
		F	S	IR		F	S	RR
Accidental discharge of extinguishant Damage to equipment	Possible ill affects on operatives, Possible damage to building.	1	4	4	Systems to be left in **MANUAL** at all times during work / tests. Site Representative to be in attendance for R.I.T. Care and vigilance by all involved.	1	4	4
Trip & Fall Hazards	Injury to personnel	2	4	8	Ensure that all equipment on site is kept to a minimum and off main walkways. Ensure that correct access equipment is used at all times. Ensure that barriers are used where floor tiles are removed. Access to Risk Area to be kept to a minimum. Care and vigilance by all involved	1	4	4
Noise	Damage to ears	2	3	6	Site the equipment outside if possible, at last resort use ear defenders.	1	3	3
Trailing Cables	Slips trips and falls	2	2	4	Barrier & signage to be used, where possible secure cables at height.	1	2	2
Work at height	Injury from fall, falling materials.	2	4	8	Ensure appropriate ladders / platform / access equipment is used	1	4	4
Cluttered walkways	Slips, trips and falls	2	2	4	Maintain good housekeeping and use barriers to segregate walkways where required	1	2	2
Congested fire exit routes	Slips, trips and falls, fire risk	2	3	6	Maintain good housekeeping; dismantle access equipment if no longer required.	1	3	3
Poor lighting	Slips, trips and falls	2	2	4	Improve lighting, provide task lighting and ensure that placement of light fittings provide more even lighting.	1	2	2
Handling/dropping equipment	Cuts, abrasions and contact injuries	2	3	6	Wear hard hat, safety footwear, protective gloves, overalls and safety eyewear	1	3	3
Incorrect use of tools and equipment	Cuts, abrasions and contact injuries	2	4	8	Ensure that correct access equipment is used at all times. Adequate eye protection is required at all times, where there is a risk of flying objects / particles. Open Bladed tools (knives, chisels, screwdrivers etc) are to be used / stored / transported so as not to cause injury or the risk of injury to others. Insulated tools are to be used where there is a possibility of live electrical work. All battery operated equipment to take precedence and this should be used if possible. All battery equipment to be in good working order.	1	4	4
Manual Handling	Musculoskeletal injuries	2	3	6	Use of mechanical handling equipment where possible. Ensure operatives trained in manual handling and competent, large diameter pipes to be fabricated in manageable lengths if lifting into bracket supports manually.	1	3	3
Electrocution	Risk of Electric shock, at worst case leading to death of an operative	2	2	4	Awareness – Induction Where connections are required use qualified Electricians only. Verify adequately the use any unknown supplies. Always (where possible / practical) isolate supplies. If required devise a safe system of work that is acceptable to all. Verify **all** unknown cabling with site familiar representative.	1	2	2

Further Information: Ensure all operatives are trained and competent and testing is carried out as per client's instructions. Tool Box Talks

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Prepared by: Signature: Date:

KEY

PROBABLE FREQUENCY - People	SEVERITY – People	Severity - Plant/Assets	Frequency X Severity = Risk Rating
1 = Improbable Occurrence	1 = Trivial Injuries – not requiring first aid	1 = Negligible	1-8 (3% - 16%) = Low Risk
2 = Possible Occurrence	2 = Minor Injuries – requiring first aid	2 = Minor Damage	
3 = Occasional Occurrence	3 = Major Injury to ONE person – reportable to RIDDOR	3 = Moderate Damage	9-16 (17% - 46%) = Medium Risk
4 = Frequent Occurrence	4 = Major Injury to SEVERAL people – reportable to RIDDOR	4 = Severe Damage	
5 = Regular Occurrence	5 = Death of ONE person	5 = Major Damage	17-36 (47% - 100%) = High Risk
6 = Common Occurrence	6 = Death to MULTIPLE people	6 = Catastrophic	

Risk Matrix

6	12	18	24	30	36
5	10	15	20	25	30
4	8	12	16	20	24
3	6	9	12	15	18
2	4	6	8	10	12
1	2	3	4	5	6

RISK EXPLANATION

1 – 8	Acceptable (While further action may not be reasonable or practicable it is essential that the process and controls are monitored throughout the work).
9 – 16	Insufficient (Improvements are required to reduce the risks to an 'Acceptable' level and a suitable timescale must be established in which to make sure that they happen. Monitoring will be required when measures have been implemented).
17 – 36	Unacceptable (Work must not be permitted to progress until suitable measures have been put into place to reduce the risks to an 'Acceptable' level. Monitoring will be required when measures have been implemented.

I have read/been briefed and understand the Risk Assessment and agree to conform to the risk control measures. I agree that if there is a significant change in the workplace/environment, a hazard has not been identified or I think the control measures are inadequate I will notify my supervisor or line manager to review and amend this risk assessment. A copy of the Risk Assessment will be available during the work (for reference and inspection by a competent authority)

Name	Signature	Date	Name	Signature	Date