



SCDF
The Life Saving Force

2nd Fire Safety Engineer (FSE) Dialogue Session

Friday 26th Oct 2018

2:30 pm to 5:00 pm

SCDF HQ

City Campus Level 3 Lecture Room 1A



Agenda :

2:30 pm to 5:00 pm

- FSE Inquiry Panel Penalty Framework
- Expediting PB Process
- Queries raised
- PB Waiver Issues



FSE Inquiry Panel Penalty Framework (Draft, for FSE info)



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Slide is removed, pending further updates, which will be shared with FSE subsequently.



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Advice for FSEs and Peer Reviewers:

Please review the Fire Safety Act and Fire Safety Regulations.



Expediting the PB Process



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Expediting the PB Process

Auto-Approval of INDUSTRIAL FEDBs.



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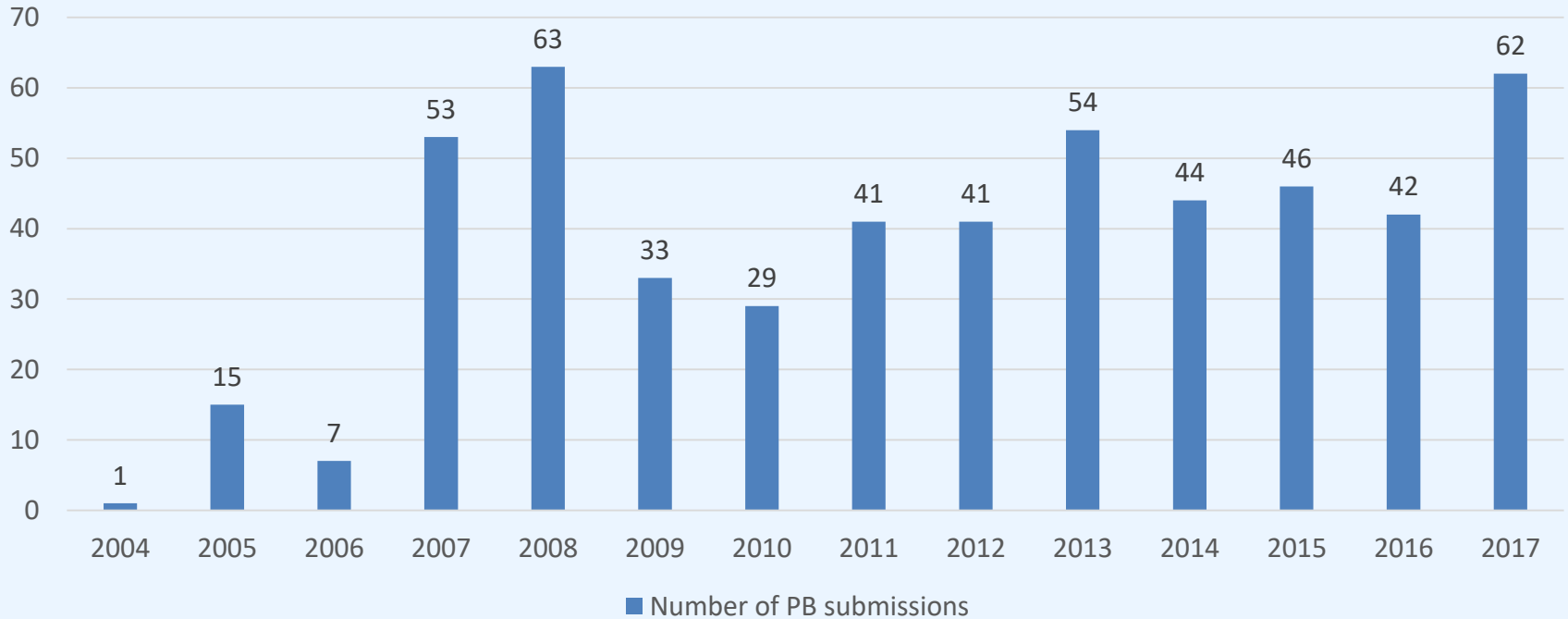


Why the change now ?

- I. Move towards self-regulation (similar to prescriptive compliance)
- II. Experienced and mature FSE fraternity.
- III. FEDB quality generally achieve minimum standards.
- IV. Little or no changes at the FER stage.



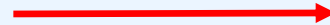
Number of PB cases (**FEDB submissions**)



Statistics (PB Waiver)

Increasing trend.

Dec 2015 circular



Year	PB WVR Issues
2013	34
2014	21
2015	55
2016	108
2017	203
2018*	380

**till 1/10/18*

Why only Industrial FEDBs ?

- I. SFEG clearly documents the PB issues and methodology.
- II. Low occupant loading.
- III. Generally no public access.
- IV. Issues are standard.



Effective date

- a) Effective in 1st Jan 2019. (Pending final internal approvals)
- b) Review of Industrial FEDBs
 1. From 1st Jan 2019, FSEs can still request for FEDB review with justifications.
 - First page of report to clearly state request with justifications.
 2. Once request for FEDB review is lodged, cannot withdraw request.
 3. FEDBs with F.E.D. proposed as acceptance criteria will be subjected to review.
 - FSE to declare “Fractional Effective Dose is not adopted as an acceptance criteria”
 4. SCDF can still choose to review any Industrial FEDBs.



From 1st Jan 2019 -> 1st page of all Industrial FEDB

- a) FSE to declare “Fractional Effective Dose is not adopted as an acceptance criteria”
- b) Request for FEDB review with justifications (if that is FSE’s request)



Benefits for the PB Process

- I. Faster approvals for industrial FEDB.
- II. Shorter processing time for all projects.
 1. More time for review
 2. Shorter queues



Rest of the FEDBs

Review as per current situation.

All FERs

Review as per current situation.



Thoughts ?



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Queries Raised



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Queries Raised

1. Could the guideline of CFD smoke simulation for residential corridor (excessive distance for cross ventilation in SSL/FFL typically) be consolidated and published in website for sharing among all FSEs, if this has not done so.

The guidelines for the above are published in the FSE dialogue slides that can be downloaded from the SCDF website :

[Fire Safety >> Plans and Consultation >> Performance-Based Approach to Fire Safety Design >> Fire Safety Engineers (FSE) Dialogue Session].



Queries Raised

2. To carry out CFD simulation for resi corridor, if resi unit has two doors, need to open both doors or choose to open only one door for smoke to plume into corridor.

Query is project specific (Case by case) . FSE advised to come in for consultation with study proposals after assessing the fire and life safety risks.



Queries Raised

3. To carry out CFD simulation for resi corridor, if resi unit is a marionette (or duplex) with upper level, but only one entrance on lower level, where to place the fire in CFD simulation, ie upper level or lower level?

Query is project specific (Case by case) . FSE advised to come in for consultation with study proposals after assessing the fire and life safety risks.



Queries Raised

4. If Waiver with Engineering Justification for singular non-compliance of prescriptive fire code, eg. Smoke reservoir length, or permissible mass flow rate, or travel distance increased by 10% is still permitted by SCDF, without the need for full PB framework.

Waiver with engineering justification (PB waiver) allowed only:

- a) For clauses in Circular (Dec 2015) and/or
- b) If prescriptive WVR Decision specifies that WVR with additional fire engineering study is needed.



PB Waiver Issues



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WVR/00001/18 **FER**

- Blk 1-i1
- Blk 2-i1
- Blk 2-i2
- Blk 3-i1
- Blk 3-i2



Correct number of issues is necessary for processing.

The waiver description/issues need to be separated as they are processed individually. 5 payments made.

WVR/00001/18 **FER**

- PB Blk 1-i1, Blk 2-i1, Blk 2-i2, Blk 3-i1, Blk 3-i2



Will be REJECTED

Will be rejected even if QP/FSE subsequently makes 4 additional payments into WVR Ref number.



Addressing deviations in multiple blocks/floors.

Where the deviations (*Eg : No part of the floor area of the corridor shall be at a distance of more than 13m from any ventilation openings*) is applicable to different block/floors with similar layout, FSE cannot model most onerous layout as a representative of the others.

Each block/floor is reviewed individually and would require its own assessment as it is a unique design.

Adopting fire engineering results for other blocks/floors is allowed only if the blocks/floors are exactly identical. FSE would need to declare that they are exactly identical.



Goodies



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Goodies
3 CPE points.



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End



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