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AUTH.NAME AUTHOR AFFILIATION
TUCKMAN,M.S. Duke Power Co.
RECIP.NAME RECIPIENT AFFILIATION
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SUBJECT: Forwards rept summarizing false negative blind performance urine drug screen which occurred during Feb 1991.Filing rept on behalf of B&W.

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Nuclear Production Dept.
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M.S. TUCKMAN
Vice President
Nuclear Operations
(704)373-3851

DUKE POWER

March 26, 1991

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Subject: False Negative, Blind Performance
Urine Drug Screen Report
Oconee Nuclear Station, Docket Nos. 50-269, -270, -287
McGuire Nuclear Station, Docket Nos. 50-369, -370
Catawba Nuclear Station, Docket Nos. 50-413, -414

Gentlemen:

Pursuant to 10 CFR 26, App. A 2.8 (E)(4) find attached the subject report which summarizes Duke Power Company's findings concerning a false negative blind performance urine drug screen which occurred during February 1991. Duke Power Company has approved Babcock and Wilcox's pre-access testing program and is filing this report on behalf of Babcock and Wilcox.

Should there be any questions concerning this matter, contact William E. Dukes, Jr., M.D. at (704) 373-5459.

Very truly yours,

M.S. Tuckman

M.S. Tuckman

JAR/fn

Attachment

xc: Mr. S. D. Ebneter
Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta St., NW., Suite 2900
Atlanta, Georgia 30323

A022
1/1

bxc: W.E. Dukes -WC08C
S.P. Murdock - PB04B
R.M. Bisanar - PB05E
GS-801.01

B&W NUCLEAR SERVICE COMPANY
Special Products & Inspection Services Division

3110 Odd Fellows Road
Lynchburg, VA 24501-5010
Telephone: 804-847-3700
Telecopy: 804-847-1020

March 7, 1991
FAC91015

Ms. Sue P. Murdock, Manager
Nuclear Access and Fitness For Duty
Duke Power Company
422 South Church Street
Charlotte, NC 28242

Dear Sue,

Per our telephone conversation today, I am sending you a copy of the letter from CompuChem which documents a report of a "false negative" on a blind specimen that was sent to CompuChem Laboratories for analysis. I am sending you a copy of the above referenced letter as required by B&W Nuclear Technologies Drug and Alcohol Testing Procedure To Meet The Requirements of 10CFR26 Appendix A

On March 6, 1991 Mr. Ray Marchman and I went to CompuChem Laboratories an did a follow up investigation of the unacceptable results on the blind specimen which was submitted to the laboratory for analysis. We talked to E. Dale Hart, Assistant Director, Technical Programs Forensic Drug Testing Laboratory at CompuChem Laboratories. A discussion was held of what happened, possible causes, and what they were doing to help prevent this from happening again. After these discussions and a review of the laboratory techniques, I feel that they continue to provide us with dependable and reliable services.

If I can answer any additional questions on this matter, please do not hesitate to call me at 804-847-3355.

Very Truly Yours,

F A Currence

F. A. Currence, Manager
BWNT Access Control

enclosures

cc: J. F. Cuvelier
R. T. Marchman

COMPUCHEM LABORATORIES, INC. P.O. Box 12652 3308 Chapel Hill/Nelson Highway Research Triangle Park, NC 27709 (919) 549-8263

March 5, 1991

B & W Nuclear Technologies
ATTN: Ray Marchman
3110 Odd Fellows Rd.
Lynchburg, VA 24501

Dear Mr. Marchman:

On February 27, 1991, CompuChem Laboratories received a urine sample from B & W Nuclear Technologies (B & W) identified as Social Security Number: 422-87-4156 for forensic drug testing. The sample was assigned an internal accession number of 34404830 and subjected to our standard drug testing protocol in which it screened negative and was reported as such.

Subsequently, we were informed by you that the sample was a proficiency sample with a target concentration (from the preparer/vendor) of 267 ng/mL.

On March 1, the sample was retested per your request. The sample was assigned an internal accession number of 34501106 for the retest. In the retest procedures, the sample screened and confirmed positive for the presence of THC metabolite.

The results of the tests performed on the sample were as follows:

Original Test (THC Screening Cutoff = 20 ng/ml)
EMIT Results in milliabsorbance units (mAU):

Negative	Cutoff	Blind Positive	B & W Sample
965	1066	1076 (+10)	1064 (-2)

Retest
EMIT Results:

Negative	Cutoff	Blind Positive	B & W Sample
871	961	993 (+32)	1016 (+55)

GC/MS Results: 222 ng/mL THC metabolite

Obviously, based upon the results of the retest analyses, the sample should have tested positive in the original test.

One noteworthy observation in the data from the first test is the response difference of 10 mAU between the calibrator (20 ng/mL) and the blind positive control (125 ng/mL). Normally, the response difference between these two samples is on the order of 40-70 mAU. Still, even with the

relatively low response for the blind positive control, one would expect a sample at over 200 ng/mL to give a response greater than a 125 ng/mL control and certainly greater than a 20 ng/mL calibrator.

In my opinion, the original results for the sample in question may have been due to a high calibrator response and a random sampling error in the analysis of the B & W sample. As I mentioned earlier, the normal difference in response between the positive control and the calibrator is approximately 40-70 mAU. Differences outside this range are generally due to statistical variation in the calibration process. Differences less than 40 mAU are due to high calibrator responses, while differences greater than 70 mAU are due to low calibrator responses. In the original test of the sample, a high calibrator response resulted in very little difference between the 20 ng/mL calibrator and the 125 ng/mL blind positive control as well as open controls at the same concentration.

Typically , the variation in EMIT results when a sample is run repeatedly is approximately ±10 mAU; however, random variations of as much as ±50 mAU are observed. The greatest source of variability in EMIT procedures run on automated analyzers is the sampling of urine by the instrument. In the sampling process, an instrument probe removes 15 μL of urine for analysis from a 3 mL total volume of sample contained in a test tube. Errors in this process will lead to analytical variation. When a sampling error is combined with high calibration results, even samples well above the assay cutoff may give results which are below the cutoff.

Unfortunately, random variations in sampling by the instrument are not easily detected. This is because such observations may not occur with the quality control samples run with each group of samples. All that we can do to minimize this type of sampling error is to maintain strict instrument maintenance requirements. Daily maintenance of the instruments is performed to reduce the possibility of such an error.

The problem of high calibrator response leading to decreases in assay resolution can be addressed through changes in our QC requirements for the EMIT procedures. We are in the process of developing minimum separation requirements for EMIT procedures based upon normal performance for each drug parameter. Under these requirements, if controls give responses which are closer to the calibrator than predicted by historical data, the instrument will be recalibrated and samples near the cutoff will be repeated.

If you require any further information regarding the analysis of the sample in question, please phone me at (919) 248 6804.

Respectfully yours,

Edwin D. Hart
Assistant Director,
FDT Technical Programs

cc: Ms. Wanda Boone
Mr. James McCarthy
Mr. Robert Meierer
Dr. Michael Peat

Docket No. 50-413, 50-414
50-369, 50-370
50-269, 50-270, 50-287

MAR 2 1 1991

Mr. M. S. Tuckman, Vice President
Nuclear Operations
Duke Power Company
P.O. Box 1007
Charlotte, North Carolina 28201-1007

Dear Mr. Tuckman:

SUBJECT: OPERATIONAL EVENTS WHILE SHUTDOWN

The NRC has just issued Information Notice 91-22, "Four Plant Outage Events Involving Loss of AC Power or Coolant Spills," which addresses recent events that occurred during shutdown operations.

The chief purpose of this information notice is to notify each licensee that the high rate of precursor events to loss of decay heat removal during shutdown is a source of concern to the NRC. All of the events discussed in this information notice occurred during a one-week period in March 1991. Because of the potential for loss of a critical safety function in these and similar events, I believe a high level of management attention is required in the planning, coordination, and execution of shutdown operations.

While this information notice does not require specific licensee action or response, I urge you to give this important matter your personal attention.

Sincerely,
Original signed by
Thomas E. Murley

Thomas E. Murley, Director
Office of Nuclear Reactor Regulation

cc: See Next Page

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Duke Power Company

Catawba Nuclear Station
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