May 15, 1997

MEMORANDUM TO: FILE

FROM: David K. Allsopp, DISP, NRR (Original signed by:)

SUBJECT: UNION OF CONCERNED SCIENTIST'S (UCS) NUCLEAR SAFETY MONITORING PROGRAM

On May 7, 1997, David Lochbaum met with the U.S. Nuclear Regulatory Commission (NRC) in Rockville, Maryland, to discuss UCS's Nuclear Safety Monitoring Program. Attachment 1 is a list of the meeting attendees. Attachment 2 is a copy of the handouts that were used in the meeting.

Attachments: 1. List of Attendees
2. Handouts

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MEETING WITH DAVID LOCHEAUM, UCS

May 7, 1997

NAME	ORGANIZATION
E. Jordan	NRC/EDO
T. Martin	NRC/EDO
B. McCabe	NRC/EDO
S. Collins	NRC/NRR
D. Ross	NRC/AEOD
F. Miraglia	NRC/NRR
T. Martin	NRC/ADT
V. Dricks	NRC/OPA
M. Johnson	NRC/NRR
W. Dizard	McGraw-Hill
D. Lochbaum	UCS
B. Bradley	NEI
D. Chung	NUS LIS

Attachment 1

Attachment 2

PRESENTATION TO THE NRC STAFF

ON

UCS's NUCLEAR SAFETY MONITORING PROGRAM

MAY 7, 1997

DAVID A. LOCHBAUM
NUCLEAR SAFETY ENGINEER
UNION OF CONCERNED SCIENTISTS

UCS's Nuclear Safety Monitoring Program

OBJECTIVE

Evaluate nuclear power plant performance to monitor resolution of generic safety issues and to identify emerging trends with potential adverse nuclear safety implications.

METHODOLOGY

Review publicly available information for a focus group of operating plants that represent the nuclear industry.

Evaluate events documented in these reports to determine if the licensees are meeting expectations for the identification, assessment, and resolution of safety issues.

Assess potential new safety issues by determining if focus plant(s) may be vulnerable.

RESULTS

For specific focus group plants - Later.

In general, experience shows that the method meets the objective, although some mid-course corrections have been identified and may be incorporated.

FOCUS GROUP SELECTION CRITERIA:

- ☞ Seek diversity in terms of reactor vendors, plant age, geographical location, and configuration (i.e., single unit site vs multiple unit site).

- ☞ Consider special factors such as prior UCS involvement (Indian Point 3), opportunity to complement other UCS efforts, presence of local citizens' groups, and selection of at least plant operated by the major utilities (Commonwealth Edison, Entergy, and TVA). Selection of a ComEd plant will also provide an opportunity to interface with a major player in nuclear oversight at the state level, the Illinois Department of Nuclear Safety.

- ☞ Adjust the focus plant population as necessary to ensure that all UCS's nuclear issues (e.g., restructuring, BWR ECCS strainer, UFSAR deficiencies, station blackout, etc.) are covered.

- ☞ The focus group population is <u>not</u> intended to be the worst plants or the best plants -- without independently evaluating <u>all</u> the plants, developing a best or worst list would require reliance on a prior evaluation process.

UCS's Nuclear Safety Monitoring Program

Reactor Type BWR 1 - Containment Type DRYAMB

Big Rock Point	Consumers Power Company	240	03/29/63

Reactor Type BWR 2 - Containment Type Mark 1

Nine Mile Point 1	Niagara Mohawk Power Corp	1850	12/14/69
Oyster Creek	GPU Nuclear Corporation	1930	12/01/69

Reactor Type BWR 3 - Containment Type Mark 1

Dresden 2	Commonwealth Edison Company	2527	06/09/70
Dresden 3	Commonwealth Edison Company	2527	11/16/71
Millstone 1	Northeast Utilities	2011	12/28/70
Monticello	Northern States Power Company	1670	06/30/71
Pilgrim	Boston Edison Co.	1998	12/09/72
Quad Cities 1	Commonwealth Edison Company	2511	02/18/73
Quad Cities 2	Commonwealth Edison Company	2511	03/10/73

***Oyster Creek:* Representing the older BWR types, which were essentially one-of-a-kind during the early phases of reactor development. Oyster Creek is operated by GPU Nuclear and is located in New Jersey. It is the second oldest plant operating in this country.**

UCS's Nuclear Safety Monitoring Program

Reactor Type BWR 4 - Containment Type Mark 1

Browns Ferry 1	Tennessee Valley Authority	3293	08/01/74
Browns Ferry 2	Tennessee Valley Authority	3293	03/01/75
Browns Ferry 3	Tennessee Valley Authority	3293	03/01/77
Brunswick 1	Carolina Power & Light Company	2436	03/18/77
Brunswick 2	Carolina Power & Light Company	2436	11/03/75
Cooper	Nebraska Public Power District	2381	07/01/74
Duane Arnold	Iowa Electric Light & Power Co	1658	02/01/75
Edwin I. Hatch 1	Georgia Power Company	2436	12/31/75
Edwin I. Hatch 2	Georgia Power Company	2436	09/05/79
Fermi 2	Detroit Edison Company	3430	01/23/88
Hope Creek	Public Service Electric & Gas	3293	12/20/86
James A. FitzPatrick	New York Power Authority	2436	07/28/75
Peach Bottom 2	PECO	3458	07/01/74
Peach Bottom 3	PECO	3293	12/01/74
Vermont Yankee	Vermont Yankee Nuclear Power Corporation	1593	12/01/72

***Cooper:** Representing the 22 BWR/3 and BWR/4 Mark 1 containment plants. Cooper is operated by the Nebraska Public Power District and is located in Nebraska.*

Reactor Type BWR 4 - Containment Type Mark 2

Limerick 1	PECO	3293	02/01/85
Limerick 2	PECO	3293	01/08/90
Susquehanna 1	Pennsylvania Power & Light	3293	06/08/83
Susquehanna 2	Pennsylvania Power & Light	3293	02/12/85

Reactor Type BWR 5 - Containment Type Mark 2

LaSalle County 1	Commonwealth Edison Company	3323	01/01/84
LaSalle County 2	Commonwealth Edison Company	3323	10/19/84
Nine Mile Point 2	Niagara Mohawk Power Corp	3323	03/11/88
WNP-2	Washington Public Power Supply System	3323	12/13/84

LaSalle County 1: Representing the eight BWR/4 and BWR/5 Mark 2 containment plants. LaSalle is operated by the Commonwealth Edison Company and is located in Illinois. LaSalle was selected primarily for the opportunity to monitor one of the Com Ed facilities.

Reactor Type BWR 6 - Containment Type Mark 3

Clinton	Illinois Power Company	2894	11/24/87
Grand Gulf	Entergy Operations Inc.	3833	07/01/85
Perry	Cleveland Electric Illuminating Co.	3579	11/18/87
River Bend	Gulf States Utilities Company	2894	06/16/86

***River Bend:** Representing the four BWR/6 Mark 3 containment plants. River Bend is operated by Entergy and is located in Louisiana. River Bend was constructed and initially operated by Gulf States Utilities until that utility was acquired by Entergy in a merger a few years ago. The plant has not yet fully assimilated into Entergy.*

***NOTE:** Because there are only four BWR/6 plants and they are all relatively new, it is proposed that this plant would be the lowest priority among the focus group.*

UCS's Nuclear Safety Monitoring Program

Reactor Type PWR 2 Loop - Containment Type DRYAMB

Kewaunee	Wisconsin Public Service Corp	1650	06/16/74
Point Beach 1&2	Wisconsin Electric Power Company	1519	12/21/70 & 10/01/72
Prairie Island 1&2	Northern States Power Company	1650	12/16/73 & 12/21/74
R. E. Ginna	Rochester Gas & Electric Corp	1520	07/01/70

Reactor Type PWR 3 Loop - Containment Type DRYAMB

H. B. Robinson 2	Carolina Power & Light Company	2300	03/07/71
Joseph M. Farley 1&2	Southern Nuclear Operating Co	2652	12/01/77 & 07/30/81
Shearon Harris	Carolina Power & Light Company	2775	05/02/87
Turkey Point 3&4	Florida Power & Light Company	2200	12/14/72 & 09/07/73
Virgil C. Summer	South Carolina Electric & Gas Co	2775	01/01/84

Reactor Type PWR 3 Loop - Containment Type DRYSUB

Beaver Valley 1&2	Duquesne Light Company	2652	12/01/76 & 11/17/87
North Anna 1&2	Virginia Power	2893	06/06/78 & 12/14/80
Surry 1	Virginia Power	2441	12/22/72
Surry 2	Virginia Power	2441	05/01/73

***Surry:** Representing the 13 Westinghouse 3-loop plants and six Westinghouse 2-loop plants. Surry is operated by Virginia Power and is located in Virginia. Virginia Power is an industry leader in dry cask storage of spent fuel.*

UCS's Nuclear Safety Monitoring Program

Reactor Type PWR 4 Loop - Containment Type DRYAMB

Alvin W. Vogtle 1&2	Georgia Power Company	3565	06/01/87 & 05/20/89
Braidwood 1&2	Commonwealth Edison Company	3411	07/29/88 & 10/17/88
Byron 1&2	Commonwealth Edison Company	3411	09/16/85 & 08/21/87
Callaway	Union Electric Company	3565	04/01/85
Comanche Peak 1&2	Texas Utilities Electric Company	3411	08/13/90 & 08/01/93
Diablo Canyon 1&2	Pacific Gas & Electric Company	3338	05/07/85 & 03/13/86
Indian Point 2	Consolidated Edison Company	3071	08/01/74
Indian Point 3	New York Power Authority	3025	08/30/76
Salem 1	Public Service Electric & Gas Co	3411	06/30/77
Salem 2	Public Service Electric & Gas Co	3411	10/13/81
Seabrook	North Atlantic Energy Service Corp	3411	08/19/90
South Texas Project 1&2	Houston Lighting & Power Co	3800	08/25/88 & 06/19/89
Wolf Creek	Wolf Creek Nuclear Operating Corp	3565	09/03/85
Zion 1&2	Commonwealth Edison Company	3250	10/02/73 & 11/01/74

Reactor Type PWR 4 Loop - Containment Type DRYSUB

Millstone 3	Northeast Utilities	3411	04/23/86

Millstone 3 and Indian Point 3: Representing the 22 Westinghouse 4-loop dry atmospheric and sub-atmospheric plants. Millstone 3 is operated by Northeast Utilities and is located in Connecticut. IP3 is operated by the New York Power Authority and is located in New York about 25 miles upriver of NYC. IP3 has been operating over 20 years, but has a lifetime capacity factor of around 50%. UCS has a long history of involvement with IP3. Millstone 3 is currently shutdown and requires approval by the NRC Commissioners prior to restarting.

Reactor Type PWR 4 Loop - Containment Type ICECND

Catawba 1	Duke Power Company	3411	06/29/85
Catawba 2	Duke Power Company	3411	08/19/86
Donald C. Cook 1	Indiana/Michigan Power Company	3250	08/23/75
Donald C. Cook 2	Indiana/Michigan Power Company	3411	07/01/78
McGuire 1	Duke Power Company	3411	12/01/81
McGuire 2	Duke Power Company	3411	03/01/84
Sequoyah 1	Tennessee Valley Authority	3411	07/01/81
Sequoyah 2	Tennessee Valley Authority	3411	06/01/82
Watts Bar	Tennessee Valley Authority	3411	10/01/95

Sequoyah 1: Representing the nine Westinghouse 4-loop ice condenser containment plants. Sequoyah is operated by the Tennessee Valley Authority and is located in Tennessee. Sequoyah and Watts Barr are sister plants so selecting this TVA plant will monitor both sites.

UCS's Nuclear Safety Monitoring Program

Reactor Type PWR CE - Containment Type DRYAMB

Arkansas Nuclear 2	Entergy Operations Inc.	2815	03/25/80
Calvert Cliffs 1	Baltimore Gas & Electric Company	2700	05/08/75
Calvert Cliffs 2	Baltimore Gas & Electric Company	2700	04/01/77
Fort Calhoun	Omaha Public Power District	1500	09/26/73
Maine Yankee	Maine Yankee Atomic Power Co	2700	12/28/72
Millstone 2	Northeast Utilities	2700	12/26/75
Palisades	Consumers Power Company	2530	12/31/71
San Onofre 2	Southern California Edison Co	3390	08/18/83
San Onofre 3	Southern California Edison Co	3390	04/01/84
St. Lucie 1	Florida Power & Light Company	2700	12/21/76
St. Lucie 2	Florida Power & Light Company	2700	08/08/83
Waterford 3	Entergy Operations Inc.	3390	09/24/85

Reactor Type PWR CE80 - Containment Type DRYAMB

Palo Verde 1	Arizona Public Service Company	3800	01/27/86
Palo Verde 2	Arizona Public Service Company	3800	09/18/86
Palo Verde 3	Arizona Public Service Company	3800	01/01/88

Calvert Cliffs 1: Representing the 15 Combustion Engineering plants. Calvert Cliffs is operated by Baltimore Gas & Electric and is located in Maryland. Calvert Cliffs has become the point plant for license renewal efforts after Yankee Rowe pulled out of the picture.

Reactor Type PWR LLP - Containment Type DRYAMB

Arkansas Nuclear One 1	Entergy Operations Inc.	2568	12/04/74
Crystal River	Florida Power Corporation	2544	03/13/77
Davis-Besse	Toledo Edison Company	2772	07/31/78
Oconee 1	Duke Power Company	2568	07/16/73
Oconee 2	Duke Power Company	2568	09/09/74
Oconee 3	Duke Power Company	2568	12/16/74
Three Mile Island 1	GPU Nuclear Corporation	2568	09/02/74

***Oconee 1:** Representing the seven Babcock and Wilcox plants. Oconee is operated by Duke Power Company and is located in South Carolina. Duke is an important player in the nuclear industry and is seeking to expand its business area by providing engineering and operations support to other utilities.*

EVENT CHECKLIST

The nuclear power plant event checklist features questions that probe the effectiveness of the licensee's problem identification and corrective action programs. The event checklist will be used when reviewing publicly available documentation:

- licensee event reports (LERs) submitted by licensees to the NRC on problems reportable under 10 CFR 20, 10 CFR 50.9, 50.36, or 50.73
- inspection reports issued by the NRC documenting the scope and results from periodic and special inspections of licensee activities
- daily event reports issued by the NRC on actual and potential problems reported by licensees
- weekly information reports issued by the NRC on staff activities during the week including meeting summaries and significant plant event reviews
- Systematic Assessment of Licensee Performance reports issued every 18-24 months for each nuclear plant site by the NRC

Events may be addressed in more than one of these sources. A single event checklist will be prepared using the document which most fully describes the event, its causes, and corrective actions.

EVENT CHECKLIST (CONTINUED)

Answers are provided for each question. The answer that most completely addresses the question for the specific event is selected. The only question permitting more than a single answer is the question involving root cause(s).

Each answer is assigned a numeric value. When the answer indicates that the minimum safety standard has been met, the assigned value is zero. When the answer indicates that the minimum safety standard has been exceeded, indicative of aggressive licensee action, the value is positive. The positive value gets larger the more that the licensee's actions exceed the minimum standards. When the minimum safety standards have not been met, the value is negative. The negative value gets larger as the licensee's actions fall further below minimum expected performance levels.

The scoring system recognizes that events periodically occur in nuclear power plants given their complex nature. When equipment and personnel respond in conformance with minimum standards, the event is considered to have negligible safety significance. As long as the minimum standards are met, the frequency of such events also has minimal safety significance. The underlying assumption is that the federal regulations governing the design and operation of nuclear power plants provide reasonable assurance that public health and safety are protected. The objective of the event checklist is to ensure that the safety margins established by the regulations have not been eroded by persuasive problems.

The scoring system acknowledges the positive role of pro-active licensee actions. The theory is that a licensee turning over every rock and dealing with every problem operates a safer plant than a licensee letting sleeping dogs lie. The scoring system attempts to quantify the safety significance of the events rather than simply tracking event frequency.

Question 1: Who first identified the problem that was reported?

Appendix B to 10 CFR 50 requires that the licensee administer a quality assurance (QA) program. The QA requirements cover independent verification on work tasks, periodic testing and inspection efforts, and corrective action programs. The objective of the QA requirements is to ensure that safety standards are met and to detect and correct any deficiencies as soon as possible. Therefore, a finding by an external auditor, either NRC or INPO, reflects a breakdown in the licensee's QA program that merits a negative score.

An allegation (e.g., a safety concern expressed by a nuclear worker to a company organization outside the normal chain of command or to an external agency) indicates that the culture maintained by the licensee does not permit the free and open expression of safety concerns by its employees, thus also warranting a negative score.

There can be no positive score for this question since the licensee is required under the law to identify problems. Aggressiveness by the licensee in seeking out problems is addressed by the next question.

Question 2: How was the reported problem identified?

When the event was discovered by a special licensee self-assessment effort, by an assessment of conditions at another power plant, or by a rigorous extent of condition evaluation, positive scoring is recorded. These efforts represent pro-active licensee performance that exceeds the minimum required standards. It is commendable when a licensee takes actions to prevent or eliminate a problem experienced by another licensee. It is equally commendable when a licensee's corrective actions extend beyond the simple fix of the initiating event to address its broader implications and similar faults.

Discovery through testing, work control practices (e.g., technical review of proposed modification), and assessment of a plant incident represent expected performance.

Discovery by an internal audit garners minor negative points because one performance barrier (the administrative controls over the original work activities) was breached.

Discovery by an external audit gets maximum negative points because two performance barriers were breached (the licensee's QA program in addition to the administrative controls over the original work activities)..

Question 3: Was the reported problem evaluated properly?

A "yes" answer results in a zero score because that is the necessary performance expectation. A "no" answer obviously warrants a negative score because it indicates unacceptable performance.

A "partially adequate" answer is permitted because there are times when the initial assessment for the event is incorrect, but is reversed upon further review by the licensee. The "partially adequate" answer also applied to the situation in which the licensee took appropriate actions to resolve the problem, but failed to properly report the issue to the NRC.

The distinction between "partially adequate" and "no" should be based on the safety implications of the offending element. "Partially adequate" would be appropriate when the licensee's technical resolution of the problem was both timely and sufficient, but the licensee failed to properly inform the NRC. The plant's safety margin would have been restored in such an event. A "no" would be recorded in the case where the licensee met all of the reporting and notification requirements, but failed to adequately address the technical problems.

Question 4: What was the cause of the reported problem?

There can be no positive scoring for this question since such events are tolerated, not encouraged.

Random equipment failures, although scoring zero points in the root cause category, will generate an overall negative score during evaluation of questions six through eight if there is a history of failures implying insufficient corrective actions.

Maintenance deficiencies and design/fabrication/installation errors produce maximum negative scores because they reflect poor management oversight with the associated implications of contributing to an overall erosion of safety margins. The concern is that these root causes may represent broader problems because the deficient management controls render all work potentially suspect.

This is the only question where multiple answers are permissible because there can be more than one root cause contributing to the event. "Double jeopardy" will be avoided whenever possible. For example, if the root cause is procedural inadequacy, personnel error will not also be automatically indicated on the premise that someone failed to do a good job developing and/or reviewing the procedure.

Question 5: When was the reported problem identified?

A "missed opportunity" approach is used in lieu of a time frame approach. The time frame approach has too many vulnerabilities. As an extreme example, the event where a control room operator ignored a blaring alarm for 45 minutes is worse than the case where a deficiency on the refueling bridge was missed for a year, especially if the refueling bridge was not used during that year.

The negative scoring is proportional to how often the event was overlooked. As an example, Northeast Utilities reported during the summer of 1996 that it had discovered a 32" x 9" hole in the wall of the fuel handling building at Millstone. The hole, hidden from view behind a girder, apparently existed since plant construction. This deficiency was missed by the original workers, by the QA inspection of the original work, and during numerous pressure tests of the fuel handling building. The hole had been missed despite numerous opportunities to be aware of its presence.

The number of "misses" can be somewhat subjective. For example, it could be argued that every modification to a system that contained an original design error represented an opportunity to detect that error since the system design was reviewed while preparing the modification. Judgement will be exercised to limit the "misses" to those opportunities where it can be reasonably expected that the error should have been caught.

Question 6: Had the reported problem previously occurred or previously been identified?

This question looks for repeat offenders. If the event or a similar event had previously occurred or had already been identified at the facility, a negative score ensues. The concept is that proper and complete corrective actions for the prior event should have precluded its repetition.

Reasonable judgement will be exercised in the definition of previous occurrence. The definition will not be so broad (i.e., a plant component broke) so as to make every event a repeater; nor will the definition be so narrow (i.e., failure of a 2 inch valve manufactured by Acme in 1994 and installed during 1995 on a low energy water system) so as to exclude repetitions.

The event, or similar event, generally must have occurred previously at this facility in order for a "Yes" response to this question. The exceptions would be if an industry event was disseminated to the facility by the NRC or a vendor.

Question 7: Had corrective actions been implemented?

and

Question 8: Did corrective actions adequately address the initial problem?

These questions apply only when there has been a previous event and target the effectiveness of corrective actions. These questions are closely related to, but not "double jeopardy" for, the sixth question for the following reason. Consider an event in which power is lost due to a blown fuse. For that event, the corrective action could be to replace the fuse. If this event is repeated five times in two months and the corrective action each time is to replace the fuse, the corrective actions, although implemented, have not resolved the problem. The fuse may be undersized or there may be an intermittent short in the circuit -- in any case, feeding it fuses is an inadequate response.

Question 9: Has the reported problem been resolved?

Properly identifying and evaluating problems is good, but resolving problems is best.

A positive score is assigned when the licensee, in addition to correcting the specific problem, aggressively examines its broader implications. A positive score is assigned even when these extra efforts do not identify any related problems.

A small negative score is assigned when the corrective action has not yet been implemented, but is reasonably expected to be completed in the near term (defined as within one operating cycle). This concession recognizes that resolution is best, but that there are times and circumstances when a minor delay is tolerable.

A larger negative score is assigned when corrective actions will not be completed in a timely manner.

The Safety Significance Multiplier

The scores for the questions are added to obtain a sub-total for the event. A safety significance multiplier is then applied to obtain the overall event score.

When the event does not involve any emergency equipment, the multiplier is 1.

If components with important functions are involved, a multiplier of 1.10 is applied. The rationale is that while the components are not expressly needed to prevent or mitigate accidents, they have an important role in assuring the overall safety margins at the plant.

The multiplier rises to 1.25 when emergency equipment is affected. Clearly, whatever the problem, its implications are more severe if it affects emergency equipment than if it did not.

The multiplier jumps to 2.0 when two or more emergency systems are affected. Essentially, the reported problem represented a potential common mode failure mechanism that must be taken extremely seriously.

The rationale for the multiplier is based on the nuclear industry being mature and well beyond the "break in" period. All emergency systems have been inspected and tested numerous times with plenty of opportunities for flushing out problems. The multiplier is more tolerant for non-emergency systems because (a) by their nature, non-emergency systems have lower safety significance, and (b) these systems are not designed and tested to the same high standards that are applied to emergency equipment.

The safety significance multiplier is applied for positive <u>and</u> negative scores. Thus, when the licensee's pro-active efforts correct problems affecting multiple emergency systems, a large positive score is reported. Conversely, when standards are not satisfied for multiple emergency systems, a large negative score results.

EVENT CHECKLIST SUMMARY

The possible scores for a single event range from -240 to +40. A score of -240, hopefully only a hypothetical condition, reflects unacceptable performance by the licensee in every aspect of the problem identification and corrective action programs. A score of +40, hopefully less of a hypothetical condition, reflects exemplary problem identification and corrective action efforts by the licensee.

The event checklist can flag unacceptable performance based on a single event (i.e., a large negative score indicative of long standing design problems affecting multiple safety systems that were discovered by the NRC after repeated failures of the licensee to detect and/or correct the deficiencies).

The event checklist will probably be most meaningful when used to trend performance by a licensee. The warning signal from several event checklists indicating problems will be clearer than from any single event. In addition, such trending may screen out the isolated events of indicated problems which do not accurately reflect overall licensee performance.

EVENT CHECKLIST LIMITATIONS

The event checklist has been used since late January 1997 to monitor performance at UCS's ten focus plants. This experience has indicated that some minor changes to the checklist may be warranted. For example:

- If the NRC finds the problem, the answers to the first two questions must generate maximum negative points. The first question, which is essentially fully enveloped by the second question, may be eliminated in the revised event checklist.

- The safety significance multiplier may need to be revised or supplemented to fairly address events involving safety equipment, but for which the safety implications were negligible. For example, a licensee recently reported an error in its calibration procedure for nuclear instrumentation. As a result, the control function would not have automatically enforced at the power level required by Technical Specifications (up to 31% instead of 30%). The problem, although involving safety equipment, had zero safety implications.

The objective of the event checklist is provide insight into the effectiveness of the licensee's safety monitoring program. Since it relies on reviewing events reported by the licensee and the NRC, it is vulnerable to be blinded when a licensee has a high threshold for reporting problems or a low priority on identifying problems and when the NRC does not conduct many inspections at a licensee's facility.

A supplement to the event checklist may be a peer plant comparison evaluation that attempts to determine if a licensee's safety monitoring program is consistent with that of its peers. Such insights might be provided through a screening of LERs and inspection reports for plants comparable to the plant operated by a licensee. The need for comparison evaluation will be assessed in a later phase of UCS's monitoring program.

	Plant:		
	Event:		
	Date:		
	Source:		
EVENT:			
		Value	Score
Who first identified the problem that was reported? (Select one)			
	Utility	0	
	Allegation	-5	
	INPO / External	-10	
	NRC	-10	
How was the reported problem identified? (Select one)			
	Special self-assessment	10	
	Operational experience evaluation	10	
	Extent of condition evaluation	5	
	Work control practices	0	
	Testing	0	
	Plant incident assessment	0	
	Not specified / unknown	-5	
	Internal audit	-5	
	External audit	-10	
Was the reported problem evaluated properly? (Select one)			
	Yes	0	
	Partially or eventually	-5	
	No	-10	
What was the cause of the reported problem? (Select all that apply)			
	Random equipment failure	0	
	Personnel error	-5	
	Procedural inadequacy	-5	
	Maintenance deficiency	-10	
	Design/fabrication/installation deficiency	-10	
When was reported problem identified? (Select one)			
	First opportunity	0	
	Second opportunity	-5	
	Within a few chances	-10	
	After numerous chances	-20	

	Plant:		
	Event:		Page 2
	Date:		
	Source:		
Had the reported problem previously occurred or previously been identified?			
	No	0	
	Similar problem	-5	
	Yes	-10	
If yes, had corrective action been implemented?			
	n/a	0	
	Yes	0	
	Corrective action planned, but not completed	-5	
	No	-10	
If corrective action was implemented, did it adequately address the initial problem?			
	n/a	0	
	Yes	0	
	No	-10	
Has the reported problem been resolved?			
	Yes, with aggressive extent of condition investigation	10	
	Yes	0	
	Scheduled for resolution prior to restart from next refueling outage	-5	
	Not yet	-10	
	SCORE FOR THIS EVENT:		**0**
The reported problem involved:			
	Only non-safety related systems, structures or components (SSC)	1	
	Some SSC with function(s) that are important to safety	1.1	
	Safety related systems, structures, or components	1.25	
	Multiple safety related systems, structures, or components	2	
	OVERALL SCORE FOR THIS EVENT:		**0**

	Plant:		
	Event:		Page 3
	Date:		
	Source:		
	Comments from this event evaluation:		
(A)			
(B)			
	Evaluated by:		Rev. __