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RELATED CORRESPONDENCE



UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:

HOUSTON LIGHTING & POWER
COMPANY, ET AL.

(South Texas Project,
Units 1 & 2)

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Docket Nos. 50-4980L
50-4990L

TESTIMONY ON BEHALF OF HOUSTON LIGHTING & POWER COMPANY, ET AL.

OF

MR. W. STEPHEN MCKAY
MR. TIMOTHY K. LOGAN

ON

ALLEGED INCIDENTS OF DOCUMENT FALSIFICATION



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5 UNITED STATES OF AMERICA
6 NUCLEAR REGULATORY COMMISSION
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0 TESTIMONY OF W. STEPHEN MCKAY AND TIMOTHY K. LOGAN
1 ON ALLEGED INCIDENTS OF DOCUMENT FALSIFICATION

2 Q. 1 Please state your names.

3 A. 1 W. Stephen McKay (WSM) and Timothy K. Logan (TKL).

4 Q. 2 Mr. McKay and Mr. Logan, by whom are you employed?

5 What is your current position?

6 A. 2 (WSM): Pittsburgh Testing Laboratory (PTL). I
7 am Corporate Manager for Quality Assurance (QA) in the
8 Pittsburgh Home Office of PTL.

9 (TKL): Houston Lighting & Power Company (HL&P). I am
0 Project QA Supervisor on HL&P's W. A. Parish Unit #8 Project,
1 a coal fired power plant, under construction at Thompsons,
2 Texas.

3 Q. 3 Please describe your professional qualifications.

4 A. 3 (WSM, TKL): These are set forth in our earlier
5 testimony on the placement and compaction of backfill at
6 STP.
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Q. 4 What is the purpose of your testimony?

A. 1 (WSM, TKL): The purpose of our testimony is to address intervenors' Contention 2, regarding alleged falsifications of Project records.

Q. 5 Are you familiar with the circumstances surrounding the falsification of certain concrete aggregate test reports by a PTL Technician in January 1977, which was the subject of NRC I&E Report Nos. 77-03 and 77-05?

A. 5 (WSM, TKL): Yes.

Q. 6 Mr. McKay, please explain your role relative to PTL's handling of the matter.

A. 6 (WSM): In January 1977, when the falsification occurred, I was the senior member of the PTL QA Group in the Pittsburgh Home Office. It occurred in the PTL concrete aggregate laboratory located at the STP site. Since August 1976, I have been in charge of all PTL quality activities on STP, and in particular, at the time of the incident, I was the senior PTL management representative responsible for assuring that the matter was immediately responded to, and fully and adequately investigated and resolved.

Q. 7 Mr. McKay and Mr. Logan, please describe the falsification and explain how it was identified.

A. 7 (WSM, TKL): The falsification involved a PTL Level I Technician who was performing tests on sand, also referred to as "fine aggregate," used in the production of concrete at STP.

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5 The tests, which are performed on a daily basis during
6 concrete "batching" (the combining of components, including
7 cement, water, sand and stone aggregates, to produce concrete),
8 are designed for the identification of possible excessive
9 organic impurities which may be present in the fine aggregate
10 material, for proper particle distribution, and for excessive
11 fine particle sizes. To perform the tests, the material is
12 washed through sieves, and the resulting sample must be oven
13 dried to evaporate the water. The residue is then weighed
14 and the weight is recorded for each sample. This drying
15 takes about 24 hours.
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25 On January 25, 1977, a PTL Level II Technician examining
26 certain test worksheets in progress, which were being prepared
27 by the PTL Level I Technician involved, looked for actual
28 test samples referred to in the worksheets but was unable to
29 find them. The PTL Level II Technician waited until January 27,
30 when the tests were to have been completed, and verified at
31 that time that test samples had never been prepared, despite
32 references in the worksheets indicating that tests had been
33 taken, producing acceptable results.
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42 Q. 8 Mr. McKay, what action was taken by PTL once the
43 tests in question were concluded and the falsification was
44 suspected?
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48 A. 8 (WSM): The PTL Level II Technician immediately
49 notified the PTL Site Manager and other PTL Supervisors of
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5 the incident on Thursday, January 27, 1977. The Level I
6 Technician was questioned by the PTL Site Manager the next
7 day, Friday, January 28, and at that time the individual
8 admitted that the tests in question had not been performed.
9
10 The Technician also indicated that he had falsified records
11 on a "few occasions" in the past, and said that the falsifi-
12 cations were the result of being "hard pressed for time."
13
14 The PTL Site Manager immediately called me at the PTL Home
15 Office in Pittsburgh and explained the situation.
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21 Q. 9 Mr. McKay and Mr. Logan, what did you do when you
22 first learned of the falsification?
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25 A. 9 (WSM): When the Site Manager called me Friday,
26 January 28, and explained the falsification, I instructed
27 him to discharge the Level I Technician, which was done the
28 next working day, Monday, January 31. I further instructed
29 the Site Manager to immediately re-sample and re-test the
30 stockpile from which the material in question was taken.
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32 Additionally, the PTL Site Manager was instructed to immedi-
33 ately notify the B&R Site QA Manager of the situation.
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37 (TKL): The B&R Site QA Manager notified HL&P QA of the
38 problem on January 31. HL&P QA notified the NRC on February 1,
39 1977.
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42 Q. 10 Mr. McKay, after you gave these initial instruc-
43 tions to your Site Manager, what were the next actions you
44 took?
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5 A. 10 (WSM): On Monday, January 31, I left the Home
6 Office and went to the STP site to personally review and
7 discuss the incident with PTL Site Supervisors. I instructed
8 them to prepare a PTL Nonconformance Report in accordance with
9 PTL procedures, which was completed and filed on February 2,
10 1977. I also reviewed the falsified test reports prepared
11 by the Level I Technician together with PTL's reports on the
12 re-sampled material.
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19 Q. 11 What were the results of the reports on the
20 re-sampled material?
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23 A. 11 (WSM): No unacceptable or nonconforming test
24 results were noted as a result of re-sampling the material
25 in question.
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29 Q. 12 Mr. McKay and Mr. Logan, had the material in
30 question been previously tested prior to the tests which
31 were falsified by the PTL Technician?
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34 A. 12 (WSM, TKL): Yes. Although not as a part of the
35 Project QA program, the same material had already been
36 tested for compliance with the Project specifications regard-
37 ing gradation, fine particle size, and distribution on two
38 previous occasions: first, by the aggregate supplier,
39 Thorstenberg Inc., prior to delivery to the site batch
40 plant, and then again by the concrete supplier, Champion
41 Inc., prior to use by the Concrete Batch plant. In both
42 cases, the material in question was found to be in accordance
43 with the specifications.
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5 Q. 13 Mr. Logan, did HL&P confirm that the material
6 was in accordance with specifications?
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9 A. 13 (TKL): Yes. HL&P QA reviewed all documentation
10 generated by PTL and B&R concerning the incident, including
11 studies of test results. Our review confirmed that all
12 material was in accordance with the specifications.
13

14 Q. 14 Mr. McKay, did you explain the falsification
15 incident and the PTL management response to the incident to
16 NRC Investigators?
17

18 A. 14 (WSM): Yes. The NRC conducted an investigation
19 at the STP site beginning on February 2, 1977, which was
20 later described in NRC I&E Report 77-03. The NRC interviewed
21 me and members of PTL's Site Management as well as HL&P and
22 B&R employees who were familiar with the situation. I fully
23 explained the facts surrounding the falsification and the
24 responsive action taken by PTL Management.
25

26 Q. 15 Please describe the qualifications of the Level
27 I Technician in question and his previous involvement with
28 PTL work in connection with the STP.
29

30 A. 15 (WSM): The individual in question joined PTL in
31 1976, and after the required training and successful comple-
32 tion of written examinations, was certified by PTL as a
33 Level I Technician in September 1976. Previously, the
34 individual had worked for 1 1/2 years in another testing
35 laboratory in Shreveport, Louisiana, where he performed
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5 soils, concrete and asphalt testing. The individual per-
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7 formed concrete aggregate testing for STP between October
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9 1976 and the time of the falsification incident in January
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11 1977, after which he was discharged.

12 Q. 16 What corrective action did PTL take after the
13
14 issuance of its Nonconformance Report on February 2, 1977?

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16 A. 16 (WSM): First, a thorough review was made of all
17
18 previous test reports from October 1976 through January
19
20 1977, which were issued by the Level I Technician who had
21
22 been terminated. In addition, a statistical evaluation was
23
24 performed using Standard Deviation and Coefficient of Varia-
25
26 tion, which compared the results of tests by the Level I
27
28 Technician with similar tests by other PTL personnel, the
29
30 concrete supplier, Champion, Inc., and the aggregate supplier,
31
32 Thorestenberg Inc. These investigations were completed
33
34 March 17, 1977, and determined that no detectable trends or
35
36 deviations existed in tests performed by the Level I Techni-
37
38 cian.

39 Q. 17 Mr. Logan and Mr. McKay, what preventative
40
41 measures did PTL take as a result of this incident?

42 A. 17 (WSM, TKL): The PTL Site Manager conducted an
43
44 indoctrination of all PTL personnel assigned to STP reempha-
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46 sizing the need for accuracy, completeness, and factual
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48 reporting of test results. Additionally, PTL set up a
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50 formal personnel rotation so that one individual was not
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5 consistently responsible for the performance of any one
6 series of tests. Additional supervision and surveillance by
7 PTL Supervisors were also initiated. Later, PTL decided to
8 replace the formal personnel rotation system with a system
9 under which more qualified Level II personnel are used to
10 perform the aggregate testing. This revised system was
11 implemented after review and concurrence by B&R, HL&P and
12 the NRC. Under this system, reviews and multi-tiered super-
13 vision are performed, with all Level I Technicians under
14 supervision by a certified Level II Technician, and reports
15 are reviewed by the Level II Technician and the Assistant
16 Manager/ Document Supervisor. Additionally, there is a
17 review conducted by a B&R Quality Surveillance Inspector
18 prior to final review and transmittal to the B&R QA Vault.
19 Finally, personnel with a higher degree of education and
20 background experience have been assigned to the aggregate
21 section.
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36 Q. 18 What actions did HL&P take?
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38 A. 18 (TKL): HL&P increased routine daily monitoring
39 of PTL laboratory activities, with special emphasis on tests
40 requiring time-consuming operations, such as drying in
41 ovens. Further, HL&P QA monitored the PTL personnel training
42 and personnel rotation as described above.
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47 Q. 19 Did PTL revise its QA Program as a result of the
48 falsification incident?
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5 A. 19 (WSM, TKL): PTL's QA Program functioned as it
6 was designed to function. The situation was promptly identi-
7 fied, immediately reported to the client, fully analyzed,
8 and subjected to the proper corrective action. Consequently,
9 other then the general preventative measures discussed in
10 the previous answer, no other QA programmatic changes were
11 considered necessary.
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17 Q. 20 Is HL&P QA satisfied as to the adequacy of PTL's
18 QA Program?
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21 A. 20 (TKL): HL&P QA is satisfied that this incident
22 verified the adequacy of PTL's QA Program, because:
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- 24
25 1. The incident was promptly identified and was
26 accurately reported;
27
28 2. All details and possible ramifications were fully
29 investigated and reported; and
30
31 3. Resolution was accomplished in a timely and effi-
32 cient manner.
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36 The NRC I&E Reports also found no items of noncompliance
37 with regard to the incident.
38

39 Q. 21 Had the falsification not been detected, would
40 the aggregate in question have been subjected to additional
41 testing prior to its placement in the plant?
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45 A. 21 (WSM, TKL): Yes. The fine aggregate undergoes
46 prequalification testing at a frequency of once for each 200
47 tons used. The stockpiled material must pass this same test
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5 prior to its use for batching. The falsified test was a
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7 daily test run primarily to assure that handling or some
8
9 other operation has not changed the properties of the material
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11 to the extent that it no longer qualifies.

12 After placement, cylinder tests are run to determine
13
14 the actual strength of the concrete. If strength was affected
15
16 by use of this material, these tests would show that effect.
17
18 If the strength was too low, Engineering would evaluate the
19
20 problem and repair or replacement would follow.

21 Q. 22 Mr. Logan, are you familiar with the situation
22
23 described in the NRC's I&E Report 78-07 involving the inspec-
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25 tion of bolted beam to column connections?

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27 A. 22 (TKL): Yes. I investigated that situation at
28
29 the time it occurred and discussed it with the NRC investi-
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31 gator.

32 Q. 23 Did this situation involve the falsification of
33
34 inspection records?

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36 A. 23 (TKL): No. This situation is not at all similar
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38 to the PTL employee situation discussed previously. The
39
40 problem identified by the NRC resulted from unclear procedures
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42 and differences in the way individual QC Inspectors marked
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44 their inspection records. These problems were resolved by a
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46 revision of the procedures to assure that all Inspectors
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48 marked their records in a uniform fashion. The NRC never
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5 accused anyone of falsification and closed out the incident
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7 in I&E Report 78-11 following our procedure revision.

8 Q. 24 Please explain what happened in that situation.
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10 A. 24 (TKL): A specific vertical column in the Reactor
11 Containment Building (RCB), Unit 1, had four beams that
12 bolted to it at elevation - 2 feet. Each place where a beam
13 joined the column (a joint) was to be inspected to assure
14 that the bolts were tightened to the proper degree. The QC
15 Inspectors carried copies of the drawings and marked them
16 with colored pens whenever they had inspected a joint. The
17 confusion arose from the issue of whether each beam-to-column
18 joint was a separate entity to be inspected or whether the
19 entire connection (four beam-to-column joints) was the
20 inspection item. Some QC Inspectors would wait until they
21 had inspected all four joints before coloring the location
22 on the drawing. Other QC Inspectors inspected and marked
23 each of the four joints as a separate item. These latter
24 Inspectors usually placed one colored dot in the center of a
25 circle on the blueprint, which represented the column, to
26 indicate inspection of beam-to-column web joints and placed
27 other colored dots elsewhere in the circle to indicate
28 inspection of the beam-to-column flange joints.
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45 In this particular case the connection had been partially
46 inspected, i.e. some, but not all, of the joints at that
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location had been inspected, and the connection was physically marked to indicate a partial inspection. The QC Inspector doing the inspection was one of those who treated each joint as a separate item and, thus, he had placed a colored dot on his inspection record indicating the inspection of beam-to-column web joints.

The NRC took the position that since our procedures did not differentiate clearly between a connection and a joint, no colored dot should be placed on the inspection record until the entire connection (all four joints) had been inspected. Since this entire connection had not been inspected, NRC viewed the inspection record as inaccurate.

We agreed that a single system needed to be used by all Inspectors in order to prevent misunderstanding of the completeness of the inspection. The procedures were revised to provide a single inspection system, the QC Inspectors were given new instructions and the previously inspected connections were reinspected.

T.Hudson:07:G