

NEI Emergency Preparedness Threat-Based Drill Workshop

Protective Action Strategy Update

James D. Jones
Constellation Energy Nuclear Group

Purpose of This Briefing

- **To provide an overview of industry efforts to update protective action strategies**

Acronyms and Definitions

- **Protective Action Strategies (PAS)**
 - Evacuate
 - Shelter-in-place
- **Protective action recommendation (PAR)**
- **Protective Action Decision (PAD)**

Industry Guidance: PAR Basics

- **PAR's are intended to protect the public by limiting significant radiological dose**
- **Significant radiological dose would only be present during plant conditions represented by a General Emergency**
- **Thus, PAR's are only provided during a General Emergency**
 - **NOTE: Some licensees have negotiated exceptions to this guidance.**

Industry Guidance: PAR Basics

- **Evacuation is recommended when the dose risks associated with avoidable (projected) dose to the public exceeds the risk of evacuating**
 - This “tipping point” is 1 rem TEDE (EPA 400 App C)
- **The use of Potassium Iodine tablets is often recommended coincident with evacuation**
- **Current guidance recommends evacuation of the public in sectors 2 miles around and 5 miles downwind of the plant in a General Emergency.**

Industry Guidance: PAR Basics

- **Sheltering-in-place is recommended when evacuation is called for but cannot be implemented due to:**
 - **Short term releases (that will end prior to completion of evacuation)**
 - **Impediments to evacuation (lack of transportation resources, impassable roads)**
 - **NOTE: Security-related issues, such as the possible sabotage of roads and bridges coincident with an attack on a nuclear plant, are not specifically considered in current guidance.**

Why is the Industry Looking at PAR Guidance?

- **The post-9/11 risk environment contains threat-related risks not specifically considered in the references cited in current protective action guidance.**
- **Specifically, protective actions during a security-based emergency are not specifically discussed.**
- **Minor changes to current protective strategies are a simple solution to this issue.**

Why is the Industry Looking at PAR Guidance?

- **The industry has already responded to the significant change in the threat environment by:**
 - **Revising threat/security-based emergency action levels**
 - **Development of strategies to address ground and air attacks and attacks that result in significant destruction of plant components, infrastructure and environs**
 - **Significant modification of the drill program to improve the readiness of onsite and offsite response entities**
- **There have been no changes to Protective Action Strategies**

Realities of Current Threat Environment

- **Attacks are well planned and coordinated**
- **Public and Public Safety personnel response actions are anticipated resulting in evacuation infrastructure destruction and secondary attacks on first responders**

Offsite Decision Maker Issues

- **PAR (made by the licensee) should align with PAD (made by local/state agencies) as detailed in respective emergency plans**
- **When the plans do not align, the licensee and the offsite decision-makers could appear to be in conflict at a very critical time**

The Problems

- **Current PAS-recommended evacuation in a security-based General Emergency may result in:**
 - **Increased risk to the public due to coincident attacks on evacuation infrastructure**
 - **Increased risk to public safety personnel responding to traffic management duties**
 - **Diversion of local law enforcement from threat response to traffic management.**

Solution: Revise the Guidance (NEI Position Paper)

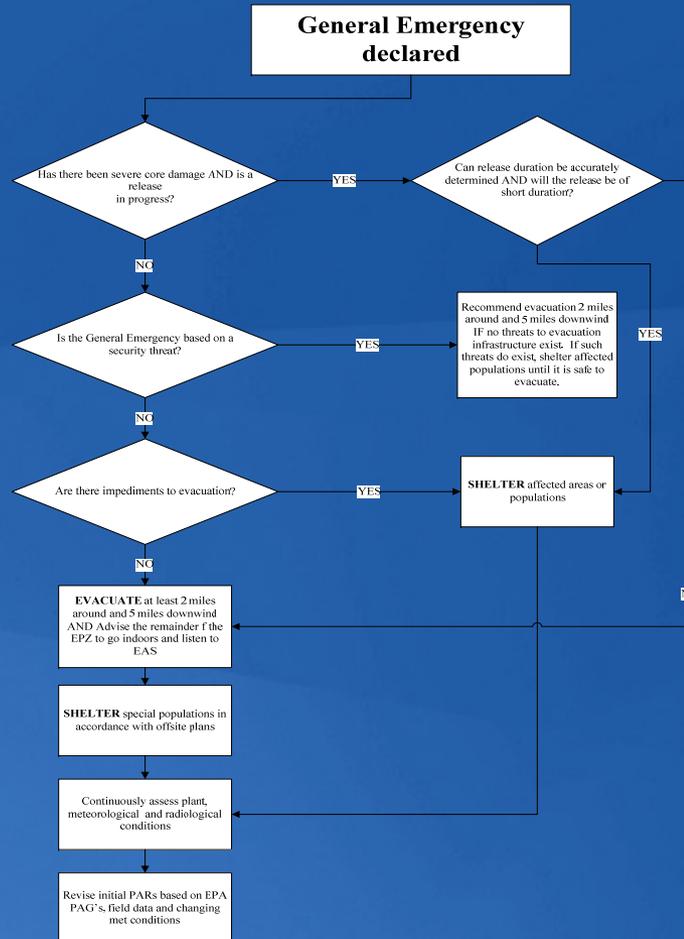
- **Using existing guidance, provide a document that**
 - **Accommodates the realities of the current threat environment**
 - **Is considerate of offsite decision maker interactions**
- **Rev 0 of this paper was endorsed for use by the NRC in RIS 2005-08**

Solution: Revise the NEI Position Paper

- **Strategy:**

- **Threats to evacuation infrastructure and responding public safety personnel should be considered threats to evacuation**
- **In accordance with existing guidance, if impediments to evacuation exist, shelter-in-place.**

PAS Change Strategy



Questions?

- **Contact:**

Jim Jones

Director of Emergency Programs

Constellation Energy

James.jones@constellation.com

315.349.4486