



UNIVERSITY OF MISSOURI

Research Reactor Facility

Research Park
Columbia, Missouri 65211
Telephone (314) 882-4211

FACSIMILE TRANSMISSION

Date: 8-Jan-96

Fax Number: (708) 515-1259

Attention: **Tim Reidinger**
NRC Region III

Transmitter: **Lynn Ayers**
University of Missouri Research Reactor
FAX (573) 884-7557
Phone (573) 882 5312

Attached are tracking sheets for all safety concern reports submitted to MSOC since its inception. I have also attached a current MSOC membership list; one replacement has occurred for a member who no longer works at MURR.

Ken Herwig was selected as MSOC Chair in July, 1995.

Pages: 9 (including cover sheet)

IF YOU HAVE PROBLEMS RECEIVING THE FAX, PLEASE CALL (314) 882 4211



COLUMBIA KANSAS CITY ROLLA ST. LOUIS
an equal opportunity institution

MURR Safety Oversight Committee
membership 15-Dec-95

<u>Tier 1 Group</u>	<u>Representative</u>	<u>Phone</u>
Service Applications	Dorothy Van Ark	882-5286
Facility Operations	David Nickolaus	882-5210
Reactor Operations	Shift Supervisor on Duty	882-5213
Neutron Materials Science Program	Ken Herwig	882-5316
Biomedical Program	Lynn Ayers	882-5312
Nuclear Analysis Program	Leon Krueger	882-5276
"CHIND" Committee (CD,HP,ID,NE,DO)	Scott Keithley	882-5262

(use additional sheet if necessary)

The submitted concern is that intercom announcements cannot be heard on the beamport floor. The initiator states that announcements made by Reactor Control cannot be heard, and that there have been occasions on which an actual isolation/evacuation has been confused with a test. Requests for speakers at the beamport floor level have been put forth in the past without success.

MSOC concluded that the inability to hear the intercom has minimal significance as a safety issue, because all MURR staff are clearly instructed to respond to the isolation/evacuation alarm unless they have been notified to disregard it. If announcements to disregard alarms are not heard, staff should err on the side of responding to tests, not ignoring an actual isolation/evacuation. However, it is true that personnel throughout the Center are conditioned and desensitized to routine alarm tests, sometimes to the point of disregarding legitimate evacuation situations. The alarm generally does not produce an immediate, urgent response. This is considered a significant safety concern.

RE FILING:

Date initial SCS action N/A

Date referred to MSOC 1/5/95 or APPEALED N/A

ASSIGNED TO N/A

for review

SUGGESTIONS FOR RESOLUTION (use additional sheet if necessary)

- A. A speaker has been relocated from the Nucleopore platform to the south beamport floor area where the problem is presumed to occur. Two other speakers in the area have been increased in volume. This should improve the audibility of intercom announcements for workers on the beamport floor.

There is a long list of areas in which the intercom cannot be heard, and our amplifier is already operating at or beyond its capacity. While we agree that this system is inadequate and should be upgraded, we regard this as a facility maintenance/improvement issue, not a safety issue.

- B. Recommendations to resolve the conditioning/desensitizing of staff to alarms.

1. Remove routine testing of the isolation/evacuation alarm from the startup routine, and reschedule it at approximately 04:20 on maintenance shutdown days (just after shutdown). This would condition very few people to disregard the alarm, and only during a specific, predictable period of time. The majority of workers will learn that the alarm is rarely heard, and they should respond with appropriate urgency when it is used during an emergency.
2. Since the alarm would not be routinely heard, the alarm sound should be included in indoctrinations, either in the video or as a separate audiotape. (It may already be in the video.)
3. Establish a policy to reserve the "touch tone" attention signal for certain critical announcements: reactor status, emergencies, or situations (like alarm tests) that may be confused with emergencies.

Distribution of report/recommendations: Jim Rhyne, Charlie McKibben, Walt Meyer 1/18/95

Date approved by MSOC (Initial) 1/11/95

(Long-term) 1/11/95

Date Initial Action implemented 1/9/95

Date Long-term Action implemented See page 2 of this report

Complete implementation verified 10/27/95. *Q*

RE DISTRIBUTION/POSTING

Date distributed to/posted for initiator, Subcommittee members, Lobby file: Initial report posted 1/20/95

Update posted 8/11/95 / Removed 10/6/95. *Q*

Newsletter article 10/12/95.

Lobby file 10/30/95. *Q*

STATUS OF RECOMMENDATIONS

Response from Walt Meyer 1 / 27 / 95:

Recommendation B.1 requires installation of a cut-out switch for the evacuation horns, so that the Reactor Safety System function can be tested just before startup, with the horns silenced at that time. The ET Shop was asked to evaluate the feasibility of this approach. Operations is willing to implement the recommendation on a trial basis if it is feasible.

Recommendation B.2: The sound of the isolation/evacuation horns is on the indoctrination videotape.

Recommendation B.3: Operations opposed making a policy of the touch-tone attention signal. There was concern that some staff might become dependent on the touch-tone, assuming that any announcement made without the signal is of low significance. If an operator forgot to use the signal in an emergency, signal-dependent persons might be discouraged from finding out what was said.

Follow-Up Meeting 7 / 14 / 95:

Walt Meyer again expressed willingness to implement recommendation B.1 on a trial basis. The ET shop indicated that a new cut-off switch could be installed fairly easily in a location behind the operator's console, but operators were concerned that non-visibility might cause the switch to be forgotten during startup. A preferable approach, mounting the new switch in a visible location on the control panel, would be more difficult. Competing priorities in the Electronics Shop have delayed planning and implementation of this recommendation.

Several concerns about recommendation B.1 were discussed. One is the risk of starting up after several hours of maintenance work, during which the alarms might unknowingly sustain damage. Although unlikely, this scenario was judged a much more significant hazard than is caused by personnel conditioning. Another weakness of Recommendation B.1 is that its effectiveness would be extremely difficult to evaluate. A "trial basis" could require at least a year, probably longer, to observe any consistent change in personnel responses. The final and most important issue is that conditioning/desensitization is probably not the cause of the most objectionable "straggling" behaviors. Members estimate that conditioned personnel, mistakenly assuming a test situation, might hesitate for no more than 5-15 seconds during an actual emergency. After that period, the ongoing alarm clearly differs from a test, prompting personnel to make the expected response. Walt and Nolan reported a much different behavior pattern for individuals identified as non-responders during past drills and isolations. Some of these individuals have remained on the phone with hands over their ears to block out the alarm, or continued to delay after operators instructed them to leave. MSOC does not believe that changing alarm testing times would improve the response of such individuals, who clearly understand the required behavior but refuse to comply. Considering the probable limited benefit, potential new risks, and technical difficulties involved, MSOC chose to drop recommendation B.1, replacing it with recommendation B.4, presented below.

New Recommendation: B.4: In regard to willful non-responders, the committee concluded that such individuals pose a threat to themselves, to the emergency response team, and to the Center's regulatory standing. MSOC recommends that the Center adopt and adhere to a firm policy imposing penalties for non-responders. Re-training or counseling in response to a first offense should involve both the individual and his or her supervisor/sponsor (as is currently done), and be documented in the offender's personnel files (not currently done). Repeat violations must result in negative consequences (i.e.: loss of unescorted access) to preserve personnel safety and to clearly communicate that this serious infraction will not be tolerated.

SUMMARY OF RECOMMENDATIONS:

- A Adjust speakers.
- B.1 Move alarm testing time.
- B.2 Incorporate alarm sound into indoctrination.
- B.3 Use touch-tone signal for critical announcements.
- B.4 Define & impose penalties for non-responders.

STATUS AS OF 7/31/95:

COMPLETED 1/9/95.
DROPPED.
ALREADY EXISTS - ITEM CLOSED.
DROPPED.
DRAFT POLICY COMPLETE. TO BE INCLUDED IN NON-FEO TRAINING 8/95.

MURR SAFETY OVERSIGHT COMMITTEE TRACKING SHEET

SAFETY CONCERN

(use additional sheet if necessary)

The initiator's concern regards the replacement of Jay Kunze as Chair of the RAC Reactor Safety Subcommittee and speculation that this action may have been taken in response to positions, statements or issues raised by Dr. Kunze in his capacity as Chairman which were unfavorable with management. The initiator states that Dr. Kunze had not intended to step down, did not know he was being replaced before a public announcement was made of Turk Storvick's appointment to the position, and speculated that he must have made somebody mad.

MSOC members had varied perceptions of the safety significance of this concern. Members also debated whether or not this concern falls within the scope of this committee's responsibilities (safety vs. chilling effect). The accuracy of the speculations which form the basis of this concern is not known. Because the concern is submitted by an outside party rather than the affected individual, the committee decided that a direct inquiry should be made to determine Jay Kunze's perception of the issue. A member was delegated to contact Dr. Kunze and report back to the Committee, which will then consider any need for further deliberation/action.

RE FILING:

Date initial SCS action N/ADate referred to MSOC 1/31/95 Initial Evaluation 2/8/95ASSIGNED TO not applicable for review

SUGGESTIONS FOR RESOLUTION (use additional sheet if necessary)

NONE.

A member of MSOC contacted Dr. Kunze by phone on 2/20/95. Dr. Kunze stated that he does not perceive his replacement as Chairman to be a retaliatory action against him, nor does he have any concern regarding Dr. Storvick's ability to assume the Chairmanship. The MSOC, upon hearing the report of its delegated representative, has closed the issue.

Date closed by MSOC (Initial) 5/19/95(Long-term) not applicableDate Initial Action implemented not applicableDate Long-term Action implemented not applicable

RE DISTRIBUTION/POSTING

Date distributed to/posted for initiator, Subcommittee members, Lobby file 5/26/95

Posted 7/7/95.

Removed 10/6/95. *Dr*

MURR SAFETY OVERSIGHT COMMITTEE TRACKING SHEET

SAFETY CONCERN

(use additional sheet if necessary)

The concern relates to alpha emitters which could become airborne during the TRUMP-S upgrade project. It requests establishment of a MURR respirator program (to include the affected TRUMP-S workers), because NRC regulations do not allow employees to use respirators for protection from airborne radioactivity except under the control of a qualified respirator program. (This concern originated in the NAP and was forwarded to the Director's Office before the MSOC was operational. It was reviewed by the MSOC as part of the Committee's clearinghouse function for concerns handled within the various subcommittees.)

MSOC considers this request to be a legitimate concern of high priority and significance. Members are aware that management has agreed to establish a qualified respirator program for a limited number of MURR staff, and that other approaches are being actively pursued to minimize the potential airborne alpha contamination for the TRUMP-S upgrade (extensive decontamination efforts, controlled airflow, etc.).

The Committee requests a current status/progress report and projected timetable for implementation of the proposed respirator program, including confirmation of appropriate budget allocations.

RE FILING:

Date initial SCS action 11 / 28 / 94

Date referred to MSOC 1 / 12 / 95 Committee Evaluation 2 / 8 / 95

ASSIGNED TO Charlie McKibben for response

SUGGESTIONS FOR RESOLUTION (use additional sheet if necessary)

UPDATE: 30-Oct-95

The TRUMP-S facility upgrade was completed without need of respirators. Considerable doubt has arisen regarding the cost-benefit of an approved respirator program: even the NRC has discouraged this approach. Respirator use for radiation protection has been declining throughout the industry, due to increased time for task completion (increasing external exposure in most applications), impaired communication, and physical stress and discomfort for respirator wearers. In consideration of the cost, personnel impact, and low perceived need or benefit of a respirator program, MSOC unanimously approved a motion to retract the earlier assignment of high priority for this issue. The committee defers to the Radiation Safety Officer to implement or close the proposed respirator program as he deems appropriate for the Center's needs. The initiator of this safety concern was an active participant in this discussion and decision.

Date approved by MSOC (Initial) N/A(Long-term) N/ADate Initial Action implemented N/ADate Long-term Action implemented N/A

RE DISTRIBUTION/POSTING

Date distributed to/posted for initiator, Subcommittee members, Lobby file / /

Posted 1/8/96

Lobby file 1/8/96

MSOC Tracking ID #

MSOC-0004

(Operations 06/02/95)

MURR SAFETY OVERSIGHT COMMITTEE TRACKING SHEET

SAFETY CONCERN

(use additional sheet if necessary)

Emergency response actions called for in the TRUMP-S Waste Contingency Plan (a document concerned with EPA-regulated components of TRUMP-S waste) conflict with actions called for in MURR Facility Emergency Procedures (FEPs). Because both documents are currently in force, the discrepancies could cause confusion in emergency response or set us up for regulatory violations from EPA or NRC. Operations proposed that the TRUMP-S Waste Contingency Plan should be revised to obtain compatibility. They delegated Derek Pickett and Tony Schoone (the Emergency Managers for the Contingency Plan) to meet with Environmental Health & Safety staff to revise the Contingency Plan as necessary.

The concern was forwarded to MSOC for tracking.

RE FILING:

Date initial SCS action 6/19/95Date referred to MSOC 6/19/95 Initial Evaluation 6/30/95ASSIGNED TO Derek Pickett / Tony Schoone

SUGGESTIONS FOR RESOLUTION (use additional sheet if necessary)

Long-Term: MSOC concurs with Operations' recommendation.

Derek is making good progress on revising the Waste Contingency Plan. He met with Russell Hanson of EH&S on 6/22/95 and obtained agreement on proposed revisions. He has also discussed the proposed revisions with Operations staff to ensure that the revisions would be adequate to resolve the concern. As of 7/19/95, he is simply waiting for EH&S to incorporate the changes and issue the revised Contingency Plan.

Short-Term: MSOC recommends that Walt Meyer issue a Standing Order to clarify that Facility Emergency Procedures shall supercode the TRUMP-S Contingency Plan in the event of conflicting recommendations. This will formally clarify expectations until the revisions are implemented.

Date closed by MSOC (Initial) 7/19/95(Long-term) not applicableDate Initial Action implemented not applicable
7/20/95Date Long-term Action implemented not applicable

RE DISTRIBUTION/POSTING

Date distributed to/posted for initiator, Subcommittee members, Lobby file _____

MURR SAFETY OVERSIGHT COMMITTEE TRACKING SHEET**SAFETY CONCERN**

(use additional sheet if necessary)

An anonymous initiator is concerned that a proposal for management evaluations by MURR staff, raised twice in MURR-wide staff meetings, has been ignored by management. The initiator states that J. Rhyne (at the Aug. 3 and Sept. 6 staff meetings) promised to discuss the matter at the next available meeting of Group Leaders and Managers. The initiator further states that his/her Group Leader/Manager said the matter has not been placed on the agenda or raised by anyone at a meeting, and that he (the Group Leader/Manager) feared retaliation if he were to bring up the subject. The initiator is disappointed, having anticipated that such a review would provide an avenue for staff feedback. The initiator states that safety is impacted by undermining staff confidence "that future safety concerns will be properly addressed in an atmosphere of continued fiscal/management problems and failed promises by management." He/she proposes that a "fair, complete, and anonymous review of all Group Leaders, Managers, and Directors" be conducted, with the entire staff allowed to participate and responses reported at least one level above each evaluated individual.

RE FILING:Date initial SCS action n/aDate referred to MSOC 9/18/95 Initial Evaluation 9/29/95ASSIGNED TO Jim Rhyne, Group Leaders & Managers**SUGGESTIONS FOR RESOLUTION (use additional sheet if necessary)**

Upon initial review, MSOC perceives that the initiator has submitted this concern to the Committee due to frustration in seeking to raise the subject at a managerial level. The Committee regards the issue as primarily a management decision, although some Chilling Effect is implied in the Group Leader/Manager's alleged fear of retaliation. Without judging the proposal for management evaluations, MSOC recommends that Rhyne raise the issue for consideration by the Group Leaders & Managers. MSOC requests feedback from Rhyne regarding the outcome of the managerial discussion(s) or his rationale for rejecting this recommendation.

Date closed by MSOC (initial) _____

(Long-term) _____

Date Initial Action implemented _____

Date Long-term Action implemented _____

RE DISTRIBUTION/POSTINGDate distributed to/posted for initiator 10/6/95 Lobby file _____

UNIVERSITY OF MISSOURI-COLUMBIA

INTRA DEPARTMENT CORRESPONDENCE

Date: October 18, 1995

TO: Ken Herwig, Chair MSOC

FROM: Jim Rhyne *Jim*

RE: Evaluation of MURR Management

The issue raised by the anonymous concern brought to your committee about the evaluation of MURR management by non-management personnel was discussed in the Managers and Group Leaders meeting October 17, 1995.

I was personally surprised and amazed by the feeling expressed that the person bringing up the concern felt that he/she could not "pursue the issue through normal managerial channels, as indicated by the belief that his/her Group Leader/Manager feared retaliation in bringing up the issue." This concern about possible retaliation seems to be rather inconsistent with the free-ranging level of discussion that occurs in the Group Leaders and Managers meetings (and in other MURR meetings for that matter). If any concrete examples are available supporting this "fear of retaliation", it would be most helpful to have this information.

Essentially universally, the MURR managers have no problem with the concept of evaluation by the persons they supervise. However, the precise methods by which this could be implemented and the format to be used was not immediately obvious to the group. For example, on quick examination, the formats used by departmental faculty to evaluate department chairs and deans do not appear to be applicable for the broad spectrum of positions we have here at MURR. Fran Malloy, who has extensive personnel experience in her position in the Graduate School, did not know of any other unit on campus for which such an evaluation procedure is in place that we could copy.

The opinion was also voiced by several that the evaluation of management ought to be contained in the two-way communication procedure that is part and parcel of the annual (or more frequent) employee evaluation process.

We do plan to discuss this further at a later meeting. Meanwhile, we are certainly open to more specific suggestions on implementation of such an evaluation procedure.