



Our reference 本署檔號 :
(68) in EMSD/LESD 7-2/4 Pt. IV

Telephone 電話號碼 : (852) 2808 3861

Your reference 來函檔號 :

Facsimile 圖文傳真 : (852) 2504 5970

23 February 2011

All Registered Lift/Escalator Contractors
All Registered Lift/Escalator Engineers

Dear Sirs,

Circular No. 2/2011
Performance Assessment Scheme
Contractors' Performance Rating System

With a view to further enhancing the Performance Assessment Scheme (PAS) and rating methodologies for the Contractors' Performance Rating (CPR) System implemented in June 2009, the department has, in collaboration with a Task Force with members from the Lift and Escalator Contractors Association, the Registered Elevator and Escalator Contractors Association Limited, the registered lift/ escalator contractors, the International Association of Elevator Engineers, the Hong Kong General Union of Lift and Escalator Employees and the Building Services Operation and Maintenance Executive Society, updated the content of the PAS and revised the calculation method of the CPR system.

Changes postulated by the PAS and the CPR have been explained to and agreed by the members of the Task Force on 20 January 2011. The proposed changes were also circulated to all registered lift/escalator contractors and registered lift/escalator engineers for comments on 2 February 2011. There was no comment on the revised calculation method and rating methodologies for the CPR system. Comments on the PAS received have been incorporated in the attachment. The revised PAS will supersede Circular No. 21/2009 with immediate effect.

It should be noted that the PAS and CPR system will not affect PM points which have been accorded to individual registered lift/escalator contractors and engineers. In addition, it was agreed that the next CPR result to be released in early March 2011 will use the PM points accorded within the last 12 months, i.e. from March 2010 to February 2011 with the new calculation method.

Yours faithfully,



(W. S. CHUI)

for Director of Electrical and Mechanical Services

Encl.

c.c. The Director of the Architectural Services Department (Attn.: CBSE/2)
The Director of Buildings
The Director of Housing (Attn.: SM/QM)
The Lift and Escalator Contractors Association
The Registered Elevator and Escalator Contractors Association Limited
The International Association of Elevator Engineers
The Hong Kong General Union of Lift and Escalator Employees
The Building Services Operation and Maintenance Executives Society

Assessment of the Performance
of
Registered Lift/Escalator Contractors & Engineers

Effective Date: 23 February 2011
Electrical & Mechanical Services Department



Assessment of the Performance
of Registered Lift/Escalator Contractors & Engineers

1. Introduction

Under the Lifts and Escalators (Safety) Ordinance ("the Ordinance"), registered lift/escalator contractors/engineers (hereinafter called RC and RE for registered contractor and registered engineer respectively) are required to perform their specific duties as stipulated in sections 11A (for REs) and 11J (for RCs) of the Ordinance. The Director makes reference to the quality of lift/escalator works observed during inspections to gauge and monitor the performance of REs and RCs.

2. Performance Monitoring

(a) Performance monitoring ("PM") points are derived to facilitate assessment of the performance of RCs and REs. The quantified PM points represent the performance pitfalls of RCs and REs in carrying out lift/escalator works failing to comply with the requirements stipulated in the following Ordinance, Code of Practice and international standards:

- (i) Lifts and Escalators (Safety) Ordinance;
- (ii) Code of Practice on Building Works for Lifts and Escalators;
- (iii) Code of Practice on the Design and Construction of Lifts and Escalators ("Design Code");
- (iv) Code of Practice for Lift Works and Escalator Works ("Works Code");
- (v) Code of Practice for the Electricity (Wiring) Regulations; and
- (vi) BS2655, BS5655, BS5656, EN81 and EN115, wherever applicable to lifts or escalators.

(b) The established non-compliant items, depending on their nature, are classified into 6 Categories, namely A, B, C, D, E & X. Each item within the individual Categories A, B, C, D & E has the same Performance Monitoring (PM) points, whereas items within Category X have different PM points. For calculation of the average score of PM points over a period, every allocation of PM points by an item under Category X will increase the number of units inspected by one.

(c) During the inspection of a lift/escalator by the Director's representative in the presence of the RC/RE or his representatives, PM points will be recorded according to each identified non-compliant item. The lift/escalator inspections may normally be conducted under the following occasions:

- (i) Upon receiving a test certificate issued by a RC and a RE for a new lift or a new escalator;
- (ii) Upon receiving a test certificate issued by a RC and a RE for a lift or an escalator after major alterations;
- (iii) Upon receiving a test certificate issued by a RC and/or a RE for an existing lift or escalator;
- (iv) Upon receiving complaints from the public;
- (v) Upon notification of an incident related to a lift/escalator; and
- (vi) Random inspections of existing lifts or escalators.

PM points recorded will be kept in the account of each RC or RE or both of them depending on the nature of the identified non-compliant items. Normally, the PM points arisen from non-compliant items of maintenance works will be recorded in the RC's account and PM points arisen from non-compliant items identified from inspections following receipt of certificates will be accorded to the RC and the RE who last examined or tested the installation.

(d) PM points will be recorded following the decision of the courts/disciplinary boards or conclusion of investigation where the RC or RE is convicted, guilty or found liable for the incident subject to the fact that no PM points have been allocated upon the discovery of the non-compliant items/misconduct/negligence concerned.

(e) The RC or RE will be notified in writing in case any non-compliant items are identified and the related PM points are recorded in his account. He may appeal in writing with full justifications to the Director within three weeks of the notification date. For exceptionally complicated cases where the RC or RE requires more time to prepare appeal justifications, the RC or RE may furnish reasons and apply to the Director in writing within two weeks of the notification for extension of time for submission of full appeal justifications. The Director will advise the time limit, where applicable, for the RC or RE to prepare for the appeal. The Director's decision on granting extension of time and on the appeal shall be final.

(f) PM points incurred for the non-compliant items identified will be kept in the RC's or RE's account for 12 successive calendar months, commencing from the month of the non-compliant items identified, for calculation of the moving average in h(iii) below.

- (g) As the total PM Points of each RC/RE's account accumulate up to the critical points or at such critical situations where the non-compliance may lead to serious safety consequence, the Director may take one or more of the following actions:
- (i) Issue a warning letter to the RC or RE and also notify other relevant enforcing authorities;
 - (ii) Initiate disciplinary proceedings by bringing the matter(s) to the notice of the Secretary for appointment of a Disciplinary Board pursuant to section 8 or section 11E of the Ordinance;
 - (iii) Institute prosecution actions against the RC or RE.
- (h) For the purpose of paragraph (g), the following critical points and situations are established:
- (i) The identification of any Category A non-compliant item (15 PM points item) in a single unit inspection. It should be noted that prosecution actions may be instituted for the identification of any Category A non-compliant item marked with an asterisk (*).
 - (ii) An aggregated total of 12 PM points or more for non-compliant items, excluding Category A and Category X items, in a single unit inspection.
 - (iii) 4 PM points for the moving average of the accumulated PM points of the non-compliant items found over a period within which the number of units inspected is not less than 10, excluding Category A and Category X items and the aggregated total of PM points under item (ii) above to which a warning has been issued. The inspected units giving rise to the Category A item(s), Category X item(s), or an aggregated total of 12 PM points or more in a single unit inspection are to be excluded for the calculation of moving average figure. The accumulated PM points will be nullified upon issuance of a warning letter due to triggering of the moving average critical point and the number of units inspected will be reset to zero. Further moving average assessment will be made for the ensuing period when the number of units inspected reaches 10 again.
 - (iv) The non-compliance was due to grave negligence or misconduct of the RC and/or RE.
 - (v) The performance of the RC or RE is persistently unsatisfactory, i.e. 3 warning letters have been issued to the RC or RE within a 12 months' period.
- (i) A demarcation prefix "P" has been added to all the non-compliant items under this assessment scheme.
- (j) A sample calculation illustrating the arrangements mentioned in (f) and (h) is shown in the **Appendix**.
- (k) The aforementioned monitoring of performance and sanction mechanism shall not derogate of any action or penalty which has to be taken or imposed in relation to any

disciplinary matter or any offence stipulated in the Ordinance.

3. List of Common Non-compliance - Lifts

Category A (15 points)

- PLA1* The car door electrical interlock device is not provided or is ineffective such that the lift is still operational with a car door not fully closed.
- PLA2* The landing door interlock device is not provided or is ineffective such that the landing door is insecure or can be opened without using the unlocking key when the car is not in the unlocking zone, or when the lift can be operated with a landing door not fully closed or locked (for lifts installed on or after 31 May 1984, the landing door is considered "locked" only when the engagement of locking elements is not less than 7 mm).
- PLA3* The safety gear or the ascending car overspeed protection means or the overspeed governor is not provided or failed to perform its intended function when the car reaches the designated tripping speed of the overspeed governor such that:-
- (i) the car (and/or counterweight where applicable) cannot be stopped and maintained stationary, in the case of safety gear.
 - (ii) the car cannot be stopped or slowed down to a speed for which the counterweight buffer is design, in the case of ascending car overspeed protection means (this applies to the lifts installed with the tendering date on or after 1 January 2001).
- PLA4 The machine brake is ineffective such that a downward travelling car with up to 125% rated load (150% rated load for industrial truck loaded freight lifts and vehicle lifts; 110% rated load for passenger lifts designed & constructed prior to BS 5655:Pt. 1) cannot be stopped and maintained stationary in case the power supplies to the motor and the brake are interrupted.
- PLA5 The buffer is ineffective due to either improper installation or, in the case of oil buffer, insufficient buffer oil.

- PLA6 For hydraulic lifts only: Protection devices against free fall or descent with excessive speed is not provided or failed to perform its intended function. Reference should be made to Table 1 or Clause 5.8.2 in Section E Part 2 of the Design Code for requirements of protection devices.
- PLA7* The electrical interlock device for the inspection or emergency door or inspection trap to the lift well or for the access door to the lift pit is not provided or is ineffective such that the lift can be operated when any of these doors or trap doors is not in the closed position.
- PLA8* The hoisting rope/chain is broken due to inadequate or inferior maintenance/workmanship/material quality (where material quality of the hoisting rope/chain is in issue, no points will be recorded if the material quality of the hoisting rope/chain is outside the control and awareness of the RC or RE).
- PLA9* The unintended car movement protection device is not provided or ineffective such that the lift moved from the landing with the landing door not in the locked position and the car door not in the closed position (this applies to the lifts installed with the tendering date on or after 1 September 2007).

Category B (6 points)

- PLB1 Incorrect setting of the car overload device or the car overload device is not of a fail-safe design such that the lift can close its doors and operate when the load in the car exceeds 110% of the rated load (for lifts installed on or after 3 May 1969).
- PLB2 The upper and/or lower final limit switches of an electric lift, or upper final limit switch of a hydraulic lift is not provided or is ineffective.
- PLB3 Terminations of hoist ropes or compensation ropes or governor ropes improperly installed in that the fixing or termination of the ropes is insecure or metal/resin filled sockets not adequately filled with metal/resin or rope grips not provided or missing.
- PLB4 The buffer switch is not provided or is ineffective for the energy dissipation type buffers (for lifts installed on or after 31 May 1984).
- PLB5 The governor slack rope switch is not provided or is ineffective (for lifts installed on or after 31 May 1984).
- PLB6 The compensation rope tension switch is not provided or is ineffective.
- PLB7 The emergency stop switch at the machine room (for lifts installed on or after 18 March 1994), the pit or the car top is not provided or is ineffective.
- PLB8 Speed setting of the overspeed governor is incorrect.

- PLB9 The stopping distance in a safety gear test does not comply with the sliding distance limitation stated in BS5655: Part 10 or BS2655: Part 1 (for lifts installed before 18 March 1994).
- PLB10 Phase failure/reversal protection is not provided or is ineffective.
- PLB11 Insufficient traction such that the requirements stated in BS5655: Part 10 are not satisfied (for lifts installed on or after 31 May 1984).
- PLB12 The car door mechanical lock is not provided or is ineffective (for lifts installed on or after 31 May 1984) such that the car door is insecure or can be opened by bare hands inside the lift car when the car is not in the unlocking zone, or when the lift can be operated with the car door not locked (for lifts installed on or after 10 October 2000, the car door is considered "locked" only when the engagement of the locking elements is not less than 7 mm).
- PLB13 The car/counterweight obstruction safety device is ineffective or not correctly adjusted (for lifts installed on or after 31 May 1984).
- PLB14 The interlocking device for the car top/side emergency exit is not provided or is ineffective such that the lift can be operated when the exit is not closed and locked.
- PLB15 The fireman's lift fails to perform the required fireman's lift operating mode.
- PLB16 The home landing operation is not provided or is ineffective such that the lift car cannot be brought back to home landing in case of fire emergency (for lifts installed on or after 18 March 1994).
- PLB17 The electrical interlock device for the fire/security gate installed in front of the lift entrance is not provided or is ineffective. (Points will be recorded if the RC or RE has not advised the owner of this defect in writing for rectification.)
- PLB18 The landing door bridging control station is not provided or is ineffective (for lifts installed on or after 18 March 1994).
- PLB19 The tape switch is ineffective (for the lift with reduced stroke buffer and using tape to transmit car position).
- PLB20 Electrical checking on operation of the car safety gear is not provided or is ineffective (for lifts installed on or after 31 May 1984).
- PLB21 The protective screen is not provided at the pit for the counterweight or between liftways for common shaft installation.
- PLB22 Exposed/extraneous conductive parts of the lift system are not electrically earthed in accordance with the Code of Practice for the Electricity (Wiring) Regulations or the earthing is ineffective.

(PM points will be recorded under the following conditions:

The parts concerned are provided by the RC; or

The parts concerned are not provided by the RC and the RC or RE has not advised the owner of this defect in writing for rectification.)

- PLB23 For hydraulic lifts only: The anti-creep system is not provided as required or is ineffective.
- PLB24 For hydraulic lifts only: The pressure relief valve is not provided or is ineffective.
- PLB25 Security gate is installed in front of the lift entrance of a fireman's lift. (PM points will be recorded if the RC or RE has not advised the owner of this defect in writing for rectification.)
- PLB26 Sufficient overhead runby or bottom clearance in the pit according to the Design Code is not provided.
- PLB27 Clause 4.10 in Section E Part 1 or Part 2 of the Design code is not complied with.
- PLB28 Hoisting ropes are not maintained in good working conditions in that the diameter of a hoisting rope has worn down by more than 10% of its nominal diameter or the number of wire breaks is excessive or there is severe rusting (i.e. obvious rouging exists for more than a cumulated rope length of 1 m within a hoisting rope for an installation with a travel not more than 30 m or a cumulated rope length of 3 m within a hoisting rope for an installation with travel exceeding 30 m) or excessive grease/scum deposited on the hoisting rope (i.e. valley between rope strands is not visible for more than a continuous rope length of 1 m within a hoisting rope for an installation with travel not more than 30 m or for a cumulated rope length of 5% of a hoisting rope).
- PLB29 Fire or smoke incident involving the equipment or ancillary machinery of a lift installation, which is found to be induced or caused due to inferior workmanship in the installation or lack of maintenance of the lift, e.g. short-circuiting, excessive dust/dirt, foreign materials, ageing cables, etc.
- PLB30 Failure to carry out lift works by two or more lift workers in accordance with the Code of Practice for Lift Works and Escalator Works, Section C, Clause 4.3.3.

Category C (4 points)

- PLC1 Self-closing function of the landing door is ineffective (for lifts installed on or after 31 May 1984). This excludes the cases where the dysfunction is caused by foreign materials such as debris or sand particles in door sills.
- PLC2 Emergency alarm devices such as car push button with buzzer or intercom system

are not provided or are ineffective. For lifts installed on or after 20 September 1997, CCTV system, indication light, reset function and indication light for acknowledgement in lift car for the disabled are also included.

(PM points for CCTV system, indication light, reset function and indication light will be recorded under the following conditions:-

The parts concerned are provided by the RC; or

The parts concerned are not provided by the RC and the RC or RE has not advised the owner of this defect in writing for rectification.)

- PLC3 The car emergency lighting is not provided or is ineffective (for lifts installed on or after 3 May 1969).
- PLC4 More than 10% of the total number of landing/car doors inspected have excessive clearance between door panels, or between door panels and uprights, lintels or sills (PM points will be recorded for cases of excessive clearance due to unsatisfactory building works if the RC or RE has not advised the owner of this defect in writing for rectification and recorded the same in the log-book within the last three months).
- PLC5 Corrosion or damage or rusting of car cages, car doors or landing doors which affects the safety of passengers.
- PLC6 The normal/inspection switch of the car top control station is ineffective.
- PLC7 Display of the floor indication panel does not tally with the actual position of the lift car (no points will be recorded if this non-compliance is due to the owner's arrangement without notifying the RC).
- PLC8 The compensating rope/chain is broken.
- PLC9 The empty car can be raised by the lift machine rotating in the "up" direction when the counterweight is resting on the buffer (for lifts installed on or after 31 May 1984).

Category D (3 points)

- PLD1 The landing door emergency release function is ineffective.
- PLD2 Door sensitive protective devices are ineffective such that car/landing doors continue to close even when the device has been triggered. (It does not include the case when the sensitive protective device is made inoperative for the forced closing system.)
- PLD3 Door closing force of automatic power operated horizontally sliding doors is excessive.

- PLD4 Filler weights of the counterweight are insecure such that emergency stopping or vibration during normal operation can cause the filler weights to dislodge from the counterweight frame or to displace horizontally by more than 20 mm or to displace to a position such that the clearance between lift car (and its associated equipment) and the filler weights is less than 50 mm (the 50 mm clearance is applicable to lifts installed on or after 31 May 1984 only), or to jump and hit the adjacent filler weight or counterweight frame. During the PAS inspections, the filler weights may be pushed by hand without using any tool in order to check whether the filler weights are securely fixed.
- PLD5 The car apron is not installed or properly fixed.
- PLD6 The landing door apron under the threshold is not installed or properly fixed (for lifts installed on or after 31 May 1984).
- PLD7 The protective screen is not properly installed at the pit for the counterweight or between liftways for common shaft installation.
- PLD8 Guide rails/Guide rail brackets are not properly fixed/spaced.
- PLD9 The car 'door open' button is ineffective.
- PLD10 Protective guards not provided or cannot offer the protection as required such that moving parts including rotating parts can inadvertently be accessed.

Category E (2 points)

- PLE1 The car ventilation fan is inoperative.
- PLE2 Ventilation slots are blocked up (not applicable for lifts installed before 31 May 1984) (PM points will be recorded if the RC or RE has not advised the owner of this defect in writing for rectification and recorded the same in the current log-book).
- PLE3 Car lighting is not properly installed or is inoperative such that all lamps fail to turn on.
- PLE4 The brake releasing device or the handpump or the manual lowering device is malfunction, or the correct or updated emergency operation instruction is not provided.
- PLE5 Oil leakage from machinery resulting in insufficient lubrication or oily floor with prominent safety hazard.
- PLE6 Notice or operating instruction for freight lift or industrial truck loaded freight lift or vehicle lift is not provided.
- PLE7 Failure to update log-book in accordance with the Code of Practice for Lift Work and Escalator Works, Section C, Clause 7.

- PLE8 The lift well lighting, when fitted, are not properly spaced (not applicable for lift well lighting installed before 31 May 1984).
- PLE9 Load plate is not provided inside the lift car or the required information is not correctly shown.
- PLE10 Machine room door or pulley room door or emergency/inspection door to the lift well, or access door to the lift pit is not opening outwards, or is not provided with self closing device (not applicable to trap doors), or permanent warning notice or locking device of the type that can be opened without a key from inside the room or lift well or lift pit not provided (PM points will not be recorded if RC or RE has advised the owner of this non-compliant item in writing).

Category X (PM points to be specified for individual item)

(PM points specified for the individual items will be allocated subject to the fact that no PM points have been allocated upon discovery of the non-compliant items/misconduct/negligence.)

- PLX1 Conviction by the court for offence(s) in relation to contravention of the provisions of the Ordinance (20 PM points)
- PLX2 Guilty by the disciplinary board for such misconduct or negligence in carrying out lift works (15 PM points)

4. List of Common Non-compliance - Escalators

Category A (15 points)

- PEA1 The escalator machine brake or the auxiliary brake or the broken drive chain safety device is ineffective such that the escalator steps cannot be stopped and maintained stationary.
- PEA2* The step chain, drive chain or the shaft of the drive machine is broken due to inadequate or inferior maintenance/workmanship/material quality (where material quality of the step chain, drive chain or the shaft of the drive machine is in issue, no points will be recorded if the material quality of the component is outside the control and awareness of the RC or RE).

Category B (6 points)

- PEB1 The phase failure/reversal protection device is not provided or is ineffective.

- PEB2 The escalator brake is not properly adjusted such that the sliding distance does not comply with the limitations.
- PEB3 The emergency stop switch is not provided or is ineffective.
- PEB4 The broken step chain safety device is not provided or is ineffective.
- PEB5 The step sagging safety device is not provided or is ineffective (for escalators installed on or after 31 October 1987).
- PEB6 The non-reversal device is not provided or is ineffective.
- PEB7 The broken handrail safety device is not provided or is ineffective (for public service escalators installed on or after 31 October 1987).
- PEB8 The handrail entry safety device is not provided or is ineffective (for escalators installed on or after 31 October 1987).
- PEB9 The comb plate safety device is not provided or is ineffective (for escalators installed on or after 31 October 1987).
- PEB10 The speed governor or speed control is not provided or not complying with the requirements in the Design Code, Section E, Part 4, Clause 8.5.1.
- PEB11 The skirt panel switch is not provided, is missing or is ineffective such that the escalator does not stop even if a foreign object is jammed between the skirt panel and the pallet (for escalators installed on or after 18 March 1994).
- PEB12 The electrical interlocking device of the escalator in connection with the adjacent shutter gate is not provided or is ineffective (points will be recorded if the RC or RE has not advised the owner of this defect in writing for rectification).
- PEB13 Exposed/extraneous conductive parts of the escalator system are not electrically earthed in accordance with the Code of Practice for the Electricity (Wiring) Regulations or the earthing is ineffective.
(Points will be recorded under the following conditions:
The parts concerned are provided by the RC; or
The parts concerned are not provided by the RC and the RC or RE has not advised the owner of this defect in writing for rectification.)
- PEB14 The interlocking device for successive escalators without intermediate exit is not provided or is ineffective such that the escalator will not stop automatically upon stopping of its succeeding escalator.
- PEB15 Fire or smoke incident involving the equipment or ancillary machinery of a escalator installation, which is found to be induced or caused due to inferior workmanship in the installation or lack of maintenance of the escalator, e.g. short-circuiting, excessive dust/dirt, foreign materials, ageing cables, etc.

Category C (4 points)

- PEC1 The clearance between the skirt panel and the step of an escalator exceeds 4mm.
- PEC2 The clearance h_6 (see figure 1, detail X of Section E, Part 4 of the Design Code) between the comb and the step exceeds 4 mm, or the horizontal clearance between the teeth of the comb and the web of the step exceeds 4 mm or the clearance between steps exceeds 6 mm.
- PEC3 The enclosure of escalator (cladding) is not properly installed such that machinery, moving parts or electrical parts are exposed and accessible by unauthorized persons.
- PEC4 The safety device for the inspection door or the trap door next to the adjacent escalator treadway is not provided or is ineffective such that the adjacent escalator can still operate when this inspection door or trap door is open.
- PEC5 The clearance b_6' or b_6'' (see figure Z detail W of section E, Part 4 of the Design Code) between the handrail profile and guide or cover profile exceeds 8 mm.

Category D (3 points)

- PED1 Failure of the RC or RE to advise the owner of the missing guards or the guards are installed incorrectly at intersection between escalator and floor, between escalator and adjacent obstructions, or between criss-cross escalators.
- PED2 Protective guards for accessible moving parts including rotating parts are not provided or they fail to offer the protection as required.
- PED3 Deviation of the speed of the handrail from the speed of the steps is outside the limits of 0 to +2% (for escalator installed on or after 31 October 1987).
- PED4 The skirt deflector is not provided or the installation is ineffective (for escalators installed on or after 18 March 1994).

Category E (2 points)

- PEE1 The brake release or manual release instruction is not provided.
- PEE2 The notice or pictograph is not provided.
- PEE3 Failure to update log-book in accordance with the Code of Practice for Lift Works and Escalator Works, Section C, Clause 7.

- PEE4 The clearance between the balustrade exterior paneling and the guard wall/rail erected adjacent to the escalator at the landing exceeds 100 mm or the guard rail/wall is not securely fixed (PM points will not be recorded if RC or RE has advised the owner of this non-compliant item in writing for rectification).

Category X (PM point specified for individual item)

(PM points specified for the individual items will be allocated subject to the fact that no PM points have been allocated upon discovery of the non-compliant items/misconduct/negligence.)

- PEX1 Conviction by the court for offence(s) in relation to contravention of the provisions of the Ordinance (20 PM points)
- PEX2 Guilty by the disciplinary board for such misconduct or negligence in carrying out escalator works (15 PM points)

Appendix - Sample calculation of moving averages

A. Month	For a particular RC/RE, assessment started on Nov 2009																	
	2009		2010										2011					
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
B. No. of units inspected in the month excluding those with which warning has been issued following the inspection	8	3	4	4	6	7	5	1	3	6	7	4	8	3	4	4	4	4
C. Total no. of units inspected for 12 successive calendar months	8	11	15	19	25	7 ⁽⁵⁾	12	13	16	22	29	33	41	44	48	52	56	53 ⁽⁶⁾
D. Total no. of PM points (Categories A and X items) scored in the month	0	15 ⁽²⁾	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0
E. Total no. of PM points (12 PM points or more in a single unit inspection) scored in the month	0	0	0	14 ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Total no. of PM points (excluding non-compliant items already covered by a warning following the inspection) scored in the months	16	4	28	24	36	20	15	0	2	2	0	2	4	6	4	2	0	2
G. Total no. of PM points (excluding non-compliant items already covered by a warning following the inspection) scored for 12 successive calendar months	16	20	48	72	108	20 ⁽⁵⁾	35	35	37	39	39	41	45	51	55	57	57	39
H. Moving average PM points (excluding non-compliant items already covered by a warning following the inspection) scored for 12 successive calendar months (H= G/C)	(N/A) ⁽¹⁾	1.8	3.2	3.8	4.3 ⁽⁴⁾	(N/A) ⁽¹⁾	2.9	2.7	2.3	1.8	1.3	1.2	1.1	1.2	1.1	1.1	1.0	0.7

Notes:

- (1) As number of units inspected is less than 10, moving average is not calculated.
- (2) In **December 2009**, 15 PM points from a Category A item were accorded from a single unit inspection. Action is taken against the RC/RE, but such PM points are not used to calculate moving average.
- (3) In **Feb 2010**, 14 PM points (excluding Category A item) were accorded from a single unit inspection. Action is taken against the RC/RE, but such PM points are not used to calculate moving average.
- (4) In **March 2010**, the moving average PM points (excluding items under Categories A and X and aggregated total of PM points reaches 12 or more from a single unit inspection) has reached 4.3 and number of units inspected is accumulated to 25. Action is taken against the RC/RE.
- (5) The number of units inspected and the total no. of PM points for the preceding months are reset to zero following triggering the moving average critical PM points.
- (6) The number of units inspected in April 2010 is excluded for the calculation of the total number of units inspected as at the end of **April 2011** over 12 successive calendar months..