U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR SECURITY AND INCIDENT RESPONSE
U.S. DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
OFFICE OF PROTECTION AND NATIONAL PREPAREDNESS

STATEMENT OF WORK

PROJECT: Study of Federal Oversight of Nuclear Plant Offsite Response Organizations: Integrate DHS and FEMA Initiatives with a Risk Informed and Performance-Based Oversight Process.

1. Background

The U.S. Nuclear Regulatory Commission (NRC) will conduct and administrate this project in close coordination with the Federal Emergency Management Agency (FEMA).

In SECY-06-0200, "Results of the Review of Emergency Preparedness Regulations and Guidance," dated September 20, 2006, the staff proposed to begin activities to develop a performance-based regulatory concept. In the staff requirements memorandum (SRM) to SECY-06-0200, dated January 8, 2007, the Commission approved the request by the staff to begin exploratory activities in this area with the Department of Homeland Security (DHS)/FEMA, conducting one or more public meetings and providing a recommendation to the Commission on a path forward.

The staff developed a conceptual description of a risk informed performance-based emergency preparedness (PBEP) regulatory regimen for the onsite portions of nuclear plant emergency preparedness (EP) programs. The staff presented the conceptual description to internal stakeholders and FEMA. The proposed regimen was revised based on feedback and then presented at a public meeting conducted on March 5, 2008. The staff discussed aspects of the proposed regulatory regimen including program goals, design considerations, performance demonstrations, performance indicators, and oversight activities. Comments from State stakeholders were generally supportive of the regimen and industry personnel asked insightful questions (Agencywide Documents Access and Management System (ADAMS) Accession Number ML080940393 for a meeting summary).

During the meeting, NRC staff identified additional developmental areas considered necessary before the regimen could be pursued in rulemaking. These areas include consensus performance standards, performance indicators, oversight process, and program implementation guidance. The staff conveyed to stakeholders that they would have a role in these developmental activities.

On May 9, 2008, the Nuclear Energy Institute Director of Emergency Preparedness provided the NRC a letter (ADAMS Accession Number ML081340523) stating that industry would not be supportive of development or implementation of the PBEP regimen in the near future because of competing priorities. However, their letter noted that after the current EP rulemaking is completed, the nuclear industry could give stronger consideration to developing the regimen.

In the September 11, 2008, SRM COMDEK-08-0005, "FY2010 NRC Performance Budget Proposal," the Commission provided direction to support the development of a performance-based approach to EP. The SRM directed the staff to work with local communities and DHS to begin the next major EP enhancement of working to quantify the protection that EP plans and procedures should result in and codify them in regulations that are transparent, objective, and measurable.

In a memorandum dated November 24, 2008 (ADAMS Accession Number ML082100042), the staff stated their intention to begin activities in this area by the development of overarching goals for a proposed performance-based EP program to include consideration of offsite EP programs. The staff intends to coordinate efforts with FEMA. The staff will present and discuss the concept with the industry, State and local emergency response professionals to assure a wide range of stakeholder engagement. The staff will utilize consultant assistance to more fully develop the regulatory concept and identify implementation processes. The results of this effort and recommendations on next steps will be reported to the Commission.

DHS/FEMA has initiated the use of the Homeland Security Exercise and Evaluation Program (HSEEP) for nationwide use in the conduct and evaluation of drills and exercises. EP programs that support nuclear power plants are long-standing and successful, but are not integrated into HSEEP. Offsite response organizations (OROs) that support nuclear power plants have raised issues of burden, incompatibility and need regarding the use of HSEEP. This study will evaluate HSEEP integration issues to identify enhancements in performance-based oversight and HSEEP implementation.

DHS has promulgated a capabilities-based planning process supported by three planning tools: the National Planning Scenarios, Target Capabilities List (TCL), and Universal Task List (https://odp.esportals.com or https://www.llis.dhs.gov). The TCL describes the capabilities related to the four homeland security mission areas: Prevent, Protect, Respond and Recover. It defines and provides the basis for assessing preparedness. It also establishes national guidance for preparing the Nation for major all-hazards events, such as those defined by the National Planning Scenarios. The current version of the TCL contains 37 core capabilities.

Further, DHS has provided a vision of nationwide preparedness: ***A NATION PREPARED with coordinated capabilities to prevent, protect against, respond to, and recover from all hazards in a way that balances risk with resources and need.***

The DHS Guidelines establish the following priorities to meet the Nation's most urgent needs and adopt a Capabilities-Based Planning process to define and build the capabilities to achieve the Guidelines:

- Expand regional collaboration
- Implement the National Incident Management System and the National Response Framework
- Implement the National Infrastructure Protection Plan
- Strengthen information sharing and collaboration capabilities
- Strengthen communications capabilities
- Strengthen detection, response, and decontamination capabilities
- Strengthen medical surge and mass prophylaxis capabilities
- Strengthen planning and citizen preparedness capabilities

The TCL provides a guide to addressing the priorities and achieving the National Preparedness Guidelines. Capabilities provide the means to accomplish a mission and achieve desired

outcomes by performing critical tasks, under specified conditions, to target levels of performance. Capabilities are delivered by appropriate combinations of planning, organization, equipment, training, and exercises. The TCL supports an all-hazards approach to building capabilities that may be needed in the event of terrorist attacks, natural disasters, health emergencies, and other major events. All 37 capabilities in the TCL were developed with the active participation of stakeholders representing all levels of government, non-governmental organizations, and the private sector.

Nuclear plant EP programs are not incompatible with these national level initiatives, but are not fully integrated either. The study will examine methods for and the impact of integrating EP programs with DHS/FEMA initiatives in a manner that improves the level of EP, allows for ORO flexibility in developing response capability and enhances oversight through performance-based methods.

This scope of work will explore the use of performance-based oversight of ORO EP programs that support nuclear power plants as well as methods to integrate ORO oversight into DHS national initiatives. The purpose of such a system is to improve effectiveness and efficiency. A performance-based oversight system would focus on outcomes, i.e., the ability of ORO responders to perform the necessary functions to protect public health and safety during a significant, yet unlikely nuclear power plant accident. For the performance-based oversight system to be both effective and efficient, it should improve oversight as well as enhance the flexibility of OROs to plan and respond without an increase in resources (after initial implementation). Ideally, performance-based oversight would enhance FEMA's ability to confirm the adequacy of nuclear plant ORO EP while reducing burden and increasing ORO flexibility for response options. Further, integration of nuclear power plant emergency response programs into DHS nationwide preparedness initiatives holds the potential to improve preparedness across hazard types while reducing burden on OROs.

2. Description of Work

The study has three objectives as noted below. Tasks are identified that describe a method that may accomplish these goals, but proposals for alternate methods will be considered favorably if they identify an effective process for the study to achieve these objectives.

Objectives

- Develop a system of risk informed and performance-based oversight for nuclear plant OROs that would ensure adequacy of response while enhancing regulatory focus on risk-significant issues, reducing burden, and enhancing ORO flexibility in response options.
- Develop process to integrate DHS initiatives and reporting requests into nuclear plant EP programs.
- Identify revisions to regulatory requirements that would be necessary to implement the proposed oversight system and proposed integration process.

The study will provide a road map for the NRC and FEMA to begin the next major EP enhancement of working to quantify the protection that EP plans and procedures should result in and codify them in regulations that are transparent, objective, and measurable. Study conduct will not be constrained to narrow considerations and the consultant may propose restructuring of existing regulatory paradigm to achieve the objectives. Alternately, the study

may show that major changes could cause excessive burden, and would not enhance oversight and flexibility significantly enough to warrant implementation. Although that outcome is not the intent, the study is expected to determine benefit without preconceived conclusions. The consultant conducting the study will work collegially with the NRC and FEMA staff to achieve objectives, but will not be directed to any conclusion. As needed, the consultant will participate in telecom and in person meetings with NRC headquarter (HQ), FEMA HQ, and regional personnel to discuss the project. The consultant may confer with staff regarding project conduct, technical issues and the like as needed.

For the purpose of this study, the term "risk informed" is meant to convey that the more risk significant elements of EP response programs with respect to protection of public health and safety are given higher priority than other supporting elements. The term "performance-based" is meant to convey focus upon successful outcomes demonstrated through performance rather than completion of tasks, e.g., training attendance or procedure compliance.

A risk informed performance-based oversight process would generally depend more fully on drill and exercise performance with a focus on the tasks most important to protecting public health and safety. Such a system could be supported by performance indicators if appropriate, as a surrogate for direct evaluation.

3. Tasks

3.1 Review Risk Informed Performance-Based Oversight References

Review NRC documents to develop an understanding of risk informed and performance-based systems used or proposed by NRC, including Reactor Oversight Process (ROP) documents and the proposed performance-based EP oversight regimen and performance indicator system. Identify and review reference documents relevant to performance-based regulatory oversight systems.

3.2. Review DHS/FEMA Initiatives

Review DHS/FEMA initiative for HSEEP, reporting requirements/requests, Capabilities-Based Planning process, and Radiological Emergency Preparedness (REP) Manual. Review other relevant DHS/FEMA preparedness processes or programs.

3.3 Overarching Objectives

Develop overarching and detailed objectives for integration of DHS initiatives into the REP program, and for a risk informed and performance-based oversight process for nuclear plant OROs. Develop a preliminary assessment of the potential for accomplishing these objectives. Document the objectives and preliminary assessment in a letter report.

3.4 Meetings

As needed, participate in meetings with NRC HQ, FEMA HQ and regional personnel to discuss the project. A project kick-off meeting will be held. The meeting may be held at the consultant offices to minimize project travel costs.

3.5 Integration of DHS/FEMA Initiatives

Identify the initiatives, processes, and systems that affect State and local preparedness programs. Identify areas that could be integrated into nuclear plant EP programs to reduce burden while enhancing overall response. Identify processes that could be combined or eliminated as applicable to nuclear plant programs.

For example, the study should examine the TCL system with respect to nuclear plant exercise objectives to determine if the latter should be eliminated or merged with TCL system. Assess if other nuclear plant evaluation processes would be enhanced if subsumed by DHS processes. Alternately, determine if DHS processes could be enhanced by including nuclear plant preparedness processes or elements. Determine if DHS reporting requests could be integrated with nuclear plant annual letters of certification..

This task should be performed in concert with Task 3.6 to identify opportunities to consolidate or synchronize processes and oversight.

3.6 Develop Risk Informed and Performance-Based Oversight System

Identify ORO program elements and stratify the program elements by risk significance. Identify elements that could transition to a more performance-based oversight process. Identify the most risk significant elements of ORO programs and propose performance-based methods for oversight. Identify elements that could not transition to performance-based oversight and describe oversight of these elements including whether these elements are risk significant. Identify and define applicable performance indicators that might support the proposed oversight process. Develop a conceptual risk informed and performance-based oversight process for OROs. The level of detail need not be complete, but should be sufficient to guide the development of a detailed oversight process such as exists today in evaluation methods.

Provide an analysis showing whether the proposed oversight process would enhance the focus of ORO and FEMA resources upon risk significant program elements. Include the technical basis for the analysis.

Ideally, a risk informed performance-based oversight regimen would rely more fully on drill and exercise performance and less on Federal review and approval of plans, procedures, and processes. However, if performance opportunities are limited, it would affect oversight ability. It may be appropriate to consider performance opportunities outside of nuclear plant EP. Concurrently, it may be appropriate to propose a transition from classroom training to more drill oriented training methods.

Determine if performance indicators are practical and could contribute to the oversight process and if practical, identify and define potential performance indicators.

Document Tasks 3.5 and 3.6 in a letter report.

The letter report may be reviewed and commented upon by NRC and FEMA. Comments will be addressed within 30 days of receipt and a revised report submitted.

3.7 Assess Feasibility, Impact on Resources and Regulatory Changes

Determine feasibility of integration of nuclear plant oversight with DHS initiatives and the feasibility of the proposed oversight process. Determine if the proposed oversight process would enhance preparedness by focusing on risk significant issues, increase of ORO flexibility, reduction of burden, ease of implementation and conduct, and other factors that may be useful in determining the value of the proposed oversight process. Provide a structured analysis to justify the determinations.

Assess whether the integration and the proposed oversight process would require more, less, or the same level of resources for routine oversight after initial implementation is complete. Assess impact on FEMA and OROs.

Describe the expected implementation process for the proposed integration and oversight program. Outline milestones that would be included in a detailed implementation schedule (the detailed schedule is not a task of this study). Assess resources needed by OROs and FEMA for initial implementation.

Identify specific changes in regulation and guidance required to implement the proposed changes.

3.8 Document Effort

Combine the letter reports of Tasks 3.3, 3.5, and 3.6 with the analysis of Task 3.7 into a report suitable for publication as a NUREG/CR.

The draft NUREG/CR shall receive one round of NRC Project Manager (PM) review with comments provided for revision. The final draft NUREG/CR shall be provided within 2 weeks of comment receipt. The final draft NUREG/CR may then receive NRC and FEMA management review. The final draft NUREG/CR shall be revised in accordance with management review and the final document provided within 2 weeks of comment receipt. The consultant will remain available to perform document modifications necessary to meet NRC NUREG/CR format standards.

4 NRC Furnished Items

Reference documents to be determined during project kick off meeting.

5 Meetings/Travel

Assume six meetings requiring travel to potentially include: one meeting at NRC HQ/FEMA HQ, two regional meetings (probably to include FEMA Region V), two meetings with nearby OROs, and one professional meeting (e.g., National Radiological Emergency Preparedness Conference). This mix of meetings may change with the project needs. Assume hosting of NRC PM at contractor offices for project meetings with no travel cost to contractor.

6 Acceptance Criteria

The project requires professional-level conduct and documentation of tasks subject to NRC PM and management review and acceptance. Basis for determinations and analyses must be documented and source documents referenced where such documents are available.

Task 3.3: The consultant shall display broad and deep knowledge of the existing DHS programs as they relate to State and local preparedness and FEMA oversight processes for nuclear plants. The letter report will propose overarching and detailed objectives that focus and deepen those provided in this scope of work document. The letter report will assess the potential to achieve these focused objectives.

Tasks 3.5 and 3.6: Building on the consultant's existing knowledge of DHS/FEMA preparedness programs and the research done under these tasks, the consultant will provide a detailed written assessment of DHS programs and how they might be integrated into nuclear plant EP program conduct and oversight.

The consultant shall provide a detailed written assessment of areas of ORO oversight that could potentially transition to more performance-based methods. The letter report shall include details of oversight methods and issues of transition. The consultant shall be knowledgeable in current FEMA ORO oversight practices and shall provide a detailed written assessment of the potential for using performance-based oversight techniques to enhance the level of preparedness while ensuring adequate oversight and enhancing ORO flexibility in the organization of response procedures and plans.

A significant element of the report is an assessment of methods to integrate DHS programs and FEMA nuclear power plant oversight efforts with State and local preparedness programs.

Task 3.8: The consultant shall develop a NUREG/CR that documents the study in total and its conclusions. The consultant shall determine the effectiveness and efficiency of proposed performance-based oversight methods and document those conclusions. The assessment shall include: the potential impact on FEMA and ORO resources, the adequacy of the performance-based oversight process to ensure reasonable assurance, assessment of the gains in flexibility for OROs, potential to enhance evaluator-responder interface, appropriateness of program, potential for success, transition period, and resource impacts. The NRC has no predetermined outcome of the conclusion, whether a performance-based oversight system could enhance effectiveness and efficiency is to be determined by the study. Implementation of such a program is the purview of FEMA and the study intent is to provide a technical basis for such a decision.

7 Deliverables

Letter reports, as noted in Tasks 3.3, 3.6, 3.7 and the final document, addressing all tasks and providing the conclusions of the study. The final document shall be suitable for publication as a NUREG/CR in accordance with NUREG-0650, Revision 2 "Preparing NUREG-Series Publications."

The consultant shall submit monthly letter status reports (MLSRs). The consultant shall issue each MLSR no later than the 20th of each month. A copy of the MLSR shall be provided to the NRC PM and to NSIR-MLSR@nrc.gov .

The technical status section of the report shall contain a summary of the work performed during the reporting period on this contract, and milestones reached, or, if missed, an explanation; any problems or delays encountered or anticipated with recommendations for resolution; and plans for the next reporting period. The status shall include information on travel during the period to include trip start and end dates, destination, and travelers.

The MLSR will identify the title of the project, the job code, the principal investigator, the period of performance, and the reporting period; summarize each month's technical progress; list monthly spending, total spending to date, and the remaining funds; and contain information as directed in NRC Management Directive (MD) 11.7, Exhibit 7 (dated March 2, 2007). The consultant shall immediately bring any administrative or technical difficulties that may affect the schedule or costs of the project to the attention of the NRC PM.

8 Schedule

Tasks 3.1 and 3.2 shall begin within 30 days of completion of contract award and be completed 30 days later.

Task 3.3 letter report shall be sent to NRC within 90 days of contract award.

Tasks 3.5 and 3.6 should be completed with 180 days of contract award.

Tasks 3.7 and 3.8 shall be completed within about 350 days of contract award. However, it is noted that the schedule may be constrained by out-year funding. The schedule would be adjusted if full funding is delayed and the preliminary schedule described assumes adequate funding has been provided to the consultant.

The consultant may propose a different schedule for consideration in its proposal, but justification should also be provided.

9 Key Personnel

Provided by the Division of Contracts (DC).

10 Organizational Conflict of Interest

Provided by DC.

11 Other Requirements

11.1 Publications Note

The NRC encourages the publication of the scientific results from NRC-sponsored programs in scientific and engineering journals, as appropriate. If the consultant proposes to publish in open literature or present the information at meetings, in addition to submitting the required technical reports, the consultant should obtain the approval of the proposed article or presentation from the NRC PM. The NRC PM shall either approve the material as submitted, approve it subject to NRC-suggested revisions, or disapprove it. In any event, the NRC PM may disapprove or delay presentation or publication of papers on information that is subject to Commission approval that has not been ruled upon or which has been disapproved. Additional information regarding the publication of NRC-sponsored research appears in NRC MD 3.8, "Unclassified Contractor and

Grantee Publications in the NUREG Series", and 3.9, "NRC Staff and Contractor Speeches, Papers, and Journal Articles on Regulatory and Technical Subjects."

If the presentation or paper is in addition to the required technical reports and the NRC PM determines that it will benefit NRC project, the NRC PM may authorize payment of travel and publishing costs, if any, from the project funds. If the NRC PM determines that the article or presentation would not benefit the NRC project, the contractor shall endure the costs associated with the preparation, presentation, or publication of the results. For any publication or presentation falling into this category, the NRC reserves the right to require that such presentation or publication shall not identify the NRC's sponsorship of the work.

11.2 Standards for Preparing NUREG-Series Manuscripts

The NRC began to capture most of its official records electronically on January 1, 2000. The NRC shall capture each final NUREG-series publication in its native application. Therefore, contractors should submit their final manuscripts that have been approved by their NRC Project Manager in both electronic and camera-ready copy.

All format guidance, as specified in NUREG-0650, "Preparing NUREG-Series Publications," Revision 2, issued January 1999, shall remain the same with one exception: contractors shall no longer be required to include the NUREG-series designator on the bottom of each page of the manuscript. The NRC shall assign this designator when it sends the camera-ready copy to the printer and shall place the designator on the cover, title page, and spine. The designator for each report shall no longer be assigned when the decision to prepare a publication is made. The NRC's Publishing Services Branch shall inform the NRC PM for the publication of the assigned designator when the final manuscript is sent to the printer.

For the electronic manuscript, the contractor should prepare the text in Microsoft Word and use any of the following file types for charts, spreadsheets, and the like:

File Types To Be Used for NUREG-Series Publications	
File Type	File Extension
Microsoft Word	.doc
Microsoft PowerPoint	.ppt
Microsoft Excel	.xls
Microsoft Access	.mdb
Portable Document Format	.pdf

This list is subject to change if new software packages come into common use at the NRC or by its licensees or other stakeholders that participate in the electronic submission process. If a portion of the manuscript is from another source and the contractor cannot obtain an acceptable electronic file type for this portion (e.g., an appendix from an old publication), the NRC can, if necessary, create a tagged image file format (file extension .tif) for that portion of the report.

Note that the contractor should continue to submit original photographs, which will be scanned, since digitized photographs do not print well.

If the contractor chooses to publish a compact disk (CD) of the publication, it should place on the CD copies of the manuscript in both (1) a portable document format (PDF), (2) a Microsoft Word file format, and (3) an Adobe Acrobat Reader format or, alternatively, print instructions for obtaining a free copy of Adobe Acrobat Reader on the back cover insert of the jewel box.

12.0 Proposal Evaluation Criteria

12.1 Past Performance

The offeror shall discuss its successful past performance on contracts similar in size and scope to this requirement. List any awards received, provide letters of commendation, etc., that will demonstrate the offeror's record of past performance. Provide any other pertinent information that will aid in the evaluation of the offeror's performance record. Offerors shall list and discuss all prior contracts terminated for default, and whether any show cause letters, cure notices, or poor performance letters have been received. If offerors have a negative response, they should say that none have been received.

The offeror shall submit at least five references for contracts performed in the past 3 years. Each contract reference shall be limited to one page in length to include: (a) contract number; (b) name and address of government agency; (c) brief description of the type of work; (d) contracting officers name, telephone number, and e-mail address; (e) technical representatives name, telephone number, and e-mail address; (f) contract type, period of performance; and (g) the estimated value of the contract.

At the discretion of NRC, the NRC reserves the right to contact one or all sources identified in references, regarding past performance information. The NRC may also consult other sources of past performance information.

Past Performance (25 percent)

Extent to which the offeror demonstrates satisfactory performance and customer satisfaction on past contracts in the past 3 years which are similar in size and scope to the requirements of this contract.

12.2 Personnel Qualifications Experience and Availability

Offerors shall identify the proposed organizational resources to be dedicated to the effort. The offeror shall clearly discuss the capabilities of the proposed personnel to perform the effort described in the statement of work (SOW) for this effort. The overall mix of labor and availability of key personnel with knowledge and experience to accomplish the effort shall be discussed. For all personnel proposed, provide a resume not to exceed three pages in length for each individual identified. The resumes should be written to reflect the individual’s experience, knowledge, skill, training, and qualification associated with the specific needs of performing the effort described in the SOW, and should not be general in nature. The offeror shall indicate the extent to which each individual will be available to perform this effort. For key personnel, provide an employee-signed statement of availability. The offeror is also required to identify any current/former NRC employees who have been or will be involved, directly or indirectly, in developing the proposal, or in negotiating on behalf of the offeror’s firm, or in managing,

administering, or performing any tasks, consultant agreement, or subcontract resulting from this proposal (list name, title, and date individual left NRC and provide a brief description of the individual's role under this proposal). If there are no current/former NRC employees involved, a negative statement is required.

Personnel Qualifications Experience and Availability (50 percent)

Extent to which the proposal demonstrates that the proposed personnel, subcontractors, or consultants possess the required education background, experience, and training or combination thereof to meet the technical and regulatory objectives of the work described in Section C of this solicitation, and the personnel available to perform such work.

12.3 Corporate Experience

Extent to which the offeror demonstrates they have the necessary knowledge, experience, and qualifications available within the organization to perform the effort for work similar in size and scope to the work described in Section C of this solicitation. This criteria includes prior experience in: (a) conducting SCC tests, (b) performing enhanced visual inspections, (c) conducting marine atmospheric corrosion test(s) (or similar testing), (d) constructing corrosion test chambers, and (e) preparing concise reports that are clear and accurate (e.g., letter reports, or other technical documentation).

Corporate Experience (25 percent)

Extent to which the proposal demonstrates it has the relevant experience within the organization to perform the effort described in Section C of this solicitation.