

NEI 13-02

Guidance to Implement EA-13-109

June 13, 2013



NEI 13-02

Table of Contents

1 Introduction

1.1 Purpose

1.2 HCVS Guiding Principles

1.3 Procedure Interface

1.4 Overview

2 Wetwell Vent Boundary Conditions for Vent Design and Operation

2.1 HCVS Use for Design Basis

2.2 HCVS Use for BDBEEs

2.3 HCVS Use during Applicable Severe Accident Conditions

2.4 Vent Design Boundary Conditions

2.5 Vent Operation Assumptions

NEI 13-02

Table of Contents

- 3. Dry Well Vent Boundary Conditions for Vent Design and Operation (TBD)
 - 3.1 HCVS Use for Design Basis
 - 3.2 HCVS Use for BDBEEs
 - 3.3 HCVS Use during Applicable Severe Accident Conditions
 - 3.4 Vent Design Boundary Conditions
 - 3.5 Vent Operation Assumptions

NEI 13-02

Table of Contents

4 Design Considerations

4.1 Vent Design Criteria

4.1.1 Vent Thermal Design and Capacity

4.1.2 Multipurpose Penetration Use

4.1.3 Routing Considerations

4.1.4 Multiunit Interfaces

4.1.5 Release Point

4.1.6 Leakage Criteria

4.1.7 Protection from Flammable Gas Ignition

4.1.7.1 Vent Path Hydrogen/CO Suppression

4.1.7.2 Design for Deflagration/Detonation

NEI 13-02

Table of Contents

4.2 Vent Operation and Monitoring

4.2.1 Protection from Inadvertent Actuation

4.2.2 Required HCVS Controls

4.2.3 Alternate Remote Operation

4.2.4 Vent Monitoring

4.2.5 Operational Hazards

4.2.6 Designed to minimize Operator Actions

NEI 13-02

Table of Contents

5 Programmatic Controls

5.1 Environmental

5.2 Seismic and External Hazard Conditions

5.3 Quality Requirements

6. Operational Considerations

6.1 Operator Actions

6.1.1 Feasibility and Accessibility

6.1.2 Procedural Guidance

6.1.2.1 Coordination with guidance and procedures

6.1.2.2 Demonstration with other Post Fukushima measures

6.1.3 Training

6.2 Testing and Inspection of HCVS

NEI 13-02

Table of Contents

7 Reporting Requirements

7.1 Overall Integrated Plan Template

7.2 Six month Updates

8 References

Appendix A – Glossary of Terms

Appendix B – Roadmap of Order Requirements

Appendix C – Assessment of Need for Drywell Vent

Appendix D – Interface with FLEX

Appendix E – Interface with Generic Letter 89-16

Appendix F – Calculations:

Operator Doses, Source Term for Vent,
Deflagration/Detonation

Key Topic Items for Discussion

1. With steam flow hydrogen concentration is not sufficient to support deflagration/detonation
 - NRC Report
 - GE SIL

Key Topics for Discussion (Cont'd)

2. All actions related to Order EA-12-050 and Generic Letter 89-016 will be superseded by new Order EA-13-109
 - EA-12-050 rescinded by EA-13-109
 - GL 89-016 requirements are enveloped by Order EA-13-109

Key Topics for Discussion (Cont'd)

3. Use of All Available Equipment

- “Portable equipment” can utilize equipment provided through FLEX program (does not change the scope of FLEX to severe accident).
- Use of equipment must consider environmental conditions in EA-13-109

Key Topics for Discussion (Cont'd)

4. The 6 month update of Phase 1 OIP and Phase 2 OIP will be issued in December 2014
 - Duplicative details to be submitted at same time with same people. Resource limitation.
 - Recommend optional use of single document

Key Topics for Discussion (Cont'd)

5. Temperature and Pressure limits are per the evaluations and procedure limits within the plant containment envelope
 - Wetwell should be bounded by the pressure and temperature for conditions TBD
 - Drywell should be bounded by the pressure and temperature for conditions TBD

Key Topics for Discussion (Cont'd)

6. Key Assumptions

- UHS available for make-up; pumps can be restored
- Robust installed electrical and mechanical equipment remain available, except installed AC power source
- Others TBD