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RECORD #63

TITLE: ... Clarification on Ex Post Facto Declarations by Shippers  
of Radioactive Material

FICHE: 67128-330



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

*L. Cunningham*  
FE

January 11, 1984

MEMORANDUM FOR: Thomas T. Martin, Director  
Division of Engineering and Technical Programs, RI

John A. Olshinski, Director  
Division of Engineering and Operational Programs, RII

John A. Hind, Director  
Division of Radiological and  
Materials Safety Programs, RIII

Richard L. Bangart, Director  
Division of Vendor and Technical Programs, RIV

Ross A. Scarano, Director  
Division of Radiological Safety  
and Safeguards Programs, RV

FROM: James G. Partlow, Acting Director  
Division of Quality Assurance, Safeguards,  
and Inspection Programs, IE

SUBJECT: DOT REPLY TO NRC REQUEST FOR CLARIFICATION ON  
EX POST FACTO DECLARATIONS BY SHIPPERS OF  
RADIOACTIVE MATERIALS

This refers to the enclosed exchange of correspondence between NRC/IE and the U. S. Department of Transportation (DOT). The September 29, 1983 reply to the February 23, 1983 NRC letter was not actually received by this Office until late in December 1983.

The essence of the DOT clarification is that it is inappropriate for a shipper to declare after the act of shipment that alternative packaging/shipment requirements could have applied, in lieu of those which were actually applied. In the instant case cited in our letter to DOT, a shipper had contended that a shipment of LSA materials, which had actually been shipped as "packaged" LSA material, could have qualified as "unpackaged bulk" LSA material. In this particular case, the shipment was found to be in non-compliance with the requirements for "packaged" materials.

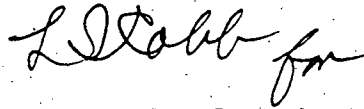
CONTACT: A. W. Grella, IE  
X27746

Multiple Addressees

2

January 11, 1984

You should utilize the information in the enclosed as guidance in your IE efforts on transportation activities.



James G. Partlow, Acting Director  
Division of Quality Assurance, Safeguards,  
and Inspection Programs, IE

Enclosure: Exchange of correspondence

cc: E. Jordan, IE  
L. Cunningham, IE  
J. Axelrad, IE  
R. Cunningham, NMSS  
C. MacDonald, NMSS  
D. Hopkins, RES  
D. Holody, RI  
F. Long, RII  
W. Schultz, RIII  
T. Westerman, RIV  
A. Johnson, RV  
R. Rawl, DOT  
W. Nalley, DOT

SEP 29 1983

Mr. James M. Taylor  
Office of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mr. Taylor:

Thank you for your letter concerning the packaging of low specific activity (LSA) radioactive materials which may also be transported in bulk.

We agree that it is undesirable to allow shippers to declare after the act of shipment that a consignment of LSA was made as "bulk" in accordance with 49 CFR 173.425(c) and that the packaging was merely for convenience. The actions necessary to ensure compliance with paragraph 173.425(c) need to be taken prior to shipment, not after.

While the shipper may "package" a bulk shipment for convenience, this option is by no means intended to allow the shipper to improperly prepare a packaged shipment and declare it as bulk after the improprieties have been discovered. Specific actions must be taken prior to making a bulk shipment, for example, to ensure "no leakage of radioactive material from the vehicle" (49 CFR 173.425(c)(6)). A shipment of packages which leak or release their contents onto a typical wooden trailer floor could not be construed as meeting this requirement unless specific actions had been taken to ensure the leaktightness of the floor. If such action had not been taken then the "packages" themselves must remain leaktight in order to meet 49 CFR 173.425(c).

The actions described in your letter seem appropriate to correct this situation.

Sincerely,

COPIES SENT BY  
ALAN L. ROBERTS

Alan L. Roberts  
Associate Director for Hazardous  
Materials Regulation  
Materials Transportation Bureau

DMT-223/RRawl/kps/54906:9/21/83  
cc: DMT-20/22/223/day

FILE#: \_\_\_\_\_

FEB 23 1983

Mr. A. I. Roberts  
Associate Director for Hazardous  
Materials Regulation  
Materials Transportation Bureau  
U.S. Department of Transportation  
Washington, D.C. 02590

Dear Mr. Roberts:

SUBJECT: REQUEST FOR CLARIFICATION ON SHIPPER ELECTIVES OF PACKAGED VS  
UNPACKAGED BULK LSA MATERIALS

In accordance with DOT regulations a shipper of radioactive material may elect either of several alternatives in packaging and shipment. Specifically, in the case of low specific activity (LSA) shipped as unpackaged bulk (§173.392(d)) by exclusive-use highway or rail, a shipper could elect to "package" the material for transport, rather than to transport it or offer it for transport as "unpackaged" bulk. Providing the LSA material meets the requirements of §173.392(d), the "package" per se is clearly then not a regulatory requirement, as it would be in the case of LSA material shipped under the provisions of §173.392(b) and (c), wherein a "strong, tight package" is required.

We have during the past year had a specific case wherein an NRC licensee/ offered a shipment of exclusive-use, "packaged" LSA materials under the provisions §173.392(b) and (c). During an inspection of the incoming packages to a commercial burial site, several deficient, breached packages were observed. These were, at the time, considered a violation of §173.392(c)(1), with the licensee subsequently being cited for a violation thereof. In his response to the citation, the licensee responded that the shipment "... could have been transported unpackaged because the content of the shipment was a LSA radioactive material, was transported in a closed transport vehicle assigned for the sole-use of the Turkey Point Plant and, otherwise met the criteria stipulated in 49 CFR 173.392(d)(1)(iii). This paragraph provides that materials of low radioactive concentration may be transported unpackaged; . . . . However the material was contained in 55 gallon drums primarily to satisfy conditions in the Barnwell Site disposal criteria."

The licensee/shipper subsequently queried DOT (copy enclosed) asking for an interpretation of the provisions of §173.392(d) as they applied to their shipment. In DOT's response (copy attached), it was stated that "any packaging of your choice may be used provided there is compliance with all requirements of §173.392(d)." On the basis of that interpretation, NRC withdrew the violation.

We have some concern over this type of situation, because it allowed the licensee/ shipper to recategorize his LSA material, even though there existed a pervasive weight of evidence that it had originally been considered to be and was described in the shipping papers as "packaged", rather than "unpackaged, bulk" LSA.

We are interested in issuing an IE Information Notice to address this type of situation. We would inform licensee/shippers that once they have described their shipment as "packaged" or "unpackaged bulk" LSA materials, that NRC would expect compliance with the applicable requirements. We would point out that recategorizing the shipments after-the-fact, especially if violations were detected, is inappropriate. We would base our conclusion of determining which option the shipper had selected on the basis of examining the shipping paper description and the package/vehicle marking. We would also encourage that whenever the shipment was in fact shipped as unpackaged bulk, that the shipping paper description contain an additional notation to that effect, particularly when the "packages" are not actually a transport regulatory requirement.

We would appreciate your views on the above matter, particularly with regard to whether you agree with us that on ex post facto determination such as the above is inappropriate. I have enclosed a copy of our file of information on the subject case.

James M. Taylor, Director  
Division of Quality Assurance, Safeguards,  
and Inspection Programs  
Office of Inspection and Enforcement

Enclosures:

1. Memo fm C E Anderson, R.II to  
D Thompson, IE, dtd 9/2/81
2. Memo fm D Thompson, IE to  
C E Anderson, R.II, dtd 9/14/81
3. Ltr to J P O'Reilly, RII fm  
R E Uhrig, FPL, dtd 7/13/81

SMPB:QASIP:IE  
A.W.Grel/tdm  
02/07/83

SMPB:QASIP:IE  
L.I.Cobb  
02/06/83

D:QASIP:IE  
J.M. Taylor  
02/07/83

Mr. A. I. Roberts

-3-

cc w/enclosures:  
R. R. Rawl, DOT  
W. H. Nalley, DOT

DISTRIBUTION:

IE FILES  
IE RDG  
QASIP RDG  
SMPB RDG  
J.M.Taylor, IE  
B.K.Grimes, IE  
E.L.Jordan, IE  
L.I.Cobb, IE  
✓ A.W.Grella, IE  
C.E.MacDonald, NMSS  
D.R.Hopkins, RES  
E.Flack, IE  
D. Holody, RI  
C.Alderson, RII  
W.Schultz, RIII  
E. Johnson, RIV  
A. Johnson, RV



NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA ST., N.W., SUITE 3100  
ATLANTA, GEORGIA 30303

SEP 02 1981

SSINS 6020

MEMORANDUM FOR: Dudley Thompson, Director, Enforcement and Investigation Staff, IE

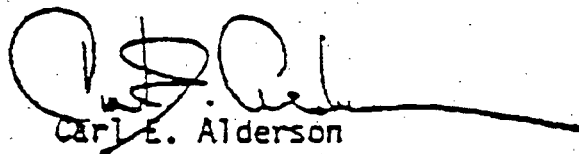
FROM: Carl E. Alderson, Director, Enforcement and Investigation Staff, Region II

SUBJECT: ENFORCEMENT POLICY REGARDING 49 CFR 173.392  
(AITS NO. F02300071)

Most licensees package radioactive waste containing low specific activity (LSA) in metal drums or boxes for transport. This packaging is used to meet the requirements of 49 CFR 173.392(c)(1) which require packaged LSA material to be shipped in "strong, tight packages". Shipment of unpackaged (bulk) LSA material is authorized by 49 CFR 173.392(d), provided the consignor complies with the conditions of that section.

Many shipments of individually packaged waste made pursuant to 173.392(c) meet the conditions of 173.392(d) and thus could be legally shipped in bulk without individual packages. In such cases, the individual packages are not required by regulation and thus enforcement action by the NRC for breach of integrity of individual packages appears inappropriate. However, NRC has traditionally taken enforcement action for breach of package integrity without regard for the provisions of 49 CFR 173.392(d).

In a current case, Florida Power and Light Company has denied a Severity III violation for punctured drums on the basis that the shipment met the requirements for bulk shipment specified by 49 CFR 173.392(d). We plan to accept this denial and withdraw the violation. Further, we do not plan to take enforcement action for future cases involving comparable circumstances. Please inform us whether or not you concur in this position.

  
Carl E. Alderson

cc: H. Thornburg, IE:DSRSI  
R. Wessman, IE:EB  
R. Carlson, RI  
J. Streeter, RIII  
J. Gagliardo, RIY  
A. Johnson, RY

CONTACT: A. F. Gibson  
242-5179





UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SEP 14 1981

EA 81-76

EGM 81-29

*EGM*  
*LLH*  
*Do we agree?*  
*Al*  
*were you aware of this case?*  
*and action? hcs*

MEMORANDUM FOR: Carl E. Alderson, Director  
Enforcement and Investigation, Region II

FROM: Dudley Thompson, Director  
Enforcement and Investigations, IE

SUBJECT: PROPOSED ACTION - FLORIDA POWER AND LIGHT COMPANY

This is to document our agreement with the proposed course of action in this case as set forth in your September 2, 1981 memorandum (copies furnished earlier to Regional Enforcement Coordinators). Our agreement is primarily based on the DOT interpretation of 49 CFR 173.392(d), shipment of bulk LSA material, that states, "any packaging of your choice may be used, provided there is compliance with all requirements of §173.392(d)." The DOT interpretation is stated in their letter to the licensee dated May 4, 1981, attached.

Whether or not shipment records indicate that individual drums were the intended containers is not relevant here because of DOT's interpretation. Further, the licensee's ex post facto determination that the material shipped met the requirements for §173.392(d) has precedent, in that in an earlier enforcement case, Jersey Central Power and Light Company, determined by analysis after the fact that liquid leaking from a container was not radioactive and there was no leakage from inner packages containing radioactive material. The JCPL violation was later withdrawn.

*Dudley Thompson*  
Dudley Thompson, Director  
Enforcement and Investigations, IE

Enclosure:  
RII memo, with encl.

- cc w/encl:
- |              |                           |
|--------------|---------------------------|
| H. Thornburg | T. Brockett               |
| N. Moseley   | J. Metzger                |
| T. Harpster  | R. Carlson, RI, w/o encl. |
| J. Lieberman | J. Streeter, RIII         |
| R. Wessman   | J. Gagliardo, RIV         |
| G. Barber    | A. Johnson, RV            |

FPL

1 100 70 100 4J

July 13, 1981  
L-81-258

Mr. James P. O'Reilly, Director, Region II  
Office of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
101 Marietta Street, Suite 3100  
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

Re: Turkey Point Units 3 & 4  
Docket No. 50-250 and 50-251  
I&E Inspection Report Nos. 50-250/80-37,  
50-251/80-35 and 15000039/80-23

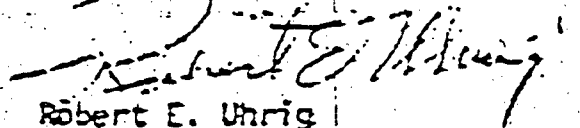
The purpose of this letter is to supplement information previously provided in FPL letter L-81-130 dated March 27, 1981. L-81-130 was written in response to the NRC letter dated March 2, 1981 wherein Turkey Point 3 & 4 was assessed with a Severity Level III Violation for failure to comply with 49 CFR 173.392(c)(1). In the NRC's opinion this was due to the fact that 21 of the containers in a low level radioactive waste shipment were found to have been punctured.

Subsequent to receiving that notice, FPL wrote to the Department of Transportation (DOT) seeking an interpretation of the provisions in 49 CFR 173.392(d) as they applied to this situation.

The DOT has determined that under the provisions of 49 CFR 173.392(d), if a shipment of material meets all of the provisions of the aforementioned section, any containers which the shipper may elect to use are not required to meet the criteria for a strong, tight package. A copy of the DOT's response, dated May 4, 1981, is attached.

The subject shipment from Turkey Point 3 & 4 did meet the requirements of 173.392(d). We hereby request that NRC reassess this violation in accordance with our letter L-81-130.

Very truly yours,



Robert E. Uhrig  
Vice President  
Advanced Systems & Technology

REU/JEM/ah

cc: Harold F. Reis, Esquire

Research and  
Special Programs  
Administration

MAY 28 1981

ATTEN:  
CHUCK HOSEY

MAY 28 1981

Mr. Alan J. Gould  
Florida Public Power and Light  
P. O. Box 529100  
Miami, Florida 33152

REGIONAL DIRECTOR  
ASSISTANT TO DIRECTOR  
DIRECTOR, R&PE  
DIRECTOR, E&OS  
DIRECTOR, EN/INV  
DIRECTOR, ETI  
PUBLIC AFFAIRS OFFICER

Dear Mr. Gould:

This responds to your recent letter to Mr. James Smiler of this Bureau about an interpretation of the regulations for transportation of bulk low level radioactive waste under provisions of §173.392(d). Simply stated, any packaging of your choice may be used provided there is compliance with all requirements of §173.392(d).

It is important to keep in mind that the DOT regulations are intended to apply only to the minimum requirements for the transportation of the hazardous materials, and any additional requirements imposed by a consignee or carrier for acceptance of a shipment are not at issue in the regulations.

Sincerely,

Thomas J. Charlton  
Chief, Standards Division  
Office of Hazardous Materials  
Regulation  
Materials Transportation Bureau



REGION II  
101 MARIETTA ST., N.W., SUITE 3100  
ATLANTA, GEORGIA 30303

APR 15 1981

Florida Power and Light Company  
ATTN: R. E. Uhrig, Vice President  
Advanced Systems and Technology  
P. O. Box 529100  
Miami, FL 33152

Gentlemen:

Subject: Report Nos. 50-250/80-37, 50-251/80-35 and 15000039/80-23

Thank you for your letter of March 27, 1981, informing us of steps you have taken to correct the noncompliance concerning activities under NRC Operating License Nos. DPR-31 and DPR-41 brought to your attention in our letter of March 2, 1981. We have examined your corrective actions and have no further questions at this time.

We have reviewed your response to our findings and your disagreement with the assigned Severity Level III classification. Your position that the closed transport vehicle was the container and thus the punctured drums did not represent a breach of container integrity is inconsistent with your shipment records, which clearly indicate the individual drums were the intended containers. The shipment of punctured drums is evidence that your controls for assuring compliance with the requirements for 49 CFR 173.392 were not adequate.

In view of the above, we continue to regard the punctured drums in your shipment No. 80-082 as a Severity Level III violation as cited in our Notice of Violation dated March 2, 1981.

We appreciate your cooperation with us.

Sincerely,

*Paul A. Kelly*  
for R. C. Lewis, Acting Director  
Division of Resident and  
Reactor Project Inspection

cc: H. E. Yaeger, Plant Manager



FLORIDA POWER & LIGHT COMPANY

March 27, 1981  
L-81-130

MAR 30 10 30 AM '81

Mr. James P. O'Reilly, Director, Region II  
Office of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
101 Marietta Street, Suite 3100  
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

Re: RII:  
50-250/80-37  
50-251/80-35

Florida Power & Light Company has reviewed the subject inspection report and a response is attached.

There is no proprietary information in the report.

Very truly yours,

Robert E. Uhrig  
Vice President  
Advanced Systems & Technology

REU/JEM/ras

Attachment

cc: Harold F. Reis, Esquire

Finding:

As a result of the inspection conducted on December 9, 1980, and in accordance with the Interim Enforcement Policy, 45 FR 66754 (October 7, 1980), the following violation was identified.

10 CFR 71.5(b) requires that "the licensee comply with the applicable requirements of . . . 49 CFR Parts 170 - 189." 49 CFR 173.392(c)(1) requires that "Materials must be packaged in strong, tight packages so that there will be no leakage of radioactive material under conditions normally incident to transportation."

Contrary to the above, on December 9, 1980, 21 barrels in this shipment delivered to the Chem-Nuclear burial site at Barnwell South Carolina were not strong, tight packages in that there were punctures in the sides which permitted the contents to spill onto the trailer bed.

This is a Severity Level III Violation (Supplement V.C.(1)).

Response:

We acknowledge that twenty-one drums contained in shipment No. 80-082 were punctured. However, we disagree that those containers were required to be strong tight packages for purposes of transportation. On the contrary, shipment No. 80-082 could have been transported unpackaged because the content of the shipment was a LSA radioactive material, was transported in a closed transport vehicle assigned for the sole use of the Turkey Point Plant and, otherwise met the criteria stipulated in 10 CFR 173.392(D)(1)(iii). This paragraph provides that materials of low radioactive concentration may be transported unpackaged; ". . . if the average estimated radioactivity concentration does not exceed 0.001 millicurie per gram and the contribution from Group I material does not exceed one percent of the total radioactivity. The average estimate of radioactive concentration of the material in shipment No. 80-082 was  $1.2 \times 10^{-7}$  millicurie per gram. However, the material was containerized in 55 gallon drums primarily to satisfy conditions in the Barnwell Site Disposal Criteria.

In view of the above, we disagree that the punctured drums in shipment No. 80-082 constitutes a Severity Level III violation. On the otherhand, there was no intent to allow the shipment to include drums which were punctured and Florida Power & Light Company management has expressed considerable concern that it happened. Consequently, an immediate investigation was initiated at the time of the incident and appropriate corrective measures quickly implemented in order to prevent a reoccurrence. In that regard, we are submitting the following information which previously was transmitted to the Bureau of Radiological Health of the State of South Carolina, Department of Health and Environmental Control.

Based upon our investigation into this incident we were able to determine that the drums were damaged because of an equipment problem, and that our failure to detect the damage was a consequence of a weakness in our inspection procedures.

In as much as each container was inspected completely just prior to being loaded onto the transport vehicle, we were able to conclude that any damage occurred while positioning the containers within the transport vehicle. By evaluating the type and location of the damage on the drums it was determined that the punctures were caused by the loading blades on the fork lift. We also learned that the drum lifting device used to load the shipment was a new piece of equipment. Subsequently, we were able to determine that it was possible for the blades of the forklift to protrude through the fork guides on the drum lifting device and contact could be made between the fork blades and the drum.

To prevent a recurrence of this incident the following corrective actions and procedural modifications have been implemented:

- a) The incident was reviewed with plant personnel who have assigned responsibilities in radioactive waste handling and management and appropriate precautions urged.
- b) All of the drum lifting devices used for radioactive drum handling have physical modifications designed to preclude the fork lift blades from protruding beyond the fork guides.
- c) Additional inspection requirements have been added to Turkey Point's Health Physics Procedure HP-46, Shipping and Receiving Radioactive Material so that all packages in addition to being inspected before they are loaded will now also be inspected after they have been positioned on the transport vehicle.
- d) To further strengthen our package inspection requirements, the procedural modifications to HP-46 have been incorporated into the appropriate QC check sheets as QC hold points.

Finally, the circumstances involving Turkey Point shipment No. 80-082 clearly illustrate a conflict between 10 CFR 173.392(C)(1), 173.392(D)(1) and Supplement V.C.1. Specifically, the NRC has classified the incident to be a Severity Level III violation for a breach of package integrity in packages that were not required for transportation. In view of this, we believe that the NRC should reevaluate their criteria under Supplement V and reclassify this more appropriately as a level VI violation. We suggest the criteria for a Severity Level III ought to be "Breach of integrity of a package required for transportation".