U.S. NUCLEAR REGULATORY COMMISSION OFFICE OF INSPECTION AND ENFORCEMENT

	Re	gion I			
Report Nos. 50	-317/81-23				
Docket Nos. 50-	-318/81-22 -317 -318				
License Nos. DI	PR-53				
DI	PR-69 Prio	rity (Category <u>C</u>		
Licensee: Balt	imore Gas and Electr	ic Company			
P. 0	. 3ox 1475				
Balt	imore, Maryland 212	03			
Facility Name:	Calvert Cliffs Nuc	lear Power Plant, Unit	ts 1 and 2		
Inspection at:	Lusby, Maryland				
Inspection conducted November 16-18, 1981					
Inspectors:	W.W. Kinney, Jen	Tram Leider, EPS, RI	date signed		
Approved by:	G.L. Snyder, H.W. Crocker, R.E. Architzel, N.M. Terc, C.A. Sakenas, R.H. Smith, K. Abraham, D.M. Rohrer, D.B. Matthews, B.D. Pickett, B.C. Thompson, P.A. Bolton, H.W. Crocker, Chief	Chier, EP&PSB, RI Chief, EPS, RI Resident Inspector, RI Inspector, EPS, RI Inspector, RI PAO, RI EPLB, HQ Battelle PNL Battelle PNL Battelle HARC	12/21/8/ date signed		
	Preparedness Sectio	n, DEP&OS			
Inspection on M 318/81-22) Area Inspected and observation involved 373 in Headquarters	SU November 16-18, 1981 Special, announce of the licensee's hspection-hours by a and NRC contractor p	MMARY (Report Numbers 50-3) d emergency preparedne annual emergency exerc team of thirteen NRC ersonnel.	17/81-23, 50- ess inspection cise. The inspection Region I, NRC		

Results: No items of noncompliance were identified. 8201070309 811224 PDR ADOCK 05000317 G PDR

DETAILS

1. Persons Contacted

Normal Job Function/Title

A.E. Lundval	1 Vice	President, Supply	Recov
C.H. Poindex	ter Vice	President, Engineering	Recov
J.A. Tiernan	Mana	ger, Nuclear Power Department	Site
L.B. Russell	Plan	t Superintendent	Plant
E.T. Reimer	Plan	t Health Physicist	Radio
N.L. Millis	Gene	ral Supervisor, Radiation Safety	Radia Dir
W.S. Gibson	Gene Elec	ral Supervisor, trical and Controls	Techr Cer
G.F. Rogers	Mana	ger, Corporate Communications	Media Cer
R.O. Mathews	Assi	stant General Super- sor Nuclear Security	Emerg
R.M. Douglas	s Mana	ger, Quality Assurance Department	Corpo
G v. Resnick	Mana Of	ger, Real Estate and fice Services	Admir Servi
S.E. Jones	Trai	ning Supervisor	Chief
T.N. Pritche	tt Proj	ect Manager of Nuclear Emergency Programs	
G.C. Creel	Mana	ger, Production Main- nance Department	
R.F. Ash	Chie	f, Nuclear Engineer	
G.H. Gaertne	r Senio	or Engineer	
B.A. Barnaba	Seni	or Engineer	

Emergency Organization Job Function/Title_

Recovery Manager Recovery Manager

Site Emergency Coordinator Plant Superintendent Radiological Assessment Director Radiation Protection Director Technical Support Center Director Media Communication Center Coordinator Emergency Security Team Leader Corporate Spokesman

Administrative Services Director Chief, Exercise Controller/Observer

The team also observed and interviewed other licensee emergency response personnel as they performed their emergency response functions.

2. Emergency Exercise

The Calvert Cliffs Nuclear Power Plant emergency exercise was conducted on November 17, 1981, from 3:30 a.m. until 7:00 p.m.

a. Pre-exercise Activities

The NRC team of observers met with the licensee on November 16, 1981, and reviewed the nature and scope of the exercise scenario. During this meeting, the licensee stated that essential operational personnel would not participate in the evacuation portion of the exercise, since both units were operating.

The licensee coordinated the exercise scenario with the various participating offsite agencies. The scenario included a large release of radioactivity to the environment under varying meteorological conditions which required response on the part of the agencies of all three counties within ten miles of the facility and the State of Maryland. The scenario also included a bomb threat and bomb explosions which caused the response of law enforcement agencies concerned with such matters. Finally, the scenario included the contaminated injury of an emergency repair worker which caused the response of the local volunteer rescue squad and the nearest hospital.

Based on the above findings, this portion of the licensee's exercise program appeared to be acceptable.

b. Exercise Observation

During the conduct of the licensee's exercise, thirteen NRC team members made detailed observations of the activation and augmentation of the emergency organization; establishment of the emergency response facilities; and actions of the emergency response personnel during the operation of the emergency response facilities. The following activities were observed:

- detection, classification, and assessment of the events making up the scenario;
- (2) direction and coordination of the emergency response;
- (3) notification of licensee personnel and offsite agencies of pertinent information;
- (4) evacuation, assembly, and accounting for licensee personnel;
- (5) assessment and projection of radiological (dose) data and consideration of protective actions;
- (6) performance of offsite, onsite, and in-plant radiological surveys;
- (7) performance of first aid and rescue;
- (8) provision of in-plant radiation protection;

(9) maintenance of site security and access control;

(10) performance of technical support;

(11) performance of repair and corrective actions; and

(12) provision of information to the ;ublic.

The NRC team noted that the licensee's activation and augmentation of the emergency organization; establishment of the emergency response facilities; and actions and use of the facilities were generally consistent with their emergency response plan and implementing procedures. However, the team did find areas for licensee improvement which are discussed below. (The licensee also identified most of these areas in their critique of the exercise.)

The scope of the emergency scenario was acceptable, as discussed in section 2.a. However, the scenario was cursory in its approach. For instance, the in-plant radiation levels were not consistent with the accident events and data provided to the offsite teams for iodine levels were given in concentration levels rather than sample counts.

The licensee did not have a sufficient number of observers/controllers to provide an independent assessment of the adequacy of their emergency response. For instance, there was only one observer/ controller in the Alternate Emergency Control Center. This one individual had to observe and assess the adequacy of the actions of the Recovery Manager, the Site Emergency Coordinator, the Radiological Assessment Director and his personnel, and the Emergency Communicators. Also, this individual was the chief exercise controller. This task was too large for one individual. Further, the objectivity of this individual could have been affected by the fact that he was responsible for the exercise scenario and the training of the emergency response personnel. The lack of sufficient observers/controllers was further demonstrated by many of the emergency teams performing their duties without the presence of an observer/controller.

The radiological assessment to provide offsite radiation dose projections could be improved by better usage of the computer system, Meteorological Information and Dose Acquisition System (MIDAS), through provision of written instructions and training of personnel. The licensee should coordinate with the offsite agencies so that the same maps are used by all offsite monitoring teams. Training of personnel in radiation units and consistency in use of the units would be beneficial. The events and actions of personnel in the medical exercise should be analyzed carefully and corrective actions taken to improve dosimeter assignments to offsite personnel and radiation control practices under emergency circumstances.

Accounting for personnel over shift change was demonstrated to be a problem area requiring improvement.

The audibility of announcements given on the public address system in plant areas with high noise levels was demonstrated to be a problem.

During the exercise, the Radiation Protection Director (RPD) had minimal contact with the Site Emergency Coordinator (SEC) even though the Emergency Response Plan calls for this position to report to the SEC. The organizational interfaces among the SEC, the RPD, and the Plant Superintendent in the Emergency Response Organization should be examined and clarified.

Time pieces, such as stop watches, should be included in kits supplied to teams collecting samples over specified times.

c. Exercise Critique

The NRC team attended the licensee's post-exercise critique on November 18, 1981, during which the key licensee exercise participants discussed their reactions to the exercise. The observations made by their thirteen observers/controllers were presented by the chief observer/ controller. The participants highlighted areas for improvement, which included most of those mentioned in section 2.b. The licensee indicated these comments would be evaluated and appropriate corrective action taken.

The NRC team compared their findings with those of the licensee and determined that neither the licensee nor the NRC observers had identified items which exhibited a potential for a degraded emergency response. However, areas for improvement were identified. Discussions during the critique indicated that licensee management possessed sufficient understanding of these areas to permit timely and effective improvements.

Based on the findings in the above area, the NRC team determined that the licensee did not fully implement the critique provisions of their Emergency Response Plan Implementing Procedure (ERPIP) No. 5.5, entitled, Exercises, Tests, and Drills. Section 3.8 of this ERPIP requires that an appropriate number of observers to evaluate and critique the exercise be provided. As discussed in section 2.5. the licensee did not have a sufficient number of observers/ controllers. This was substantiated by the fact that the exercise participants rather than the observers/ controllers provided most of the critique of the exercise.

3. Exit Meeting and NRC Critique

Following the licensee's self-criticue, the NRC team met with the licensee representatives listed in section 1. The team leader summarized the purpose and scope of the NRC inspection. The team leader also informed the licensee that their performance in the exercise demonstrated that they could implement their Emergency Response Plan and Emergency Response Plan Implementing Procedures in a manner which would adequately provide for the health and safety of the public. However, there were areas where improvement should be made, and the improvement items previously described in section 2.b. were discussed.

Licensee menagement acknowledged the findings and indicated that evaluation and resolution of the identified improvement items would begin immediately.