Review of PER-005-1—System Personnel Training (Deferred and Filing 2)

http://www.nerc.com/files/PER-005-1.pdf

VRFs for Requirements R1 and R3:

Standard,	Requirement Language	VRF Assignment	Guideline-Based	Comments
Requirement			Justification from	
			<u>September 30, 2009</u>	
			PER-005-1 Filing	
PER-005-1, R1	Each Reliability Coordinator, Balancing	MediumHigh	Reliability Standard	FERC cited possible
	Authority and Transmission Operator		PER-005-1,	Guidelines 1, 3, and 5 issues.
	shall use a systematic approach to		Requirement R1 has a	With respect to Guideline 3,
	training to establish a training program		Medium VRF. This	FERC staff was concerned
	for the BES company-specific reliability-		requirement is primarily	that other standards
	related tasks performed by its System		administrative in nature	involving implementation are
	Operators and shall implement the		because it prescribes a	more typically assigned a
	program.		certain process to be	High VRF. With respect to
			used when developing a	Guideline 5, FERC was
			training program. It is	concerned that the
			unlikely that, under	requirement comingles a
			emergency, abnormal	moderate risk requirement
			or restoration	to develop a plan with a
			conditions, a violation	higher risk requirement of
			of this requirement	implementing the plan, and
			would lead to bulk	that the VRF should defer to
			power system	the higher risk requirement.
			instability, separation or	
			cascading failures or	NERC staff can support FERC
			hinder restoration to a	staff's concern that
			normal condition.	implementation is typically
				assigned a High VRF, and
				that in a case where two
				levels of VRF are comingled,

				the higher one should take precedence. Thus, NERC proposes changing this assignment to High.
PER-005-1, R3	At least every 12 months each Reliability Coordinator, Balancing Authority and Transmission Operator shall provide each of its System Operators with at least 32 hours of emergency operations training applicable to its organization that reflects emergency operations topics, which includes system restoration using drills, exercises or other training required to maintain qualified personnel.	Medium <u>High</u>	Reliability Standard PER-005-1, Requirement R3 has a Medium VRF. Although this requirement provides for certain types of training to be performed at least every 12 months, it is unlikely that under emergency, abnormal or restoration conditions, a failure to complete this training would lead to bulk power system instability, separation or cascading failures or hinder restoration to a normal condition.	Citing possible Guideline 1 and Guideline 3 issues, FERC notes that there is a compatibility issue with PER-002-0, R4, which is assigned a High VRF. NERC staff agrees that PER-005-1 R3 and PER-002-0 R4 (which addresses training and drills that simulate emergencies) are similar, and that emergency operations-related requirements are more appropriately assigned to High VRFs, as indicated in the proposed redline.

VSLs for Requirement R1:

Standard,	Requirement	Lower	Moderate	High	Severe	Comments
Requirement	Language					
PER-005-1, R1	Each Reliability	NoneN/A	The responsible	The responsible	The responsible	Citing a Guideline
	Coordinator,		entity failed <u>to</u>	entity failed to	entity failed to	3 violation, FERC
	Balancing		update its BES	design and	prepare a BES	pointed out that
	Authority and		company-specific	develop learning	company-specific	not all of the

	Transmission	reliability-related	objectives and	reliability-related	subrequirements
	Operator shall use	task list to identify	training materials	task list. (R1.1)	were accounted
	a systematic	new or modified	based on the BES	tasit iisti (11212)	for – what would
	approach to	tasks each	company specific	OR	happen for R1.4 if
	training to	calendar year.	reliability related		an entity was
	establish a	(R1.1.1)	tasks. (R1.2)	The responsible	evaluated and
	training program	(N1.1.1)	tasks. (N1.2)	entity failed to	needed changes,
	for the BES	OR		deliver training	but did not
		OK		J	
	company-specific	T I		based on the BES	implement the
	reliability-related	The responsible		company specific	changes?
	tasks performed	entity failed to		reliability related	
	by its System	evaluate its		tasks. (R1.3)	NERC staff agreed
	Operators and	training program			that this piece of
	shall implement	to identify needed			R1.4 was not
	the program.	changes to its			appropriately
		training			addressed and
		program(s)			added language to
					the Moderate VSL
		OR			accordingly.
		orAann entity			
		evaluated its			
		training program			
		and identified			
		changes, but			
		failed to			
		implement them.			
1		(R1.4)			
		(N.T.4)			

Original R1 Guideline Explanation in the December 1, 2010 VSL Filing:

In accordance with Guideline 2, the VSLs were modified for clarity and consistency with other standards and VSLs.

- Guideline 1: This is a new standard. Accordingly, no historic performance has been established.
- Guideline 2: Modified for clarity and consistency with other standards and VSLs. Additionally, NERC has reviewed the VSL text and has determined that, as written, the VSL text is clear, specific and objective and does not contain general, relative or subjective language satisfying Guideline 2b. Thus, the text is not subject to the possibility of multiple interpretations of the VSL(s) and provides the clarity needed to permit the consistent and objective application of the VSL(s) in the determination of penalties by the Compliance Enforcement Authority.
- Guideline 3: NERC compared the existing VSLs to the stated requirement language to ensure the VSLs do not redefine or undermine the reliability goal of the requirement. In accordance with Guideline 3, the VSL assignments are consistent with the requirement and the degree of compliance can be determined objectively and with certainty.
- Guideline 4: The VSL Assignments comply with Guideline 4, because they are based on a single violation of a Reliability Standard and are not based on a cumulative number of violations of the same requirement over a period of time.

VSLs for Requirement R2:

Standard,	Requirement	Lower	Moderate	High	Severe	Comments
Requirement	Language					
PER-005-1, R2	Each Reliability Coordinator, Balancing Authority and Transmission Operator shall verify each of its System Operator's capabilities to perform each assigned task identified in R1.1 at least one time. 2.1 Within six months of a modification of	N/A	The responsible entity failed to verify 5% or less of its System Operators' capabilities to perform each assigned task from its list of BES company-specific reliability-related tasks. (R2)	The responsible entity failed to verify more than 5% up to (and including) 10% of its System Operators' capabilities to perform each assigned task from its list of BES company—specific reliability_related tasks. (R2)	The responsible entity failed to verify more than 10% of its System Operators' capabilities to perform each assigned task from its list of BES company-specific reliability-related tasks. (R2) OR The responsible entity failed to verify its System	FERC staff was concerned that the second part of the High VSL, which addresses R2.1, should be assigned as Severe. NERC staff agrees that the inconsistency should be addressed for consistency among

the B	BES company-	The responsible	<u>Operators</u>	requirements, per
speci	ific reliability-	entity failed to	capabilities to	Guideline 2. For
relate	ed tasks,	verify its System	perform each new	consistency with
each	Reliability	Operators	or modified task	the VSL
Coord	dinator,	capabilities to	within six months	assignments for
Balar	ncing	perform each new	of making a	R3, NERC staff has
Auth	ority and	or modified task	modification to its	proposed moving
Trans	smission	within six months	BES company-	the VSL
Oper	rator shall	of making a	specific reliability-	assignment for
verify	y each of its	modification to its	related task list.	R2.1 to Severe.
Syste	em Operator's	BES company-	(R2.1)	
capal	bilities to	specific reliability-		
perfo	orm the new	related task list.		
or me	odified tasks.	(R2.1)		

Original R2 Guideline Explanation in the <u>December 1, 2010 VSL Filing</u>:

In accordance with Guideline 2, the VSLs were modified for clarity and consistency with other standards and VSLs.

- Guideline 1: This is a new standard. Accordingly, no historic performance has been established.
- Guideline 2: Modified for clarity and consistency with other standards and VSLs. Additionally, NERC has reviewed the VSL text and has determined that, as written, the VSL text is clear, specific and objective and does not contain general, relative or subjective language satisfying Guideline 2b. Thus, the text is not subject to the possibility of multiple interpretations of the VSL(s) and provides the clarity needed to permit the consistent and objective application of the VSL(s) in the determination of penalties by the Compliance Enforcement Authority.
- Guideline 3: NERC compared the existing VSLs to the stated requirement language to ensure the VSLs do not redefine or undermine the reliability goal of the requirement. In accordance with Guideline 3, the VSL assignments are consistent with the requirement and the degree of compliance can be determined objectively and with certainty.
- Guideline 4: The VSL Assignments comply with Guideline 4, because they are based on a single violation of a Reliability Standard and are not based on a cumulative number of violations of the same requirement over a period of time.

VSLs for Requirement R3:

Standard,	Requirement	Lower	Moderate	High	Severe	Comments
Requirement	Language					
PER-005-1, R3	At least every 12	N/A	The responsible	The responsible	The responsible	FERC staff pointed
	months each		entity failed to	entity failed to	entity failed to	out that the
	Reliability		provide at least 32	provide at least 32	provide at least 32	assignment of
	Coordinator,		hours of	hours of	hours of	VSLs for the
	Balancing		emergency	emergency	emergency	subrequirements
	Authority and		operations	operations	operations	in PER-005-1 R2
	Transmission		training applicable	training applicable	training applicable	and PER-005-1 R3
	Operator shall		to its	to its	to its	is inconsistent.
	provide each of its		organization,	organization,	organization,	
	System Operators		affecting 5% or	affecting more	affecting more	NERC staff agrees
	with at least 32		less of their	than 5% and up to	than 10% its	that the
	hours of		System Operators.	(and including)	System Operators	inconsistency
	emergency		(R3)	10% of its System	(R3)	should be
	operations			Operators. (R3)		addressed for
	training applicable				OR	consistency
	to its organization					among
	that reflects				The responsible	requirements, per
	emergency				entity did not	Guideline 2. The
	operations topics,				include simulation	VSL assignments
	which includes				technology	for R3 will remain
	system				replicating the	as written, with
	restoration using				operational	violation of R3.1
	drills, exercises or				behavior of the	in the Severe
	other training				BES in its	category.
	required to				emergency	
	maintain qualified				operations	
	personnel.				training. (R3.1)	

Reliability Coordinator, Balancing Authority and Transmission Operator that has operational authority or control over Facilities with established IROLs or has established operating guides or protection systems to mitigate IROL violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal		 Γ	Γ	
Coordinator, Balancing Authority and Transmission Operator that has operational authority or control over Facilities with established IROLs or has established operating guides operating guides or protection systems to mitigate IROL violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	3.1 Each			
Balancing Authority and Transmission Operator that has operational authority or control over Facilities with established IROLs or has established operating guides or protection systems to mitigate IROL violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal				
Authority and Transmission Operator that has operational authority or control over Facilities with established IROLs or has established operating guides or protection systems to mitigate IROL violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal				
Transmission Operator that has operational authority or control over Facilities with established IROLs or has established operating guides or protection systems to mitigate IROL violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal				
Operator that has operational authority or control over Facilities with established IROLs or has established operating guides or protection systems to mitigate IROL violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	Authority and			
operational authority or control over Facilities with established IROLs or has established operating guides or protection systems to mitigate IROL violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	Transmission			
authority or control over Facilities with established IROLs or has established operating guides or protection systems to mitigate IROL violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	Operator that has			
control over Facilities with established IROLs or has established operating guides or protection systems to mitigate IROL violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	operational			
Facilities with established IROLs or has established operating guides or protection systems to mitigate IROL violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	authority or			
established IROLs or has established operating guides or protection systems to mitigate IROL violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	control over			
or has established operating guides or protection systems to mitigate IROL violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	Facilities with			
operating guides or protection systems to mitigate IROL violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	established IROLs			
or protection systems to mitigate IROL violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	or has established			
systems to mitigate IROL violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	operating guides			
mitigate IROL violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	or protection			
violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	systems to			
provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	mitigate IROL			
System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	violations shall			
with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	provide each			
operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	System Operator			
training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	with emergency			
simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	operations			
technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	training using			
as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	simulation			
as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal	technology such			
technology, or other technology that replicates the operational behavior of the BES during normal				
other technology that replicates the operational behavior of the BES during normal	virtual			
that replicates the operational behavior of the BES during normal	technology, or			
that replicates the operational behavior of the BES during normal	other technology			
behavior of the BES during normal				
BES during normal	operational			
and emergency	BES during normal			
	and emergency			

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conditions			
l conditions.			
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Original R3 Guideline Explanation in the <u>December 1, 2010 VSL Filing</u>:

No changes from previously filed VSLs.

- Guideline 1: This is a new standard. Accordingly, no historic performance has been established.
- Guideline 2: NERC has reviewed the VSL text and has determined that, as written, the VSL text is clear, specific and objective and does not contain general, relative or subjective language satisfying Guideline 2b. Thus, the text is not subject to the possibility of multiple interpretations of the VSL(s) and provides the clarity needed to permit the consistent and Objective application of the VSL(s) in the determination of penalties by the Compliance Enforcement Authority.
- Guideline 3: NERC compared the existing VSLs to the stated requirement language to ensure the VSLs do not redefine or undermine the reliability goal of the requirement. In accordance with Guideline 3, the VSL assignments are consistent with the requirement and the degree of compliance can be determined objectively and with certainty.
- Guideline 4: The VSL Assignments comply with Guideline 4, because they are based on a single violation of a Reliability Standard and are not based on a cumulative number of violations of the same requirement over a period of time.