

SCAPA 2007, Part IV:
Chemical Exposures and Chemical Mixtures

QA of TEELs Rev 22 Additions

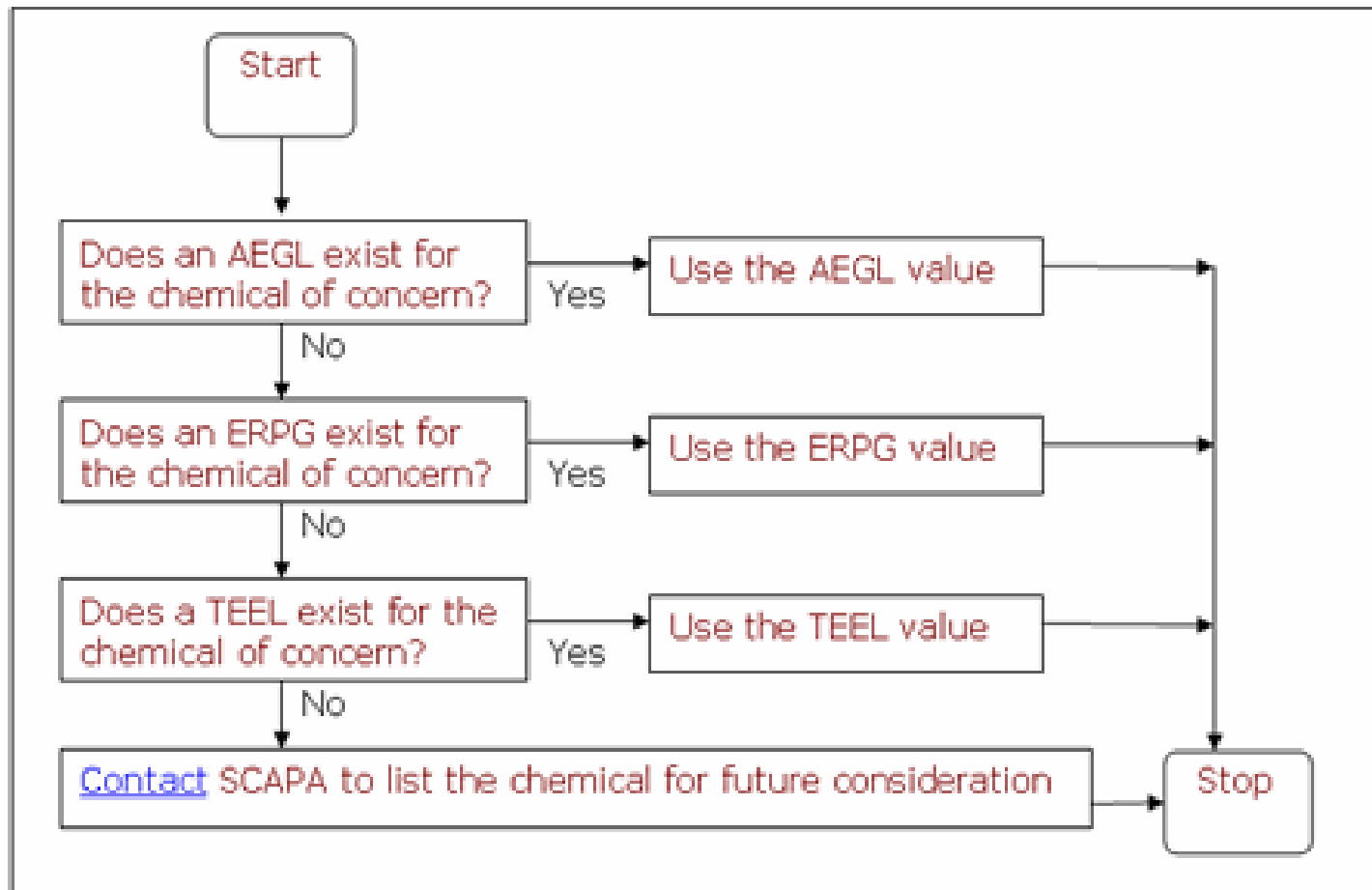
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Two Guiding Principles in QA

1. PAC selection process (*TEELs Methods and Practice April 2007, p. 1-7 Draft*)



Two Guiding Principles in QA

2. PAC Data Selection Hierarchy (*TEELs Methods and Practice April 2007, p. 2-2, Draft*)

Primary PAC	Hierarchy of Alternative PAC Data Parameters	Source
AEGL-3 (60 minutes)	ERPG-3	EPA/NAS AIHA
	TEEL-3: EEGL (30-min) IDLH LC ₅₀ LC _{Lo} LD ₅₀ LD _{Lo}	DOE-OEM NAS NIOSH RTECS/SAX/HSDB/etc. RTECS/SAX/HSDB/etc. RTECS/SAX/HSDB/etc. RTECS/SAX/HSDB/etc.
AEGL-2 (60 minutes)	ERPG-2	EPA/NAS AIHA
	TEEL-2: EEGL (60 minutes) LOC PEL-C TLV-C REL-C WEEL-C TLV-TWA × 5 * TC _{Lo} TD _{Lo}	DOE-OEM NAS EPA/DOT OSHA ACGIH NIOSH AIHA ACGIH RTECS/SAX/HSDB/etc. RTECS/SAX/HSDB/etc.

Primary PAC	Hierarchy of Alternative PAC Data Parameters	Source
AEGL-1 (60 minutes)	ERPG-1	EPA/NAS AIHA
	TEEL-1: PEL-STEL TLV-STEL REL-STEL WEEL-STEL OTHER-STEL TLV-TWA × 3 *	DOE-OEM OSHA ACGIH NIOSH AIHA OTHER ACGIH
PEL-TWA (TEEL-0)	TEEL-0: TLV-TWA REL-TWA WEEL-TWA MAK-TWA OTHER-TWA CEGL	OSHA DOE-OEM ACGIH NIOSH AIHA DFG OTHER NAS

QA Procedures

TEEL derivation for new chemicals, input worksheet data entry instructions, DKC-06-0006.

- ❖ Verify chemical identification information
- ❖ Verify existing Concentration–Limit Data (based on PAC data selection hierarchy)
- ❖ Verify toxicity data source and extraction rules
- ❖ Verify toxicity data/unit/entered correctly
- ❖ Verify “Y” or “N” chemicals:
 - Y: Concentration dependent, causing acute health effects, strong, moderate irritants
 - N: Dose dependent (Concentration X Duration of Exposure), chronic health effects, mild irritants
- ❖ Dialog with Dr. Craig for final resolutions

QA Findings of Rev 22 Additions

- 355 new chemicals
 - QA results of Rev 22:
 - ❖ CASRN: 4 of 355 = 1.13%
 - ❖ Units: 4 of 355 = 1.13%
 - ❖ TEEL-0: 14 of 355 = 3.94%
 - ❖ TEEL-1: 15 of 355 = 4.23%
 - ❖ TEEL-2: 19 of 355 = 5.35%
 - ❖ TEEL-3: 14 of 355 = 3.94%
- $62/355 \times 4 = 62/1420 = 4.34\%$ TEELs are affected.
- Comparable to previous QAs since Rev 17, about 5% of the 10% samples of new additions.

Conclusion

TEELs Rev. 22 will be greatly enhanced.

