FPL Energy
Seabrook Station

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January 23, 2003

Docket No. 50-443
NYN-03005

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

Seabrook Station
Submittal of Investigation Report on Blind Performance Test Samples

In accordance with 10 CFR 26 Appendix A, Subpart B, 2.8(e) (4), FPL Energy Seabrook, LLC submits the enclosed Investigation Report on Blind Performance Test Samples. FPLE Seabrook notes that this report is not being submitted within the time constraints specified in 10 CFR 26 Appendix A, Subpart B, 2.8(e) (4) due to an administrative oversight. The occurrence of the oversight has been entered into the FPLE Seabrook Corrective Action System.

Should you have any questions pertaining to this matter, please contact Mr. James M. Peschel, Regulatory Programs Manager, at (603) 773-7194.

Very truly yours,

FPL Energy Seabrook, LLC

Mark E. Warner
Site Vice President

cc:
H. J. Miller, NRC Region 1 Administrator
R. D. Starkey, NRC Project Manager, Project Directorate I -2
G. F. Dentel, NRC Senior Resident Inspector

ENCLOSURE TO NYN-03005

INVESTIGATION REPORT
on
Blind Performance Test Samples for North Atlantic Energy Service Corp. Seabrook Station

Objective:

The licensee shall investigate any unsatisfactory performance testing result. A record shall be made of the investigative findings and the corrective action taken by the laboratory. The licensee shall send the document to the NRC as a report of the unsatisfactory performance testing incident within 30 days.

References:

1. 10 CFR 26 Appendix A, Subpart 2.8(e)(4)
2. FR 53, 11970 (1988), Subparts 3.19(b)(2) & (5)

Observation:

A blind quality control sample containing the primary cocaine metabolite, benzoylecgonine, was submitted by Seabrook Station to the Quest Diagnostics laboratory in Norristown, Pennsylvania, in July, with the ID number of 6374750. It was reported by the laboratory as negative. The MRO requested the laboratory to analyze the sample by GC/MS, wherein the laboratory reported the presence of benzoylecgonine at a concentration of 217 ng/mL. With the cutoff of 150 ng/mL, this would have constituted a positive result.

The sample was provided to Seabrook Station by Duo Research Inc., which was requested to assist in the investigation of these results.

Finding:

The benzoylecgonine (BE) sample provided by Duo Research was from lot number 9657-017, bottle 11712. The original reference value was 575 ng/mL. The Quest Diagnostics laboratory was contacted to obtain the original screening data and any other information regarding the initial testing and retesting of the sample.

The laboratory provided the following data: the initial screening result for the sample gave a reading of 0.88, where the cutoff of 300 ng/mL is set at 1.0. So, the laboratory reported it correctly as negative based on the result. As reported to the MRO, the retest by GC/MS had a value of 217 ng/mL, which is consistent with the original screening result of 0.88 (217/300 = 0.72). The laboratory also obtained a creatinine value of 24 mg/dL.

Seabrook Station had submitted blind samples from this same lot in March and in May. The laboratory also provided the quantitative results for these, which were: BE = 580, creatinine = 61; and BE = 578, creatinine = 60, respectively.

Duo Research obtains quantitative results from other clients for blind samples submitted to other laboratories. A review of our records found the following values for samples derived from the same lot as in the questioned sample described above: BE range 556 - 658 ng/mL, creatinine range 61 - 69 mg/dL.

Conclusion and Recommendation:

It is well established that benzoylecgonine is a somewhat unstable analyte, being subject to hydrolysis resulting in a lowering of concentration. This could occur if the sample were stored at elevated temperatures for some period of time. This does not appear to be the cause for this reduced value of 217 ng/mL versus the median value of about 600 ng/mL obtained previously by the Norristown laboratory and several other laboratories receiving samples from the same production lot. This conclusion is based on the concomitant lower creatinine level, which was 24 mg/dL versus the median value of about 65 mg/dL obtained from other laboratories. Since both concentrations were about one-third lower, it appears that the sample was inadvertently diluted at some point in its handling. This would be difficult to do at the laboratory as it would have to have occurred immediately after the specimen bottle was opened, as the initial screening result was below where it should have been. The standard procedure at the laboratory is to open the bottle, pour off a small amount into a test tube, which is then submitted for screening.

Thus, it would appear that the sample may have been inadvertently diluted at the time it was first prepared by Duo Research, where 60 mL are poured from the bulk bottle into a standard laboratory bottle. This is sealed, labeled and packaged for shipment to Seabrook Station. In a review of our procedures, only one source of sample material is open at a time, making it difficult to mix samples. Apparently, Seabrook Station transfers the contents into bottles provided by the laboratory. These handling procedures should also be reviewed as a possible source of contamination.

It is concluded that the error does not appear to be the fault of the laboratory, although there is no way to totally rule this out. It is recommended that subsequent results from the laboratory be closely monitored and that the sample preparation steps at Duo Research and Seabrook Station be reviewed to insure that no similar occurrence can take place.

Prepared for: Seabrook Station

by: Robert E Willette Date: Sept 4, 2002

Robert E. Willette, Ph.D.
President
Duo Research Inc.

NYN-03005

SUBMITTAL OF INVESTIGATION
REPORT ON BLIND PERFORMANCE TEST SAMPLES

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