

## MATERIALS LICENSE

Amendment No. 04

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

## OFFICIAL RECORD COPY

Licensee		In accordance with application dated May 29, 1996, 3. License Number 07-14100-03 is amended in its entirety to read as follows:	
1. First State Power Management, Inc.			
2. 1280 West North Street Dover, Delaware 19903		4. Expiration Date April 30, 2005	
		5. Docket or Reference No. 030-20696	
6. Byproduct, Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum Amount that Licensee May Possess at Any One Time Under This License	
A. Cesium 137	A. Sealed sources	A. Not to exceed 1000 millicuries per source and 2000 millicuries total	
9. Authorized use			
A. For possession and use in Kay Ray, Accuray, Ohmart, LFE, Berthold System, Inc., Data Measurement Corp., Flow Measurement Systems, Ronan Engineering or Texas Nuclear devices which have been evaluated and approved for licensing purposes and authorized for distribution under a license issued by the U.S. Nuclear Regulatory Commission or an Agreement State.			

## CONDITIONS

10. Licensed material may be used only at the licensee's facilities located at 1280 West North Street, Dover, Delaware.
11. A. Licensed material shall be used by, or under the supervision of, Glenn E. Roberts, CHP.
- B. The Radiation Safety Officer for this license is Glenn E. Roberts, CHP.
12. A. Sealed sources and detector cells containing licensed material shall be tested for leakage and/or contamination at intervals not to exceed six months or at such other intervals as are specified by the certificate of registration referred to in 10 CFR 32.210, not to exceed three years.
- B. Notwithstanding Paragraph A of this Condition, sealed sources designed to emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed three months.

MATERIALS LICENSE  
SUPPLEMENTARY SHEET

License Number

07-14100-03

Docket or Reference Number

030-20696

Amendment No. 03

- C. In the absence of a certificate from a transferor indicating that a leak test has been made within six months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.
- D. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.
- E. Sealed sources and detector cells need not be leak tested if:
- (i) they contain only hydrogen-3; or
  - (ii) they contain only a radioactive gas; or
  - (iii) the half-life of the isotope is 30 days or less; or
  - (iv) they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material; or
  - (v) they are not designed to emit alpha particles, are in storage, and are not being used. However, when they are removed from storage for use or transfer to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source or detector cell shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- F. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission and the source or detector cell shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within five days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region I, ATTN: Chief, Nuclear Materials Safety Branch, 475 Allendale Road, King of Prussia, Pennsylvania 19406. The report shall specify the source or detector cell involved, the test results, and corrective action taken.
- G. The licensee is authorized to collect leak test samples for analysis by Sensor Services, Inc. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
13. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
14. The licensee shall conduct a physical inventory every six months to account for all sealed sources and devices containing licensed material received and possessed under the license.

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15. The licensee shall not acquire licensed material in a sealed source or device unless the source or device has been registered with the U.S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or equivalent regulations of an Agreement State.
16. Each gauge shall be tested for the proper operation of the on-off mechanism and indicator, if any, at no longer than six-month intervals or at such longer intervals as specified by the manufacturer and approved by the Commission or an Agreement State in a registration certificate referred to in 10 CFR 32.210.
17. Installation, initial radiation surveys, relocation, removal from service, or any similar activity with devices containing licensed material shall be performed only by persons specifically licensed by the Commission or an Agreement State to perform such services. The licensee may initially mount the device only in accordance with written instructions provided by the manufacturer; however, the device may not be used until surveyed by a person specifically licensed by the Commission or an Agreement State to install the device. The licensee may maintain, repair or replace device components not directly associated with the sealed source, its related shielding, or the on-off mechanism, and that will not result in increased radiation levels in accessible areas.
18. Prior to initial use and after installation, relocation, dismantling, alignment, or any other activity involving the source or removal of the shielding, the licensee shall assure that a radiological survey is performed to determine radiation levels in accessible areas around, above, and below the device with the shutter open. This survey shall be performed only by persons authorized to perform such services by the Commission or an Agreement State.
19. The licensee shall operate each device containing licensed material within the manufacturer's specified temperature and environmental limits such that the shielding and shutter mechanism of the source holder are not compromised.
20. The licensee shall assure that the shutter mechanism of each device is locked in the closed position during periods when a portion of an individual's body may be subject to the direct radiation beam. The licensee shall review and modify as appropriate its "lock-out" procedures whenever a new device is obtained to incorporate the device manufacturer's recommendations.
21. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

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License Number

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030-20696

Amendment No. 03

22. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

- A. Application dated May 29, 1996
- B. Letter dated July 24, 1996

For the U.S. Nuclear Regulatory Commission

Original Signed By:

Sheri Ann Arredondo

By

Nuclear Materials Safety Branch  
Region I

King of Prussia, Pennsylvania 19406

Date SEP - 8 1996



SEP - 8 1996

License No. 07-14100-03  
Docket No. 030-20696  
Control No. 123288

Mark L. Eisenhower  
Executive Vice President  
First State Power Management, Inc.  
2900 Eisenhower Avenue  
Suite 300  
Alexandria, Virginia 22314

Dear Mr. Eisenhower:

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region I Office, Licensing Assistance Team, (610) 337-5093 or 5239, so that we can provide appropriate corrections and answers.

Please be advised that your license expires at the end of the day, in the month, and year stated in the license. Please note that as part of this amendment, in accordance with 10 CFR 30.36, effective February 15, 1996, the expiration date of your license has been extended by a period of five years. Your new expiration date is stated in Item 4 of the license.

Until your license is terminated, you must conduct your program involving byproduct materials in accordance with the conditions of your NRC license, representations made in your license application, and NRC regulations. In particular, note that you must:

1. Operate in accordance with NRC regulations 10 CFR Part 19, "Notices, Instructions and Reports to Workers; Inspections," 10 CFR Part 20, "Standards for Protection Against Radiation," and other applicable regulations.
2. Notify NRC, in writing, within 30 days:
  - a. when an authorized user or Radiation Safety Officer, permanently discontinues performance of duties under the license or has a name change; or
  - b. when the mailing address on the license changes (no fee is required if the location of byproduct material remains the same).
3. In accordance with 10 CFR 30.36(b) and/or license condition, notify NRC, promptly, in writing, and request termination of the license:

OFFICIAL RECORD COPY **ML 10**

- a. when you decide to terminate all activities involving materials authorized under the license; or
  - b. if you decide not to complete the facility, acquire equipment, or possess and use authorized material.
4. Request and obtain a license amendment before you:
- a. permit anyone to work as an authorized user under the license;
  - b. change Radiation Safety Officer;
  - c. order byproduct material in excess of the amount, or radionuclide, or form different than authorized on the license;
  - d. add or change the areas of use, or address or addresses of use identified in the license application or on the license; or
  - e. change ownership of your organization.
5. Submit a complete renewal application with proper fee or termination request at least 30 days before the expiration date of your license. You will receive a reminder notice approximately 90 days before the expiration date. Possession of byproduct material after your license expires is a violation of NRC regulations. A license will not normally be renewed, except on a case-by-case basis, in instances where licensed material has never been possessed or used.

In addition, please note that NRC Form 313 requires the applicant, by his/her signature, to verify that the applicant understands that all statements contained in the application are true and correct to the best of the applicant's knowledge. The signatory for the application should be the licensee or a certifying official of the licensee rather than the Radiation Safety Officer or a consultant.

You will be periodically inspected by the NRC. Failure to conduct your program in accordance with NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC will result in enforcement action against you. This could include issuance of a notice of violation, or imposition of a civil penalty, or an order suspending, modifying or revoking your license as specified in the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy), NUREG 1600.

Since serious consequences to employees and the public can result from failure to comply with NRC requirements, prompt and vigorous enforcement action will be taken when dealing with licensees who do not achieve the necessary meticulous attention to detail and the high standard of compliance which NRC expects of its licensees.

Mark L. Eisenhower  
First State Power Management, Inc.

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Thank you for your cooperation.

Sincerely,

**ORIGINAL SIGNED BY:**

Sheri A. Arredondo  
Division of Nuclear Materials Safety

License No. 07-14100-03  
Docket No. 030-20696  
Control No. 123288

**Enclosures:**

1. License No. 07-14100-03
2. 10 CFR Parts 2, 19, 20, 30, and 170
3. NRC Forms 3 and 313

DOCUMENT NAME: R:\WPS\MLDL\L0714100.03

To receive a copy of this document, indicate in the box: "C" = Copy w/o attach/encl "E" = Copy w/ attach/encl "N" = No copy

OFFICE	DNMS/RI	N	DNMS/RI				
NAME	Arredondo						
DATE	07/26/96		07/ /96		07/ /96		07/ /96

OFFICIAL RECORD COPY



The Eastern Group

MS 16

K-6

July 24, 1996

07-14100-03

Ms. Sheri A. Arredondo  
United States Nuclear Regulatory  
Commission, Region I  
Division of Nuclear Materials Safety  
475 Allendale Road  
King of Prussia, PA 19406

Dear Ms. Arredondo:

This is in response to your letter dated June 29, 1996, requesting additional information to support our application dated May 29, 1996. We hereby amend our application of May 29 as follows:

Item 1: We have attached a letter from Michael Phillips, of Kraft Foods requesting change of ownership of all of their licensed Ce-137 gauges and transfer of their NRC license to First State Power Management, Inc., and indicating that all surveillance items and records will be current at the time of transfer.

Item 2: We estimate that the radiation safety officer (RSO) will be on-site performing duties as follows:

- Coordination of source maintenance: As needed; estimate at 4 hours per year on-site; remainder performed off-site.
- Employee training: 16 hours first year; 8 hours per year thereafter.
- Maintaining records and files: 8 hours per year on-site; remainder performed off-site.
- Coordinating leak testing, inventories and shutter checks: 8 hours per year on-site (4 hours every six months); remainder performed off-site.
- Management of emergency response in the event of damage or release: As needed to contain and respond to an emergency. RSO is available on-site within 2 hours of any emergency, via a 24-hour pager, the number of which will be posted in the control room of the facility.
- Compliance with regulations: On-site assessments performed when present at facility; remainder performed off-site.
- Notification of Corporate office of inspections or changes in quantities of materials in use: performed off-site.

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492 W. Sycamore Road P.O. Box 178  
Snow Shoe, Pennsylvania 16874

Tel: (814) 387-6060  
Fax: (814) 387-4982

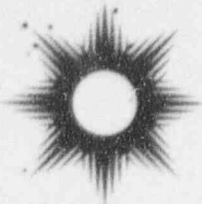
FAX REC'D

JUL 24 1996

JUL 29 1996

123288





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Ms. Sheri A. Arredondo

July 24, 1996

Note: Some of the above responsibilities may be performed concurrently. For Example, Mr. Roberts may actually only be on-site on average one full day every six months, provided he can complete his responsibilities in this time. Additional time will be spent on site as needed.

Mr. Roberts will be acting as Interim RSO. One or two First State personnel will be trained as RSO's so that an RSO will be working at the plant.

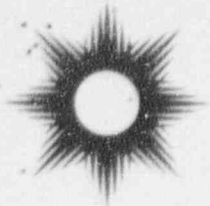
Item 3: Training will be provided by Mr. Glenn Roberts, site Radiation Safety Officer. Mr. Roberts developed and presented radiation safety training programs for WESTON Environmental Metrics' operating practices involving screening of radioactive samples, liquid scintillation counting for tritium, and treatment of mixed (radioactive/hazardous) waste. Mr. Roberts has also developed and presented training in Chemical Hygiene and Hazardous Laboratory Waste Management for WESTON Environmental Metrics. Mr. Roberts' resume is attached to our earlier submittal.

Item 4: Access to the interior of the tanks is a very infrequent occurrence because of the physical hazards involved in entering silos. Under the facility's Confined Space Entry Program and Lockout/Tagout Program, entry is restricted to trained personnel who have completed a confined space entry and a lockout/tagout procedure prior to tank entry. These procedures ensure that all physical, chemical and radiological hazards are controlled or eliminated prior to entry into the silos. Work on or around the radiation sources is also infrequent, and requires the completion of a lockout/tagout procedure prior to beginning work. These procedures specify that all sources of radiation must be shielded prior to any maintenance, repairs or other work in the silo or around the radiation source.

Because this facility is undergoing a change of ownership, new procedures are in preparation for these activities. These procedures will be prepared prior to the need for entry into the silos and/or work on the gauges. These procedures will be provided to Personnel as part of radiation training, and will be posted near the silos where the work may be performed. The RSO and the plant Safety Coordinator will ensure that these procedures are followed. Basically the procedures are as follows: The shutter is closed using a key/lock system located outside the silo. The lock is then tagged to prevent others from opening the shutter while employees are in the silo.

Item 5: The following instruments are available for use by the RSO:

- Ludlum Model 3 survey meter with a Model 44-9 pancake GM probe, which has a range of 0.05 to 200 milliR per hour.
- Ludlum Model 19 micro-R meter, which has a range of 5 microR to 5 milliR per hour.



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Ms. Sheri A. Arredondo

July 24, 1996

Item 6: Leak tests will be performed at intervals not to exceed six months or at other such intervals as are specified by the certificate of registration referred to in 10 CFR 32.210.

Item 7: Gauges will be exposed to temperatures typically encountered in unconditioned outdoor structures in the Mid-Atlantic region; e.g., approximately minus 10 to plus 130 degrees Fahrenheit. This is within the range specified by the manufacturer of the gauges; hence, cooling devices will not be required. The silos contain coal and ash in dry condition, which do not present a particularly corrosive atmosphere. The gauges are not subject to significant vibration. The gauges have been operating satisfactorily in their present locations for approximately ten years.

Please contact the undersigned if you require additional information.

Sincerely,

Bruce R. Snyder

Manager, Environmental Compliance & Safety

BRS/bap

attachment



Kraft Foods

July 18, 1996

Ms. Sheri A. Arredondo  
United States Nuclear Regulatory  
Commission, Region I  
Division of Nuclear Materials Safety  
475 Allendale Road  
King of Prussia, Pennsylvania 19406

Re: License No. 07-14100-03  
Docket No. 030-20696  
Control No. 123288

Dear Ms. Arredondo:

Kraft Foods, Inc. ("Kraft") is the licensee under Materials License No. 07-14100-03 (the "License") issued by the U.S. Nuclear Regulatory Commission ("NRC") with respect to use of the fixed sealed source level gauges in connection with the cogeneration facility presently owned by Kraft at West North Street, Dover, Delaware 19903. Kraft had entered into an agreement with First State Power Management, Inc. ("First State") to sell the cogeneration facility to First State, and in that connection the fixed sealed source level gauges covered by the License will also be transferred to First State. First State has submitted an application dated May 29, 1996 to NRC for transfer of the License to First State, and pursuant to your letter dated June 29, 1996 you have requested additional information. In paragraph no. 1 of your June 29, 1996 letter, you requested a letter from Kraft requesting transfer of the License to First State indicating that all surveillance items and records will be current at the time of transfer.

Ms. Sheri A. Arredondo  
July 18, 1996  
Page 2

In response to paragraph no. 1 of your letter dated June 29, 1996, Kraft hereby (i) requests NRC's approval of the change of ownership of all of the level gauges covered by the License to First state, (ii) requests transfer of the License to First State, to be effective at the time set forth below, and (iii) agrees that all surveillance items and records (e.g., leak tests, inventories, calibration, surveys and accountability requirements) will be current at the time of transfer. Kraft requests that the transfer of the License be effective on the date of Kraft's transfer of the cogeneration facility to First State and that NRC's approval of the transfer reflect that Kraft has no further obligation under the License after the transfer. Kraft will notify NRC approximately 10 days in advance of the anticipated transfer by Kraft of the cogeneration facility to First State so that NRC will have time to prepare a formal approval of the transfer of the License by the time of the transfer of the cogeneration facility to First State.

Very truly yours,

KRAFT FOODS, INC.

By:   
Engineering Manager



JUN 29 1996

License No. 07-14100-01  
Docket No. 030-20696  
Control No. 123288

Mark L. Eisenhower  
Executive Vice President  
First State Power Management, Inc.  
2900 Eisenhower Avenue  
Suite 300  
Alexandria, Virginia 22314

Dear Mr. Eisenhower:

This is in reference to your application dated May 29, 1996. In order to continue our review, we need the following additional information:

1. 10 CFR 30.34(b) requires NRC consent prior to a change of ownership. Therefore the NRC must have; 1) a letter from an executive manager at Kraft Foods, Cogeneration Plant requesting change of ownership of all of their licensed Cesium-137 gauges and transfer of NRC License No. 07-14100-01 to First State Power Management, Inc., and 2) an indication of whether all surveillance items and records, (e.g., leak test, inventories, calibration, surveys and accountability requirements) will be current at the time of transfer.
2. Please specify how much time the Radiation Safety Officer (RSO) will be on-site performing RSO duties. Please also specify how long it takes for the RSO to be on-site in the event of an emergency. Note that the RSO needs sufficient time and commitment from management to fulfill the duties and responsibilities to ensure that radioactive materials are used in a safe manner.
3. Section three of your application describes your personnel training program. Please specify who will be providing this training and submit this individuals training and experience as an instructor.
4. Please submit your lock-out procedures, i.e., your procedures to ensure that the shutter is closed before personnel have to enter the tanks where a fixed gauge is located. See section 10.5 of the enclosed Regulatory Guide for more information.
5. Section seven of your application refers to survey instruments. Please specify the make and model number of the survey instruments you will possess, and confirm that they are capable of measuring from 1 through 200 milliroentgens per hour.

Mark L. Eisenhower  
First State Power Management, Inc.

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6. Section five of your application states that leak tests will be conducted at no greater than three year intervals. The NRC requires that leak tests be performed at intervals not to exceed six months or at such other intervals as are specified by the certificate of registration referred to in 10 CFR 32.210. Please confirm that you will perform leak tests at intervals not to exceed six months or at such other intervals as are specified by the certificate of registration referred to in 10 CFR 32.210.
7. Please submit the information specified in Item 9.2, 9.3, and 9.4 of the enclosed Regulatory Guide.

We will continue our review upon receipt of this information. Please reply in duplicate to my attention at the Region I Office and refer to Mail Control No. 123288. If you have any technical questions regarding this deficiency letter, please call me at (610) 337-5342.

If we do not receive a reply from you within 30 calendar days from the date of this letter, we shall assume that you do not wish to pursue your application.

Sincerely,

**ORIGINAL SIGNED BY:**

Sheri A. Arredondo  
Division of Nuclear Materials Safety

License No. 07-14100-01  
Docket No. 030-20696  
Control No. 123288

Enclosures:

1. 10 CFR Parts 20, 30, and 32
2. Draft Regulatory Guide entitled  
"Guide for the Preparation of Applications  
for Licenses for the Use of Sealed Sources in  
Nonportable Gauging Devices"

DOCUMENT NAME: P:\FIRST

To receive a copy of this document, indicate in the box: "C" = Copy w/o attach/encl "E" = Copy w/ attach/encl "N" = No copy

OFFICE	DNMS/RI	N	DNMS/RI				
NAME	Arredondo						
DATE	06/25/96		06/ /96		06/ /96		06/ /96

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## TELEPHONE CONVERSATION LOG

DATE:

6/25/96

PERSON CALLED:

Bruce Snyder

ORGANIZATION:

First State Power Mgt.

TELEPHONE NUMBER:

814-880-1766

LICENSE NUMBER:

07-141003

NC 123288

all phone

PERSON CALLING:

Sheri A. Arredondo  
USNRC Region I  
475 Allendale Road  
King of Prussia, PA 19406

(215) 337-5342  
FAX Numbers  
(215) 337-5269 or  
(215) 337-5234

## SUMMARY:

First State is a subsidiary of Eastern Group. Eastern Group is buying Kraft Foods (license) power Co. at Dover Delaware. First State's mailing address is currently Alexandria, VA, however, the mailing address on license should be Dover, DE. This action for change of ownership must be authorized by Kraft Foods.

Also, since RSO is not located on site, we need info on a time commitment.

ACTION:

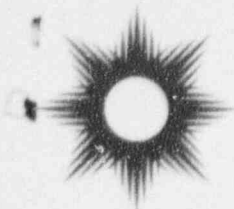
write def letter

SIGNATURE:

S Arredondo

DATE:

6/25/96



The Eastern Group

030-20696

29 May 1996

Licensing Assistant Section  
Nuclear Materials Safety Branch  
U.S. Nuclear Regulatory Commission  
Region I  
475 Allendale Road  
King of Prussia, PA 19406-1415

Subject: Application for Material License Amendment  
First State Power Management, Inc.  
Former Kraft Foods Cogeneration Plant

Gentlemen:

Please find attached an executed Application for Material License to amend License No. 07-14100-03<sup>egb</sup> in association with First State Power Management, Inc.'s operation of the Dover Cogeneration Plant. First State is scheduled to acquire the plant in the near future. First State requests a license amendment to continue the use of the fixed sealed source level gages that are currently licensed to Kraft Foods. Please note that the location of the facility has not changed although this amendment includes an address number that was issued by the City of Dover for standard 911 emergency management purposes.

First State looks forward to working with U.S. Nuclear Regulatory Commission. As always, please feel free to give me a call at (814) 387-6060 should you have any questions or require additional information concerning this request.

Very truly yours,  
THE EASTERN GROUP

Bruce R. Snyder  
Manager, Environmental  
Compliance and Safety

Enclosures

cc: M. Eisenhower, First State  
T. Bright, First State  
S. Szczepanik, WESTON  
G. Roberts, WESTON

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ML 10

123288

MAY 31 1996



(10-94)  
10 CFR 30, 32, 33  
34, 35, 36, 39 and 40

"TRANSFER"

## APPLICATION FOR MATERIAL LICENSE

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 9 HOURS. SUBMITTAL OF THE APPLICATION IS NECESSARY TO DETERMINE THAT THE APPLICANT IS QUALIFIED AND THAT ADEQUATE PROCEDURES EXIST TO PROTECT THE PUBLIC HEALTH AND SAFETY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0120), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

## APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY  
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS  
U.S. NUCLEAR REGULATORY COMMISSION  
WASHINGTON, DC 20555-0001

## ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

## IF YOU ARE LOCATED IN:

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND,  
MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA,  
RHODE ISLAND, OR VERMONT, SEND APPLICATIONS TO:

LICENSING ASSISTANT SECTION  
NUCLEAR MATERIALS SAFETY BRANCH  
U.S. NUCLEAR REGULATORY COMMISSION, REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PA 19406-1415

ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO  
RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA,  
SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING SECTION  
U.S. NUCLEAR REGULATORY COMMISSION, REGION II  
101 MARIETTA STREET, NW, SUITE 2900  
ATLANTA, GA 30323-0199

## IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN,  
SEND APPLICATIONS TO:

MATERIALS LICENSING SECTION  
U.S. NUCLEAR REGULATORY COMMISSION, REGION III  
801 WARRENVILLE RD.  
Lisle, IL 60532-4351

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS,  
LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA,  
OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH,  
WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING SECTION  
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TX 76011-8064

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

## 1. THIS IS AN APPLICATION FOR (Check appropriate item)

- ☐ A. NEW LICENSE  
☒ B. AMENDMENT TO LICENSE NUMBER 07-14100-03  
☐ C. RENEWAL OF LICENSE NUMBER \_\_\_\_\_

## 2. NAME AND MAILING ADDRESS OF APPLICANT (Include Zip code)

First State Power Management, Inc.  
2900 Eisenhower Avenue  
Suite 300  
Alexandria, VA 22314  
Same as Item #3  
DW 6/3/96

## 3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

First State Power Management, Inc.  
1280 West North Street  
Dover, DE 19903

## 4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Bruce R. Snyder  
The Eastern Group  
TELEPHONE NUMBER  
(814) 387-6060

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

## 5. RADIOACTIVE MATERIAL

- a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time

## 6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED

## 7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE

## 8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS

## 9. FACILITIES AND EQUIPMENT

## 10. RADIATION SAFETY PROGRAM

## 11. WASTE MANAGEMENT

## 12. LICENSEE FEES (See 10 CFR 170 and Section 170.31)

## FEE CATEGORY

AMOUNT  
ENCLOSED \$ 530.00

## 13. CERTIFICATION (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39 AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 82 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

## CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE

Mark L. Eisenhower - Executive Vice President

## SIGNATURE

## DATE

3/29/96

## FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			\$		

## APPROVED BY

OFFICIAL RECORD COPY

ML 10

123288

APPLICATION FOR MATERIAL LICENSE (CONTINUED)

FIRST STATE POWER MANAGEMENT, INC.

ITEM 5 RADIOACTIVE MATERIAL

MANUFACTURER	LOCATION	MODEL #	ISOTOPE	ACTIVITY	SERIAL NUMBER
#1 Texas Nuclear	ESP Hop Hi Lvl N	5197	CS137	100mCi	B-2167
#2 Texas Nuclear	ESP Hop Hi Lvl S	5197	CS137	100mCi	B-2168
#3 Texas Nuclear	Ash Hi Level	5200	CS137	50mCi	B-394
#4 Kayray	Silo Low Level	7063P	CS137	1000mCi	18730
#5 Kayray	E Boiler Silo Hi	7062BP	CS137	50mCi	16800
#6 Kayray	W Boiler Silo Low	7062BP	CS137	50mCi	16801
#7 Kayray	W Boiler Silo Hi	7062BP	CS137	50mCi	16803
#8 Kayray	Silo Level Hi	7062BP	CS137	100mCi	16802
#9 Kayray	E Boiler Silo Lo	7062BP	CS137	50mCi	16804

ADDRESSES

TN Technologies  
(Formerly Texas Nuclear)  
2555 North Interstate 35  
P.O. Box 800  
Round Rock, Texas 78680-0800  
(800) 736-0801

Kayray/Sensall  
(Formerly Kayray)  
1400 Business Center Drive  
Mount Prospect, Illinois 60056  
(847) 803-5100

**APPLICATION FOR MATERIAL LICENSE (CONTINUED)**

**FIRST STATE POWER MANAGEMENT, INC.**

**ITEM 6 PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED**

Sealed sources for level indication.

**ITEM 7 INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE**

Glenn E. Roberts will represent the facility as the Radiation Safety Officer (RSO). The RSO has independent authority to stop unsafe operations and will be authorized with sufficient time and budget to fulfill the required radiation safety duties and responsibilities. Any information obtained by First State from the NRC is provided to the RSO.

A copy of Mr. Roberts' Professional Profile is included as Attachment 1.

**ITEM 8 TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS**

See Item 3.0 Training in Attachment 2

**ITEM 9 FACILITIES AND EQUIPMENT**

See Attachment 3 that includes survey drawings that include the locations of all equipment containing licensed material and the relationship of those areas to unrestricted areas.

**ITEM 10 RADIATION SAFETY PROGRAM**

See Attachment 2.

**ITEM 11 WASTE MANAGEMENT**

Sealed sources to be returned to manufacturer (See Attachment 4).

# PROFESSIONAL PROFILE

GLENN E. ROBERTS

## Fields of Competence

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Radiation, health physics, and associated regulatory requirements. Radiation experience includes X-rays, isotopes, accelerators, detection instrumentation, gross alpha and beta determination, and gamma spectroscopy and spectrometry. Health physics experience includes internal and external dose evaluation, risk assessment, radiation protection, shielding analysis, and facility design. Strong regulatory background.

## Experience Summary

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- More than 6 years of experience evaluating radiation safety programs and regulatory compliance of a broad range of licensees. Performed as a U.S. Nuclear Regulatory Commission (NRC) Region I fully qualified inspector.
- Approval of NRC licenses with full signature authority.
- Initial and complete safety evaluation of fluoroscopes, as well as all other diagnostic x-ray equipment and industrial applications, for the State of Delaware.
- Initial and complete safety evaluation of naturally occurring and accelerator-produced radioactive material licensees for the State of Delaware.
- Served as a member of an Emergency Response Team in various capacities for 4 years. Prepared for response to transportation and nuclear power plant accidents.

## Credentials

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M.S., Health Physics - Georgia Institute of Technology (1993)

B.S., Physics/Mathematics — Delaware State College (1987)

Certified Health Physics, American Board of Health Physics, November 1995

Certified Environmental Trainer by the National Environmental Training Association with specialties in "Management and Transportation of Hazardous Materials and Waste and Occupational Safety and Health". February 1996.

Certified Hazardous Materials Manager, Master's Level, Institute for Hazardous Management Materials, April 1993 (Reg. No 4260)

Applied Health Physics (5 weeks) — Oak Ridge Associated Universities (1990)

Delaware Valley Society for Radiation Safety.

National Health Physics Society.

American Society of Mechanical Engineers (ASME).

American Society for Testing and Materials (ASTM).

Institute for Hazardous Materials Management.



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# PROFESSIONAL PROFILE

GLENN E. ROBERTS  
(continued)

## Employment History

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1991-Present WESTON  
1990-1991 U.S. NRC  
1988-1990 State of Delaware

## Key Projects

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**Program Development, Radiation Safety, Pennsylvania, WESTON Environmental Metrics Division, Health and Safety Officer/Radiation Safety Officer.** Reviewed, revised, and implemented radiation safety operating practices involving screening of radioactive samples and handling during chemical analysis. Developed new program areas to include Liquid Scintillation Counting for Tritium.

**Program Development, Mixed Waste Management, Pennsylvania, WESTON Environmental Metrics Division.** Developed and implemented the first permit-exempt mixed waste treatment operation in USEPA Region III. The process removes characteristic hazardous waste.

**Hazardous Waste Disposal Review, Pennsylvania, WESTON Environmental Metrics Division, Health and Safety Officer/Hazardous Waste Manager.** Reviewed, revised, and implemented hazardous waste disposal practices to assure compliance with federal and state regulations. Developed and implemented a Mixed Waste Segregation and Disposal Plan. Participated in establishing a national waste contract including facility audits and contract review.

**Chemical Hygiene, Pennsylvania, WESTON Environmental Metrics Division, Health and Safety Officer/Chemical Hygiene Officer.** Responsible for the administration and oversight of a chemical hygiene plan for 70,000 sq. ft. of analytical laboratory space with approximately 150 chemist and technicians. Perform full range of responsibilities and functions as required.

**NRC Inspector Qualification, Pennsylvania, U.S. NRC, Health Physicist.** Achieved the status of a fully qualified NRC Materials Health Physicist. Performed investigations at a full range of facilities; broad scope medical, nuclear medicine, teletherapy, radiography, mega-curie industrial irradiators, broad scope research and development and academic programs, etc. Also performed as a fully qualified license application reviewer with full approval and signature authority.

**Regulatory Compliance, Delaware, State of Delaware, Radiation Control Specialist.** Developed and implemented the first complete set of inspections for the State of Delaware involving fluoroscopy and naturally occurring and accelerator-produced radioactive material.

**ATTACHMENT 2**  
**RADIATION SAFETY PROGRAM**  
**FOR**  
**FIRST STATE POWER DOVER COGENERATION PLANT**

**1.0 INTRODUCTION**

The First State Power Management, Inc. Dover Cogeneration Plant utilizes several level gauges that incorporate a radioactive source. The sources are comprised of radioactive Cesium-137 (CS137) ranging in activity from 50 to 1,000 millicuries (mCi).

First State Power is committed to complying with the NRC regulations included in 10 CFR Part 19, "Notices, Instructions and Reports to Workers: Inspection" and 10 CFR Part 20, "Standards for Protection Against Radiation". A copy of the NRC poster describing employee rights and responsibilities under these regulations must be posted in a conspicuous place. A notice to employees concerning the location and availability of license information and safety officers is posted on the main bulletin board. An example of the notice is shown in Attachment A.

Employees are not permitted to open or remove sources from their source holders. Installation, maintenance, calibration, adjustment, or removal of sources must be performed by a company specifically licensed by the NRC or an Agreement State to perform such services.

In the event that further information concerning radiation safety at the Dover Cogeneration Plant is required, contact the site Radiation Safety Officer (RSO).

**2.0 RSO QUALIFICATIONS AND DUTIES**

The RSO shall be a person, who through education, training, and experience, is qualified to manage the Radiation Safety Program. The RSO must be familiar with NRC and Delaware regulations, First State Power's NRC license, and the Radiation Safety Program. The selection of an RSO will be approved by the plant manager and their performance will be evaluated on an annual basis.

The RSO has independent authority to stop any unsafe operations that may impact the sources and/or result in exposure to radiation. The RSO is provided with current copies of applicable regulations, reviews new and revised regulations affecting operations, and makes changes to the Radiation Safety Program as necessary to comply with the regulations. The RSO's responsibilities include:

- Coordination of source maintenance.
- Employee training.
- Maintenance of records and files.
- Coordination of leak testing, inventories, and shutter checks.
- Management of emergency response activities in the event of damage to a source or release of radiation. Notification of First State Power Environmental Affairs Office, NRC, State of Delaware, fire, and police in the event of an emergency.
- Compliance with NRC/State regulations.
- Notification of First State Power Environmental Affairs Office in the event of a regulatory inspection.
- Notification of First State Power Environmental Affairs Office in the event that a source is shipped off-site, repaired or use is discontinued.

### **3.0 TRAINING**

Training is required for all personnel working on or near the sources, such as maintenance personnel, and personnel that may respond in the event of an emergency, such as security. Contractors working in the area of a source must also be informed of its presence, location, and necessary precautions for safely working in the area. Training will be provided to all applicable employees prior to working on or near a radioactive source in accordance with the agenda found in Attachment B. Supervisors must notify the RSO when new employees are hired that require training. Supervisors must also notify the RSO of current employees that are transferred to a position requiring training. The training must include the basic principles of radiation protection shown in Attachment C.

Records of training will be maintained for a minimum of five years after the person last used the licensed sources.

Retraining will be conducted every two years, although training may be conducted at less than two years if conditions warrant the need for additional training.

### **4.0 INVENTORY**

Sources are physically inventoried every 6 months. Shutter operation is also checked during the inventory. The inventory and shutter check is performed by an NRC approved vendor. The inventory and shutter check is recorded on the form found in Attachment D. The form must be completed and signed by the person conducting the inventory and shutter check,

and by the RSO. The forms must be kept on file indefinitely and must be available for review by regulatory agencies.

The RSO must coordinate all changes in inventory. A change in inventory includes:

- Obtaining new or additional sources or source containing equipment.
- Discontinuing the use of a source or source containing equipment.
- Moving and or shipping a source or source containing equipment.
- Installation of a source previously in storage.

## **5.0 LEAK TESTING**

Leak tests must be conducted at no greater than 3 year intervals. The leak tests are conducted by a company specifically licensed by the NRC or an Agreement State to perform such services. First State Power will determine if a company meets these qualifications prior to contracting this service.

In the event a leak test result exceeds 0.005 microcuries or more of removable contamination, the RSO will file a report with the NRC within 5 days of receiving the leak test result. The report will include the name and serial number of the source, the leak test result, and the corrective action taken. The RSO will ensure that the leaking source is immediately removed from service, repaired, or disposed of in accordance with NRC regulations.

## **6.0 SOURCE CONDITION INSPECTIONS**

The gauges were installed per manufacturer's recommendations and are suitable for this application. The gauges are not exposed to the product stream, and therefore, are protected from abrasive/ corrosive conditions. These gauges are inspected at 6 month intervals to ensure that they are being used in accordance with manufacturers specifications and that they have not been damaged or show signs of deterioration.

## **7.0 SURVEY INSTRUMENTATION**

Survey instrumentation will be sent to the manufacturer or an authorized representative for calibration at 12 month intervals. Certificates documenting calibration will be kept for 3 years after the calibration has been completed.

## **8.0 RADIATION SAFETY PROGRAM EVALUATION**

The Radiation Safety Program will be evaluated on an annual basis determine if operations are being conducted in accordance with NRC regulations and the terms and conditions of the NRC license. The evaluation will include a review of documentation of activities



conducted under the license to demonstrate compliance with regulations and the license. The review and audit form found in Attachment E must be used to document training, license audit, inventory, and leak tests. Records of the evaluation shall be maintained for a minimum of 3 years after the date of the evaluation.

Periodically, the NRC will inspect licensed facilities. In the event of a regulatory inspection, the RSO will immediately notify the First State Power Environmental Engineer and Executive Vice President. The RSO will escort the inspector through the facility, provide access to radiation safety files, answer all pertinent questions to the best of their knowledge, and document all discussions and inspection activities. Notice of violations (NOV) must be posted within 2 days of receipt. A written response to the NOV must be posted at the plant for 5 days or until the violation is corrected. Copies of all NOVs must be immediately sent to the First State Power Environmental Engineer and Executive Vice President.

## **9.0 EMERGENCY PROCEDURES**

In the event of an emergency involving radioactive sources, employees must immediately contact the site RSO. The area where the emergency is occurring should be roped off to prevent the inadvertent entry of unauthorized personnel. Attachment F provides the distances that each source should be roped off to ensure safety. Attachment F also includes emergency guidelines for fire or explosion and possible contamination.

An incident report must be completed by the RSO for any incident involving licensed sources. Incidents include damage, unauthorized access, worker exposure, loss of device, fire, and others. An incident report must be completed using the format shown in Attachment G.

## **10.0 RECORDS MAINTENANCE**

The RSO maintains all records associated with the Radiation Safety Program. The following table summarizes the documents and records to be maintained by the RSO, and the length of time they should be retained.

## RECORDS MAINTENANCE REQUIREMENTS

DOCUMENTATION	PERIOD RETAINED
Source shipping/receiving papers	Indefinitely
Leak test data	Indefinitely
Applicable NRC regulations	Current only
Applicable state regulations	Current only
NRC License, amendments, and supporting documents	Indefinitely
Source inventories, shutter checks	Indefinitely
Source condition inspections	Indefinitely
Citations, responses, corrections	Indefinitely
Incident reports	Indefinitely
RSO training/qualifications information	Indefinitely
Training records	5 years
Instrument calibration records	3 years
Program evaluations	3 years



**ATTACHMENT A**  
**NOTICE TO EMPLOYEES**

### NOTICE TO EMPLOYEES

Our license to possess and use nuclear equipment, the conditions stated in conjunction with the license and information relative to the type and use of the equipment are on file in the Operator's Office.

Access to this information is available upon request. To request information, contact one of the following:

Radiation Safety Officer: Glenn E. Roberts (610) 701-6147

Plant Manager: (To Be Determined)

**ATTACHMENT B**  
**RADIATION SAFETY TRAINING AGENDA**

**DOVER COGENERATION PLANT**  
**RADIATION SAFETY TRAINING AGENDA**

<b>TIME</b>	<b>TOPIC</b>
08:00 - 08:10	Introduction and Training Objectives
08:10 - 08:20	Regulations and Regulatory Agencies
08:20 - 08:30	Types/Locations of Sources
08:30 - 08:50	Characteristics of Radioactive Materials
08:50 - 09:00	Health Hazards
09:00 - 09:10	Source Identification and Labeling
09:10 - 09:25	Radiation Detection
09:25 - 09:35	Exposure Controls - Time/Distance/Shielding
09:35 - 09:50	Emergency Procedures
09:50 - 10:00	Examination

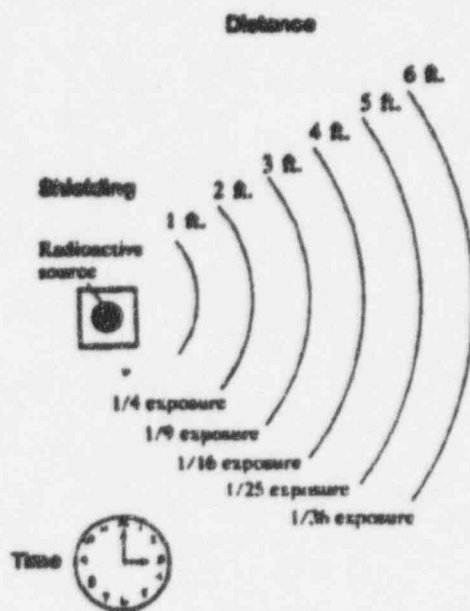
**ATTACHMENT C**

**PRINCIPLES OF RADIATION PROTECTION**

## PRINCIPLES OF RADIATION PROTECTION

Three factors come into play when protecting yourself from the effects of radiation: **time**, **distance**, **exposure**.

1. **Time:** the less time a person remains in the area of radiation, the less radiation dose that person will receive.
2. **Distance:** the intensity of radiation and its effects fall off sharply as you move further away from the radioactive source. For example, by moving twice as far away from a radioactive source, you are exposed to one-quarter the amount of radiation; moving three times as far away means one-ninth the exposure, and so on.
3. **Shielding:** protective material placed between you and the source reduces the level of radiation passing through, and thus the amount to which you will be exposed. In nuclear gauges, this protection is provided by the source housing.





**ATTACHMENT D**

**INVENTORY/SHUTTER CHECK FORM**

**Nuclear Source Inventory****Date****By:**

<b>Manufacturer</b>	<b>Location</b>	<b>Model #</b>	<b>Isotope</b>	<b>Activity</b>	<b>Serial Number</b>	<b>✓ON/OFF</b>	<b>COMMENTS</b>
#1 Texas Nuclear	ESP HOP. HI LVL N.	5197	CS137	100mCI	B-2167		
#2 Texas Nuclear	ESP HOP. HI LVL S.	5197	CS137	100mCI	B-2168		
#3 Texas Nuclear	ASH HI LEVEL	5200	CS137	50mCI	B-394		
#4 Kayray	SILO LO LEVEL	7063P	CS137	1000mCI	18730		
#5 Kayray	E. BLR SILO HI	7062BP	CS137	50mCI	16800		
#6 Kayray	W. BLR SILO LO	7062BP	CS137	50mCI	16801		
#7 Kayray	W. BLR SILO HI	7062BP	CS137	50mCI	16803		
#8 Kayray	SILO LEVEL HI	7062BP	CS137	100mCI	16802		
#9 Kayray	E. BLR SILO LO	7062BP	CS137	50mCI	16804		

**ATTACHMENT E**  
**REVIEW AND AUDIT FORM**

65 10161-1.7 = 717

628

Records must be retained for 5 years

# REVIEWS and AUDITS

Annual safety Training      Annual Audit of License      6 Months Inventory      3 Year Leak Tests

1998				
Jan.				
July				
1999				
Jan.				
July				
2000				
Jan.				
July				
2001				
Jan.				
July				
2002				
Jan.				
July				

*Records must be retained for 5 years*

**ATTACHMENT F**

**NUCLEAR SOURCE INVENTORY SHOWING ROPE OFF RADII**

**AND**

**EMERGENCY GUIDELINES INVOLVING FIRE OR EXPLOSION  
AND POSSIBLE CONTAMINATION**



## Nuclear Source Inventory

Manufacturer	Location	Model #	Isotope	Activity	Serial Number	Rope-Off Radius
#1 Texas Nuclear	ESP HOP. HI LVL N.	5197	CS137	100mCI	B-2167	8.5 ft
#2 Texas Nuclear	ESP HOP. HI LVL S.	5197	CS137	100mCI	B-2168	8.5 ft
#3 Texas Nuclear	ASH HI LEVEL	5200	CS137	50mCI	B-394	6.0 ft
#4 Kayray	SILO LO LEVEL	7063P	CS137	1000mCI	18730	26.5 ft
#5 Kayray	E. BLR SILO HI	7062BP	CS137	50mCI	16800	6.0 ft
#6 Kayray	W. BLR SILO LO	7062BP	CS137	50mCI	16801	6.0 ft
#7 Kayray	W. BLR SILO HI	7062BP	CS137	50mCI	16803	6.0 ft
#8 Kayray	SILO LEVEL HI	7062BP	CS137	100mCI	16802	8.5 ft
#9 Kayray	E. BLR SILO LO	7062BP	CS137	50mCI	16804	6.0 ft

This procedure applies to all instances where damage is incurred by the source holder due to such action as fire, etc.

Immediately rope off the area around the source holder. Use the following formula to determine the rope-off radius in feet.

$R = \sqrt{0.7 \times (\text{source size, mCI})}$  For example, if you have a 100mCI source,  $R = \sqrt{70} = 8.4 \text{ ft}$

Inform plant Radiation Protection Officer or person responsible for the use of the source as to the situation.

Limit access to source head until a radiation survey and source wipe can be preformed by qualified personnel or a representative.

### **Emergency guidelines involving fire or explosion and possible contamination**

1. Notify all other persons in the room and building at once.
2. Notify the fire department and other local plant safety personnel and the radiation safety officer.
3. Attempt to put out fires by approved means if radiation hazard is not immediately hazardous.
4. Govern fire fighting or other emergency activities by the restrictions of the RSO.
5. As soon as possible, monitor the area and determine the protective steps necessary for safe re-entry.
6. Permit no person to return to the area without the approval of the RSO; maintain a list of all entries.
7. Call for any additional advice or assistance necessary.
8. If possible contamination is involved, the area of the accident should be restricted. The public should be kept as far from the scene as practical. Local authorities should make only necessary entries and investigations in the accident area. No attempt should be made to open or examine contained material. No attempt should be made to clean any debris or material involved in the accident prior to the arrival of properly trained and equipped individuals.
9. Any persons who have had possible contact with the radioactive material should be segregated and confined until they can be examined further. The names and addresses of those involved should be obtained.
10. The injured should be removed from the area of the accident with as little contact as possible and held at a transfer point. All lifesaving measures should be performed promptly, but elective first aid and surgical procedures should be delayed until the advice or help can be obtained from a physician familiar with radiation medicine. Except in extreme emergency, patients **should not** be moved to a local hospital or doctor's office before a radiological survey has been made to assess possible contamination problems.
11. If the incident involves fire, attempts to extinguish it should be made from as great a distance as possible avoiding smoke, fumes, or dust as much as possible. The fire should be treated as one involving toxic chemicals. Suspected material should not be handled until it has been monitored and released by monitoring personnel. Clothing and tools used at the fire should be segregated until they can be checked by emergency monitoring teams.
12. Prepare a complete history of the emergency and subsequent activity related thereto.

**ATTACHMENT G**  
**INCIDENT REPORT FORMAT**

## INCIDENT REPORT

In the event of a radiation accident, certain essential facts must be obtained as promptly and accurately as possible. These facts are needed to estimate the magnitude of the incident, limit the extent of damage, and begin remedial measures.

1. What happened?
2. When did it occur? (give date and time)
3. Where did it happen? (building, floor, area)
4. Who was involved? (names, employer)
5. Who was exposed or injured? (name and extent of injury or exposure)
6. Where are the injured or exposed now?
7. How much damage to facilities?
  - (a) Was damage confined to company property?
  - (b) What damage was done to property of others?
8. Is radioactive contamination a problem?
  - (a) If so, how extensive is contamination?
  - (b) What is being done to control the contamination?
9. Is outside help (fire, police, NRC) required?
10. Is medical assistance required?
11. Should personnel be evacuated?
  - (a) from the incident area or building?
  - (b) from the site?
  - (c) from the locations off-site?
12. Who, other than me, has been notified?
13. Where can you be reached if we need you?

**ATTACHMENT 3**

**LICENSED MATERIAL SURVEY DRAWINGS**



*sensor*  
**SERVICES, Inc**  
LIC # 37-30117-01

**SSI Memo**

P.O. Box 710, Lake Harmony, PA 18624-0710 (717) 722-3620 FAX 722-3567

March 8, 1995

TO: Phil Guidry  
Kraft Foods

SUBJECT: Survey drawings for nine Cs-137 Isotopes.

Phil,

In paragraph 10 of the NRC's letter dated February 2, 1995, the NRC requested a drawing or sketch of the locations of equipment containing licensed material. Enclosed in this envelop are two sets of survey drawings and data sheets for the nine Isotopes at your plant which should fulfill the NRC's request.

I would like to point out the following:

- \* The drawings show that the effected dose rate does not exceed 2 Millirems per hour as required by the NRC regulations.
- \* The area that has the highest radiation levels would be the walkway between the East and West High Boiler silos which has a level of approximately .25 to .2 mR/hour.
- \* When the NRC talks 2 mR/hour, this is usually taken to mean whole body exposure which would be quit impossible with any of the units unless a person were to go inside one of the silos with the shutter still open. I believe those areas are label restricted and are address on another part of the license application.

If you have any questions or if I can be of further, please don't hesitate to give me a call.

Sincerely

*Jim Wagner*

*sensor*  
**SERVICES, Inc**

# Survey Data Sheet

LIC # 37-30117-01

P.O. Box 710, Lake Harmony, PA 18624-0710 (717) 722-3620 FAX 722-3567

**KRAFT FOODS**  
**Cogeneration Plant**  
**Dover Delaware, 19903**  
**Date of Survey, March 2, 1995**

**ISOTOPES:** Two source units of Cs-137.

**LOCATION:** East & West High Boiler Silos.

**ISOTOPE DATA:**

<u>Isotope:</u>	Cs-137	Cs-137
<u>Quantity:</u>	50 mCi.	50 mCi.
<u>Serial #:</u>	16800	16803
<u>Vendor:</u>	KayRay	KayRay
<u>Model #:</u>	7062BP	7062BP
<u>Frame #:</u>	16800	16803
<u>Date of Measure:</u>	9-83	9-83
<u>Location:</u>	East	West

**Particulars:**

- \* The source units are located waist high, from walkway, on the top of two coal silos to detect a full silo condition.
- \* Both detector units are only accessible by a built in ladder and platform which is used only for detector service.
- \* The maximum radiation on the surface of the silo at the detector side is .5 mR.
- \* Survey was taken with silo empty, or worst case situation.
- \* Except in the immediate area of the source and detector units, the radiation levels around the outside perimeter of both silos was determined to be background radiation.

**Two Millirem Limit:** Approximately five inches from the source unit (15 inches from the surface of the silo) with the shutter open or closed.

**Personnel concerns:** Occasional operator travel in the area of the source units approximately 5 minutes per shift in a field of approximately .20 mR/hour.

**Attachments:** Top View drawing.

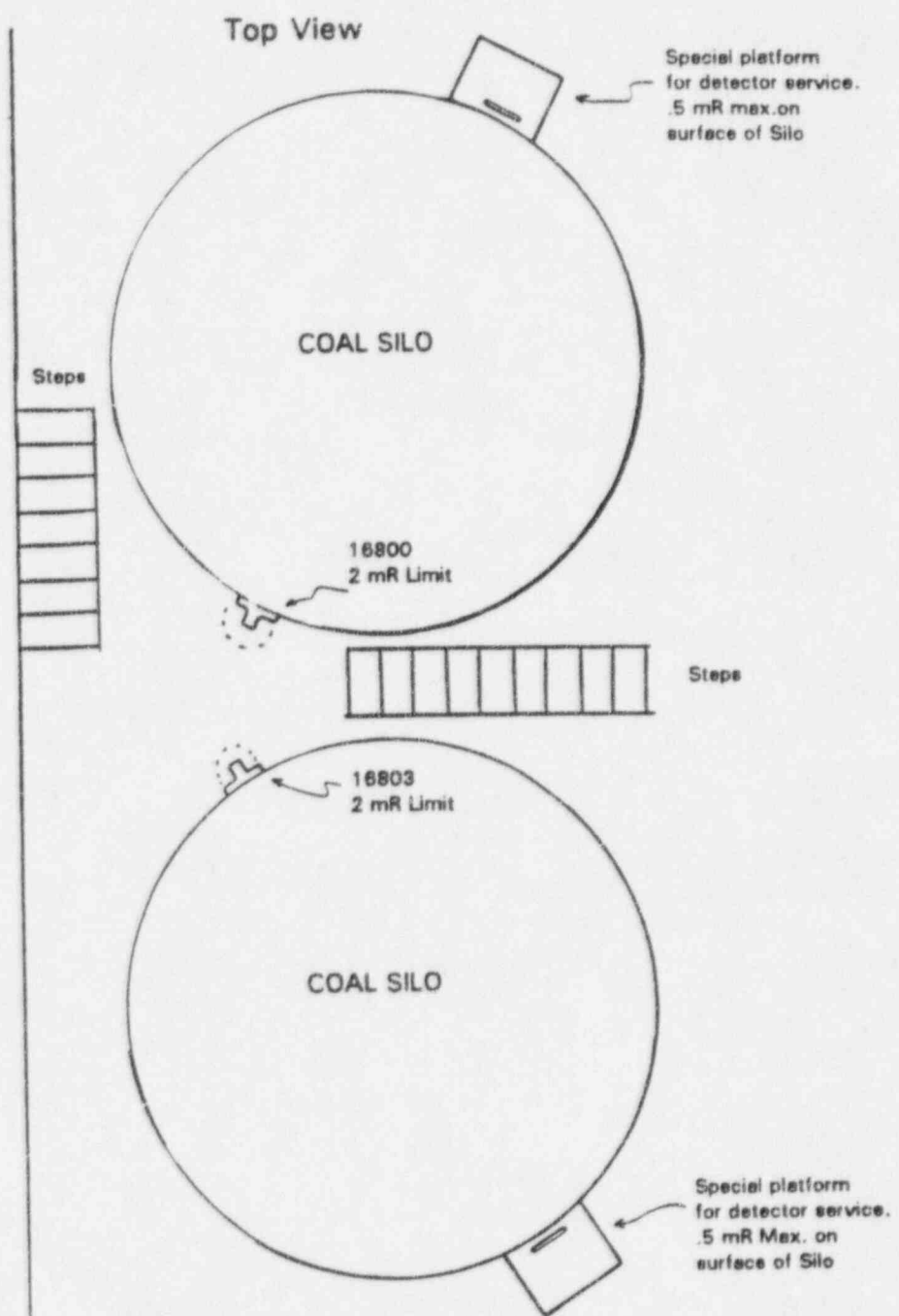
*James L. Wagner*  
James L. Wagner  
Sensor Services, Inc.  
March 7, 1995

*sensor*  
**SERVICES, Inc.**

# Radiation Survey

Radiological & Maintenance Services for Industrial Nuclear Gauging Systems  
P.O. Box 710, Lake Harmony, PA 18624-0710 (717) 722-3620 FAX (717) 722-3567

EAST ↑



Cust. Kraft Foods  
Loc. Dover, DE  
Serial# 16800 & 16803  
Frame# 16800 & 16803  
Mach. Hi Coal Silo Hoppers

Isotope CS-137  
Curies Both 50 mCi.  
Vendor KayRay  
D.O.M. Both 9-83  
Meter Ludlum 3 (#71166)

Date March 2, 1985  
By Jim Wagner  
Scale 3/16" = 1'  
Page 2 of 2

Engineer's Signature: James L. Wagner

**KRAFT FOODS**  
**Cogeneration Plant**  
**Dover Delaware. 19903**  
**Date of Survey, March 2, 1995**

**ISOTOPES:** Two source units of Cs-137.

**LOCATION:** East & West High Boiler Silos.

**ISOTOPE DATA:**

<u>Isotope:</u>	Cs-137	Cs-137
<u>Quantity:</u>	50 mCi.	50 mCi.
<u>Serial #:</u>	16800	16803
<u>Vendor:</u>	KayRay	KayRay
<u>Model #:</u>	7062BP	7062BP
<u>Frame #:</u>	16800	16803
<u>Date of Measure:</u>	9-83	9-83
<u>Location:</u>	East	West

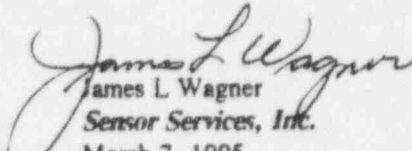
**Particulars:**

- \* The source units are located waist high, from walkway, on the top of two coal silos to detect a full silo condition.
- \* Both detector units are only accessible by a built in ladder and platform which is used only for detector service.
- \* The maximum radiation on the surface of the silo at the detector side is .5 mR.
- \* Survey was taken with silo empty, or worst case situation.
- \* Except in the immediate area of the source and detector units, the radiation levels around the outside perimeter of both silos was determined to be background radiation.

**Two Millirem Limit:** Approximately five inches from the source unit (15 inches from the surface of the silo) with the shutter open or closed.

**Personnel concerns:** Occasional operator travel in the area of the source units approximately 5 minutes per shift in a field of approximately .20 mR/hour.

**Attachments:** Top View drawing.

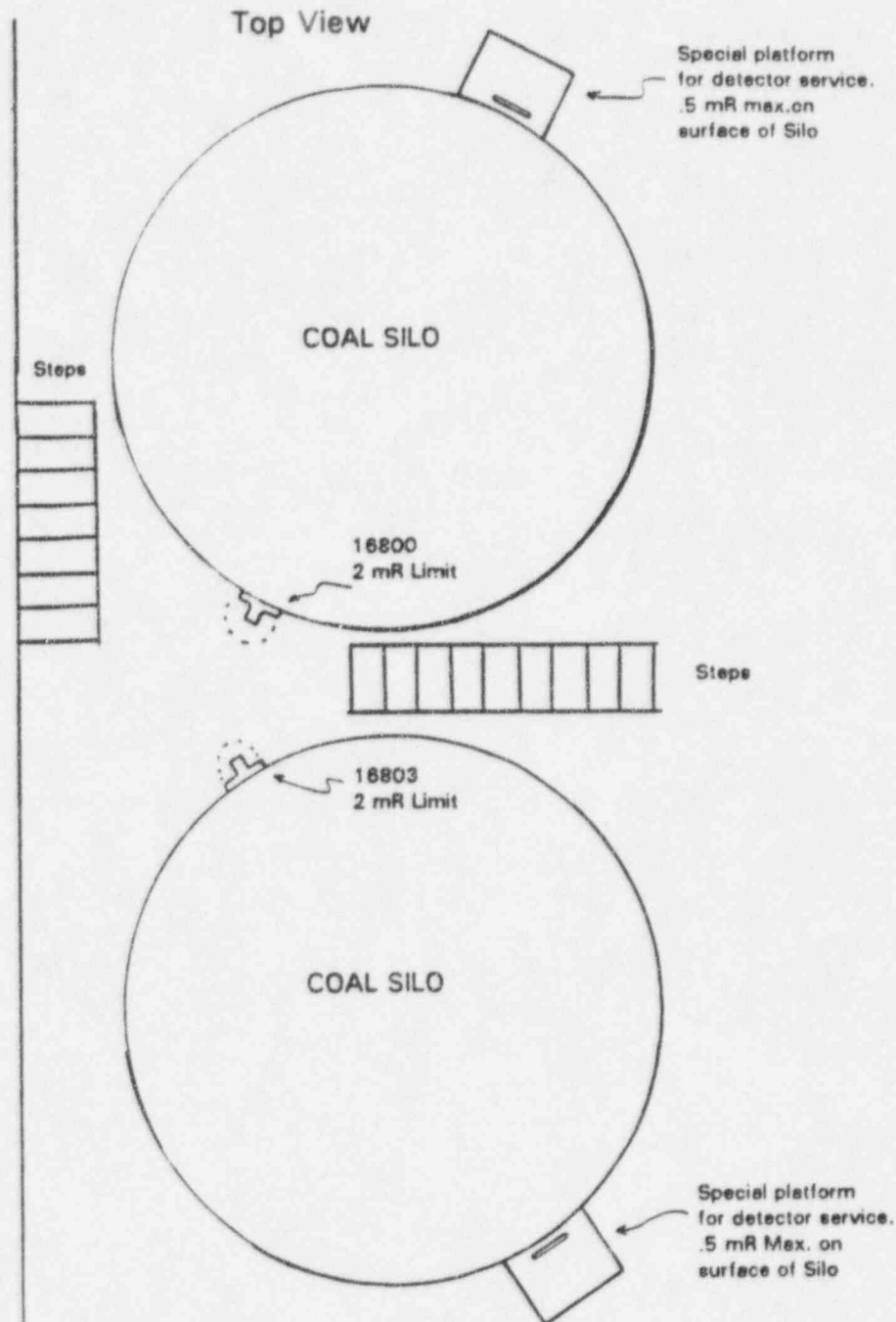
  
James L. Wagner  
Sensor Services, Inc.  
March 7, 1995

*sensor*  
**SERVICES, Inc.**

# Radiation Survey

Radiological & Maintenance Services for Industrial Nuclear Gauging Systems  
P.O. Box 710, Lake Harmony, PA 18624-0710 (717) 722-3620 FAX (717) 722-3567

EAST ↑



Cust. Kraft Foods  
Loc. Dover, DE  
Serial# 16800 & 16803  
Frame# 16800 & 16803  
Mach. Hi Coal Silo Hoppers

Isotope CS-137  
Curies Both 50 mCi.  
Vendor KayRay  
D.O.M. Both 9-83  
Meter Ludlum 3 (#71166)

Date March 2, 1995  
By Jim Wagner  
Scale 3/16" = 1'  
Page 2 of 2

Engineer's Signature: James L. Wagner

*sensor*  
**SERVICES, Inc**  
LIC # 30117-01

## Survey Data Sheet

P.O. Box 710, Lake Harmony, PA 18624-0710 (717) 722-3630 FAX 722-3567

**KRAFT FOODS**  
**Cogeneration Plant**  
**Dover Delaware. 19903**  
**Date of Survey, March 2, 1995**

**ISOTOPES:** One source unit of Cs-137.

**LOCATION:** Coal Silo.

**ISOTOPE DATA:**

<u>Isotope:</u>	Cs-137
<u>Quantity:</u>	100 mCi.
<u>Serial #:</u>	16802
<u>Vendor:</u>	KayRay
<u>Model #:</u>	7062BP
<u>Frame #:</u>	16802
<u>Date of Measure:</u>	10-86
<u>Location:</u>	High Level

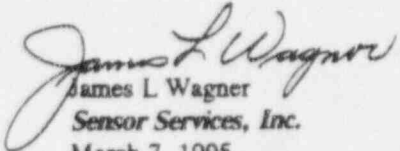
**Particulars:**

- \* The source and detector units are located approximately 6 feet below the top level of a 110 foot concrete coal silo.
- \* Both the source and detector units are lowered into position down a protective pipe by means of a track and cable device.
- \* The distance between the source and detector units, when in position, is approximately eleven feet.
- \* The unit has remote operated shutter open/close controls which enable the operators to close the shutter before raising the source unit from it's operating position.
- \* The unit is used to detect the conical result of a full silo condition located by the end of the coal fill chute.
- \* When the units are in position, operator access is impossible as well as the possibility of obtaining radiation level readings.
- \* The walkway area from where the devices are lowered into position was determined to be background radiation with the shutter open or closed. There is no other work station in the area.

**Two Millirem Limit:** Approximately seven inches from the source unit with the shutter open or closed.

**Personnel concerns:** Personnel raise source and detector units for service only. Approximately ten minuets every three years.

**Attachments:** Front View drawing.

  
James L. Wagner  
Sensor Services, Inc.  
March 7, 1995



*sensor*  
**SERVICES, Inc.**

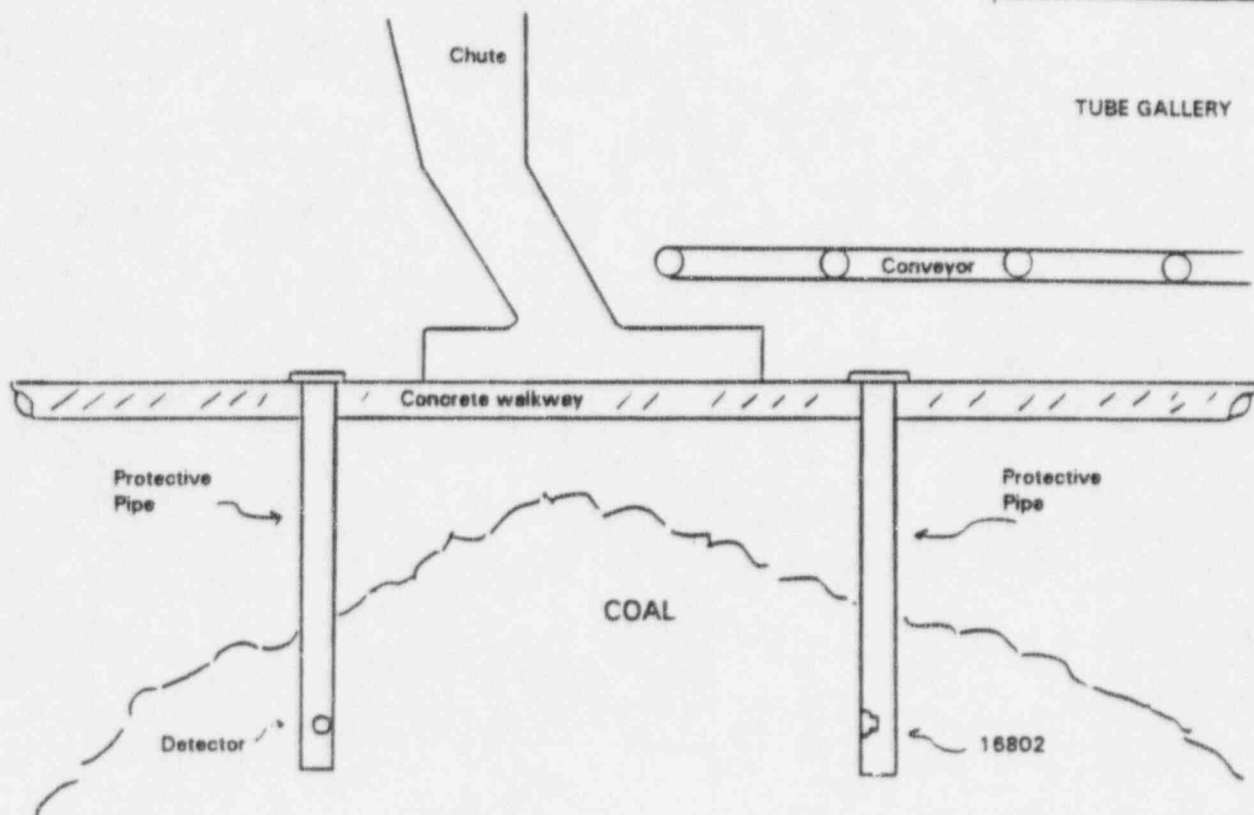
# Radiation Survey

Radiological & Maintenance Services for Industrial Nuclear Gauging Systems  
P.O. Box 710, Lake Harmony, PA 18624-0710 (717) 722-3620 FAX (717) 722-3567

Front View

WEST

EAST



Cust. Kraft Foods  
Loc. Dover, DE  
Serial# 16802  
Frame# 16802  
Mach. Coal Silo Hi Level

Isotope CS-137  
Curies 100 mCi  
Vendor KayRay  
D.O.M. 10-86  
Meter Ludlum 3 (#71166)

Date March 2, 1995  
By Jim Wagner  
Scale 1/4" = 1'  
Page 2 of 2

Engineer's Signature:

*James L. Wagner*

**KRAFT FOODS**  
**Cogeneration Plant**  
**Dover Delaware. 19903**  
**Date of Survey, March 2, 1995**

**ISOTOPES:** Two source units of Cs-137.

**LOCATION:** Precipitator Hoppers.

**ISOTOPE DATA:**

<u>Isotope:</u>	Cs-137	Cs-137
<u>Quantity:</u>	100 mCi.	100 mCi.
<u>Serial #:</u>	B-2167	B-2168
<u>Vendor:</u>	Tex-Nuc.	Tex-Nuc.
<u>Model #:</u>	5197	5197
<u>Frame #:</u>	B-2167	B-2168
<u>Date of Measure:</u>	10-83	10-83
<u>Location:</u>	North	South

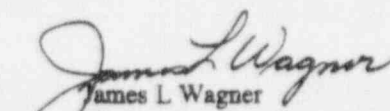
**Particulars:**

- \* The units are located nineteen feet above the floor level on the top area of the precipitator hoppers to detect full hopper level.
- \* Both units have remote operated shutter open/close devices, the controls of which, are at ground level.
- \* The source housing units are inaccessible without a ladder and the entire floor area, with the shutter open or closed, was measured to be normal background radiation.
- \* The source units are designed and installed, so one source can be used to detect the level of two hoppers.

**Two Millirem Limit:** Approximately eight inches from the source unit with the shutter open.

**Personnel concerns:** Operating personnel do not have access to the units during normal working conditions. The radiation level in the floor area is normal background radiation.

**Attachments:** Front View drawing and manufacturer's original device surveys.

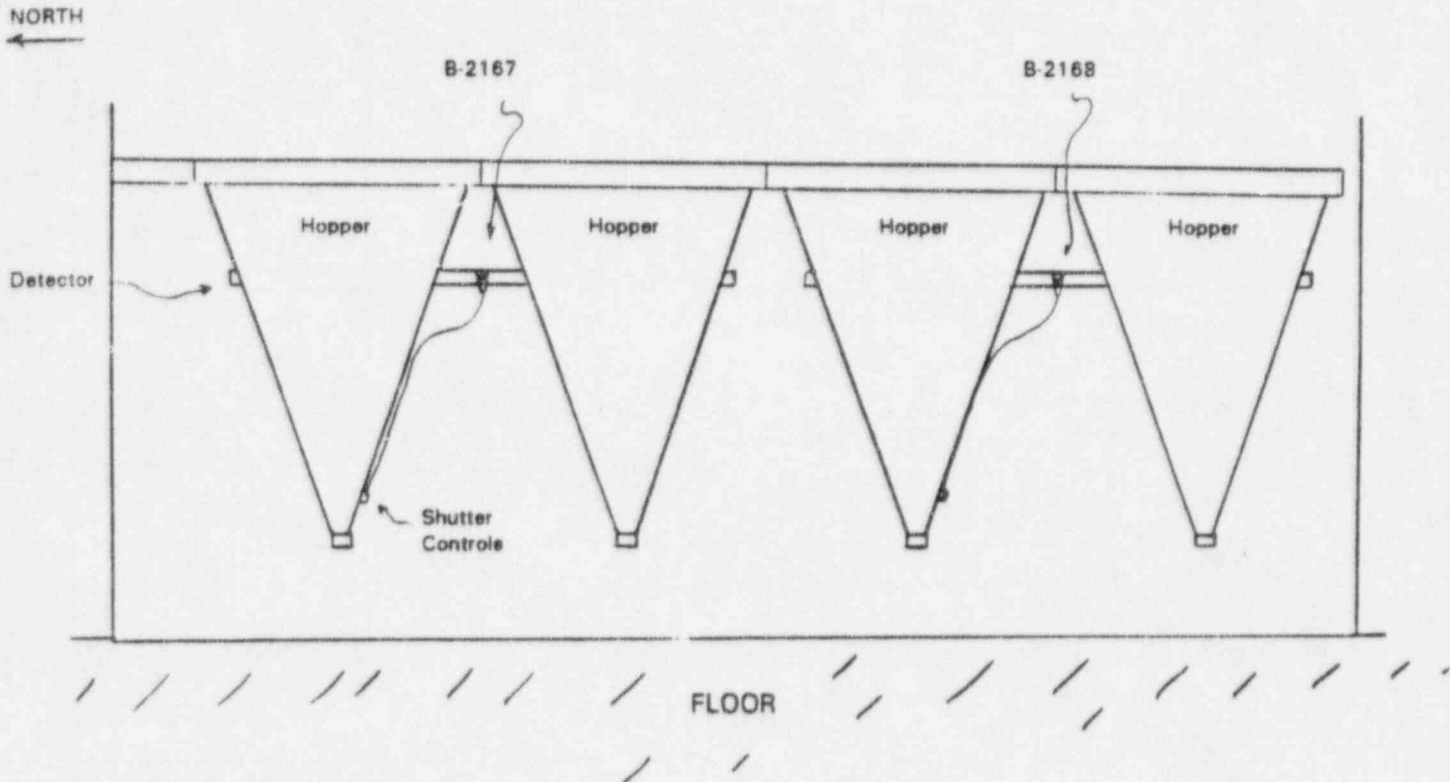
  
James L. Wagner  
Sensor Services, Inc.  
March 7, 1995

*sensor*  
**SERVICES, Inc.**

# Radiation Survey

Radiological & Maintenance Services for Industrial Nuclear Gauging Systems  
P.O. Box 710, Lake Harmony, PA 18624-0710 (717) 722-3620 FAX (717) 722-3567

Front View



Cust. Kraft Foods  
Loc. Dover, DE  
Serial# B-2176 & B-2168  
Frame# B-2167 & B-2168  
Mach. Percipitator Hoppers

Isotope CS-137  
Curies Both 100 mCi.  
Vendor Tex-Nuclear  
D.O.M. Both 10-83  
Meter Ludlum 3 (#71166)

Date March 2, 1995  
By Jim Wagner  
Scale 1 Cm" = 4'  
Page 2 of 4

Engineer's Signature: Jim L Wagner

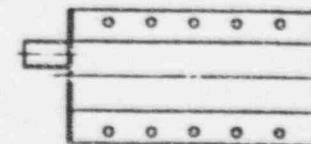
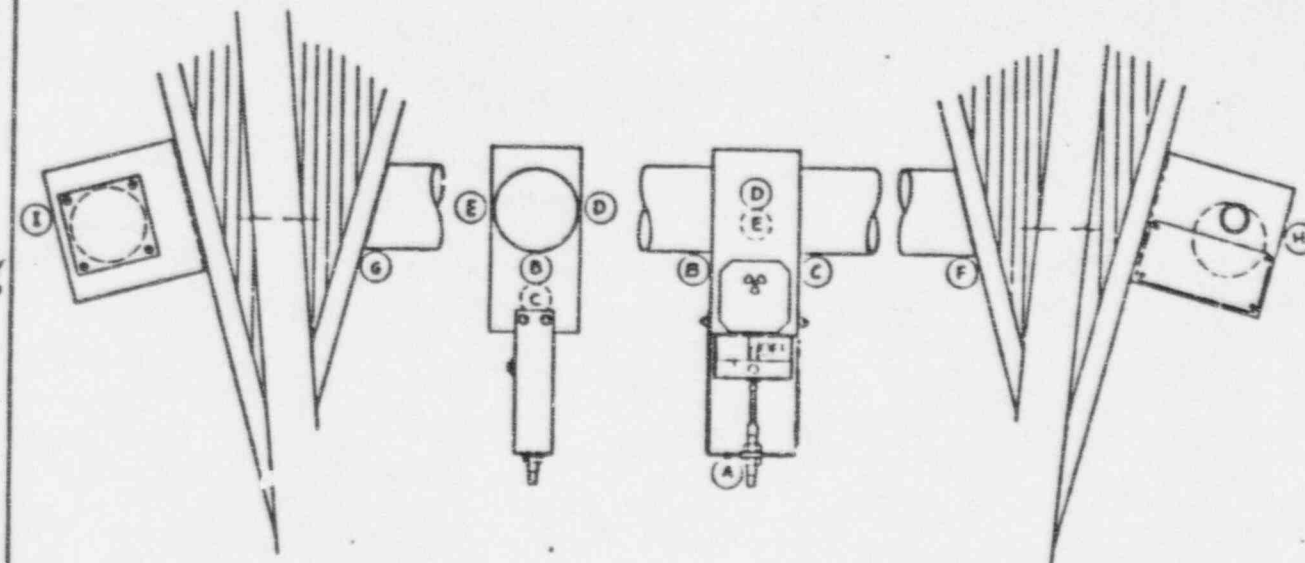
# LEVEL GAUGE RADIATION SURVEY

## NOTES

- 1) SURVEY LETTERED POINTS AT ONE FOOT FROM THE SURFACE AND/OR AT THE SURFACE.
- 2) SOME GEIGER TUBE TYPE SURVEY METERS MAY NOT HAVE SUFFICIENT RANGE TO TAKE SURFACE READINGS ON SOME APPLICATIONS. IN SUCH CASES, USE ION CHAMBER TYPE SURVEY METER OR TAKE READINGS AT ONE FOOT.
- 3) ONCE COMPLETED, DATED AND SIGNED, THIS CERTIFICATE SHOULD BE MAINTAINED AS A PERMANENT RECORD.

DATE 7/16/84  
 USER General Foods Co-Generation Pk.  
 GAUGE LOCATION Hazletville Rd  
Dover Del.  
 SOURCE HEAD MOD. NO. 5197  
 TAG NO. LSH-5790  
 SOURCE HEAD SER. NO. B 2168  
 ACTIVITY 100 ☒ CS137 ☐ CO60  
 MEASURING INSTRUMENT TNA 2650  
Survey meter SN FSI  
 READINGS TAKEN ☒ AT SURFACE ☐ AT ONE FOOT  
Anthony Monte 7/17/84  
SIG. AREA (ONLY AFTER SURVEY RECORDS)

Texas Nuclear Division  
 9101 Research Blvd., P.O. Box 9267  
 Austin, TX 78766



mR/h									
SHUTTER	A	B	C	D	E	F	G	H	I
OPEN	.6	6	7	40	40	16	18	.7	.7
CLOSED	5.4	20	18	40	35	1	1	.03	.03

VESSEL: EMPTY ☒ FULL ☐

ACTUATOR .02 mR/h

# LEVEL GAUGE RADIATION SURVEY

## NOTES

- 1) SURVEY LETTERED POINTS AT ONE FOOT FROM THE SURFACE AND ONE AT THE SURFACE.
- 2) SOME GAUGES TURN FROM SURVEY METERS MAY NOT HAVE SUFFICIENT RANGE TO TAKE SURFACE READINGS ON SOME APPLICATIONS. IN SUCH CASES, USE ION CHAMBER TYPE SURVEY METER OR TAKE READINGS AT ONE FOOT.
- 3) ONCE COMPLETED, DATED AND SIGNED, THIS CERTIFICATE SHOULD BE MAINTAINED AS A PERMANENT RECORD.

DATE 7/17/84

UNIT General Foods Corporation PH

GAUGE LOCATION Hazelville Rd

Over Del.

SOURCE HEAD MOD. NO. 5197

TAC. NO. LSH-5787

SOURCE HEAD SER. NO. B2167

ACTIVITY 100 NO CLIP COMP

PLACING INSTRUMENT TNR 2650

Survey meter GAS FSI

MEASURES TAKEN AT SURFACE AT ONE FOOT

Robert M. Nadeau 7/17/84  
DATE

Texas Nuclear Division

501 Research Blvd., P.O. Box 9267

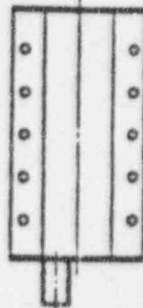
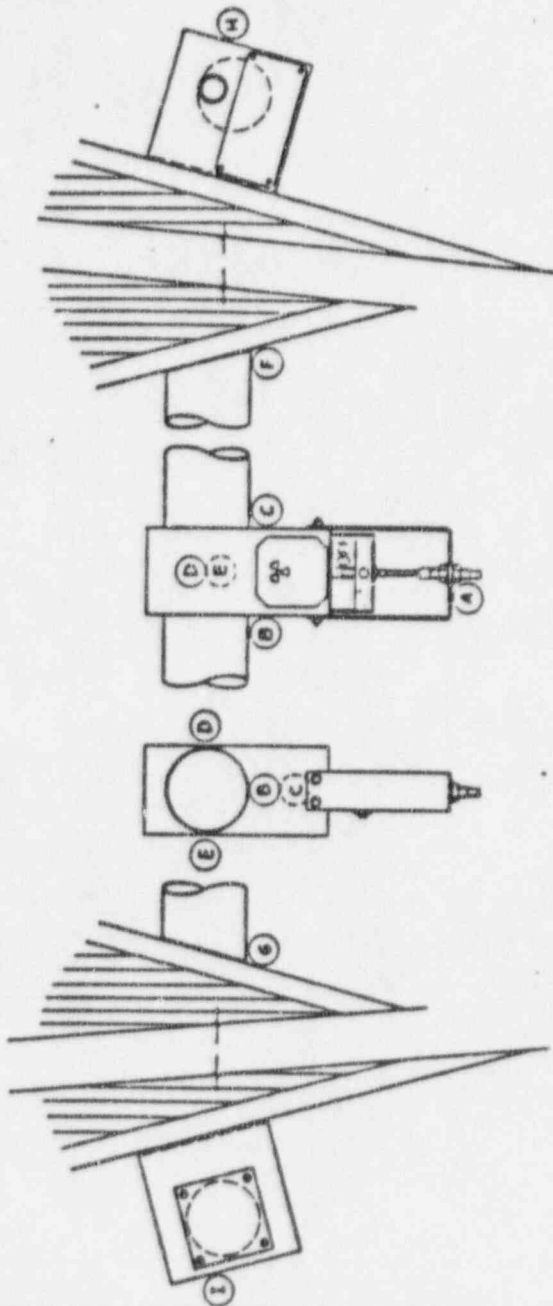
AUSTIN, TX 78766

REGISTRATION

TEP. MODEL NO.

SIC. MAY 12, 1976

PRO. 1512, 4-2805, TELER. 77-015



SHUTTER	A	B	C	D	E	F	G	H	I
OPEN	.8	7	8	45	60	15	19	17	17
CLOSED	3.8	20	10	44	56	1.8	14	13	13

mR/m

VESSEL: EMPTY ☒ FULL ☐

ACTUATOR Q mR

*sensor*  
**SERVICES, Inc**

LIC # 37-30117-01

## Survey Data Sheet

P.O. Box 710, Lake Harmony, PA 18624-0710 (717) 722-3620 FAX 722-3567

**KRAFT FOODS**  
**Cogeneration Plant**  
**Dover Delaware. 19903**  
**Date of Survey, March 2, 1995**

**ISOTOPES:** One source unit of Cs-137.

**LOCATION:** Ash Storage Bin.

**ISOTOPE DATA:**

<u>Isotope:</u>	Cs-137
<u>Quantity:</u>	50 mCi.
<u>Serial #:</u>	B-394
<u>Vendor:</u>	Tex Nucl.
<u>Model #:</u>	5200
<u>Frame #:</u>	B-394
<u>Date of Measure:</u>	6-83
<u>Location:</u>	High Level

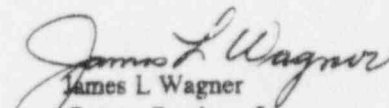
**Particulars:**

- \* The source and detector units are located atop a 50 foot silo and used to detect a full silo condition.
- \* Both source and detector units are only accessible by a specially built ladder and platform which is used only for detector and source service.
- \* The maximum radiation on the surface of the silo at the detector side is .5 mR.
- \* Survey was taken with silo empty, or worst case situation.

**Two Millirem Limit:** Approximately seven inches from the source unit with the shutter open or closed.

**Personnel concerns:** Personnel enter source and detector area only for service on units. Approximately two minutes per month.

**Attachments:** Front View drawing and manufacturer's original device survey.

  
James L. Wagner  
Sensor Services, Inc.  
March 7, 1995

**Satisfaction through Quality Service**



*sensor*  
**SERVICES, Inc.**

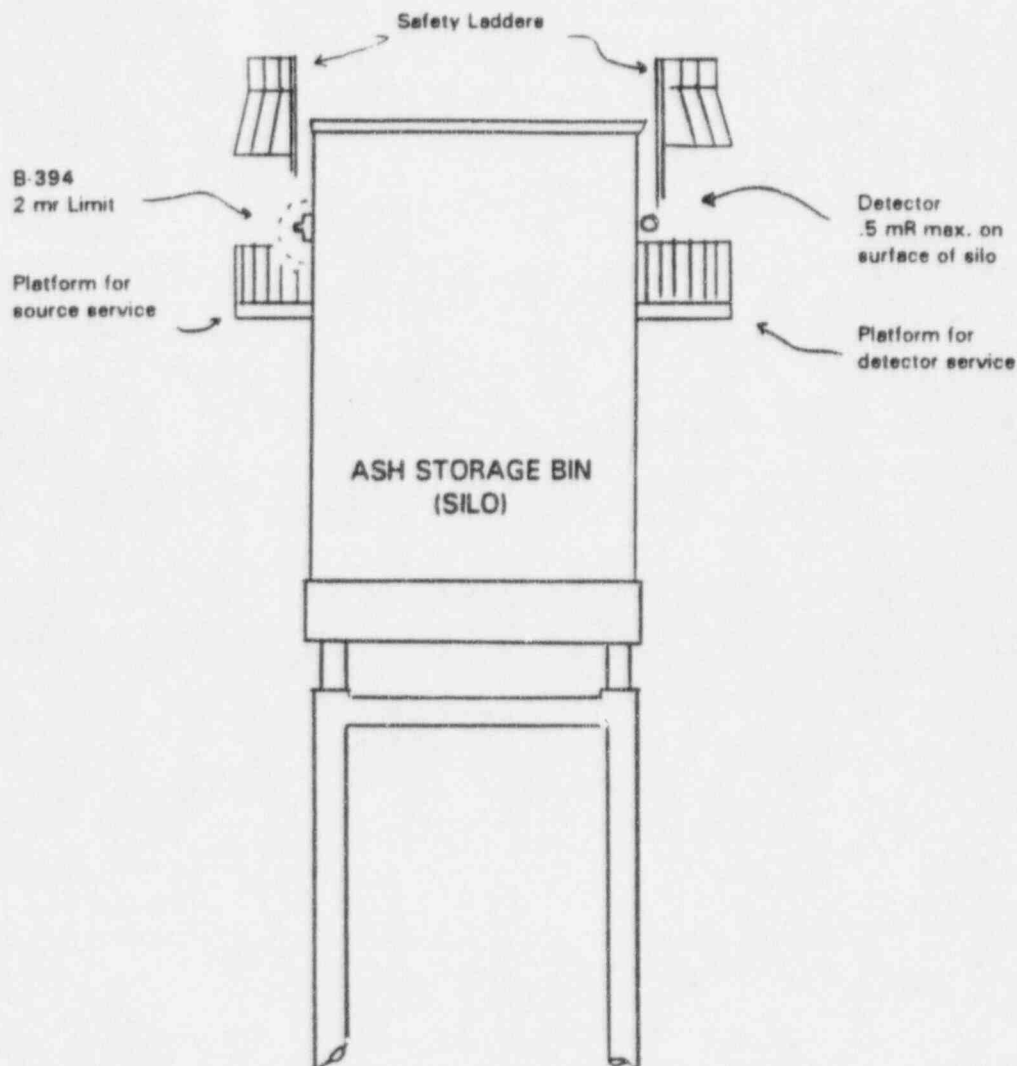
## Radiation Survey

Radiological & Maintenance Services for Industrial Nuclear Gauging Systems  
P.O. Box 710, Lake Harmony, PA 18624-0710 (717) 722-3620 FAX (717) 722-3567

Front View

WEST

EAST



Cust. Kraft Foods  
Loc. Dover, DE  
Serial# B-394  
Frame# B-394  
Mach. Ash Storage Bin

Isotope CS-137  
Curies 50 mCi.  
Vendor Tex Nucl.  
D.O.M. 6-83  
Meter Ludlum 3 (#71166)

Date March 2, 1995  
By Jim Wagner  
Scale 1" = 10'  
Page 2 of 3

Engineer's Signature: James L. Wagner

# LEVEL GAUGE RADIATION SURVEY CERTIFICATE

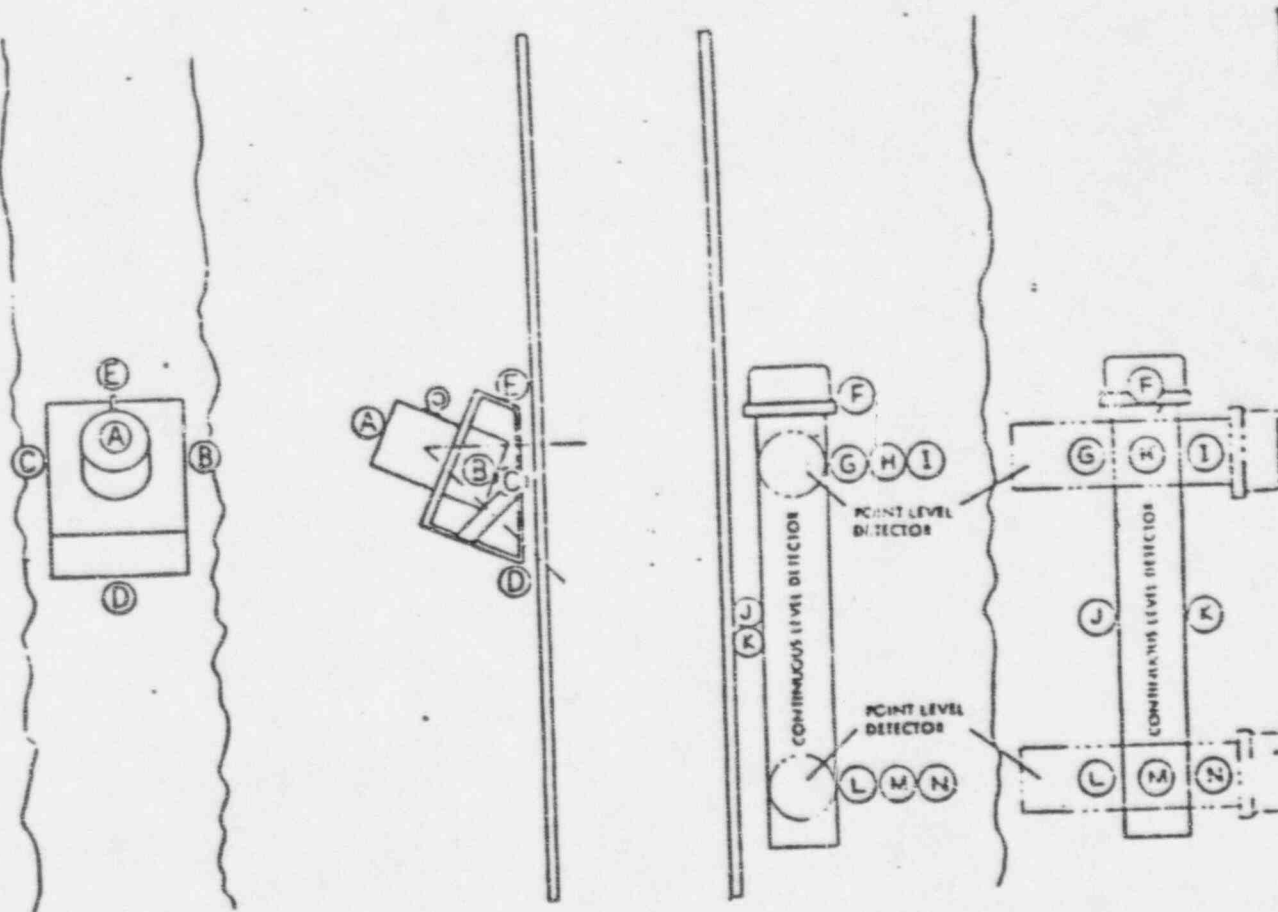
MODELS 5205, 5206, 5207, 5208 SOURCE HOUSINGS

- NOTES
1. SURVEY LETTERED POINTS AT ONE FOOT FROM THE SURFACE AND/OR AT THE SURFACE.
  2. SOME GEIGER TUBE TYPE SURVEY METERS MAY NOT HAVE SUFFICIENT RANGE TO TAKE SURFACE READINGS ON SOME APPLICATIONS. IN SUCH CASES, USE ION CHAMBER TYPE SURVEY METERS OR TAKE READINGS AT ONE FOOT.
  3. ONCE COMPLETED, DATED AND SIGNED, THIS CERTIFICATE SHOULD BE MAINTAINED AS A PERMANENT RECORD.

DATE 2/15/85  
 UNIT General Food's  
 GAUGE LOCATION Co-Generation Plant  
Power De  
 SOURCE HEAD MOD. NO. 5200  
 TAG NO. 805 revision level  
 SOURCE HEAD SER. NO. B.394  
 ACTIVITY 50 ☒ CS137 ☐ CO60  
 MEASURING INSTRUMENT TA10 2650  
Survey meter SNFSI

READINGS TAKEN: ☒ AT SURFACE ☐ AT ONE FOOT  
Anthony P. Moore 2/16/85  
 SIGNATURE (ONLY AFTER RESULTS RECORDED) DATE

TECHNICAL Nuclear  
 9101 Research Blvd.  
 AUSTIN, TEXAS 78766



mR/h														
SHUTTER	A	B	C	D	E	F	G	H	I	J	K	L	M	N
OPEN	10	1.2	1.4	3	3	.3	.3	.3	.3					
CLOSED	10	1.2	1.4	3	3	.03	.02	.02	.02					

VESSEL; EMPTY ☒ FULL ☐

LIC #07-14100-03

**KRAFT FOODS**  
**Cogeneration Plant**  
**Dover Delaware. 19903**  
**Date of Survey, March 2, 1995**

**ISOTOPES:** Two source units of Cs-137.

**LOCATION:** East & West Low Boiler Silos.

**ISOTOPE DATA:**

<u>Isotope:</u>	Cs-137	Cs-137
<u>Quantity:</u>	50 mCi.	50 mCi.
<u>Serial #:</u>	16804	16801
<u>Vendor:</u>	KayRay	KayRay
<u>Model #:</u>	7062BP	7062BP
<u>Frame #:</u>	16804	16801
<u>Date of Measure:</u>	9-83	9-83
<u>Location:</u>	East	West

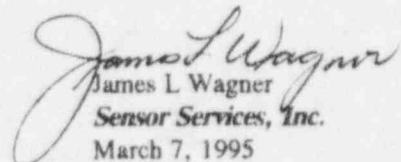
**Particulars:**

- \* The units are located waist high, from floor level, on the bottom of two coal silos to detect an empty silo condition.
- \* The maximum radiation on the surface of the silo at the detector side is .5 mR.
- \* Survey was taken with the silos empty, or worst case situation.
- \* Except in the immediate area of the source and detector units, the radiation levels around the outside perimeter of both silos was determined to be background radiation.

**Two Millirem Limit:** Approximately five inches from the source unit (15 inches from the surface of the silo) with the shutter open or closed.

**Personnel concerns:** Occasional operator travel in the area of the source and detector units approximately 2 minutes per shift in a field of approximately .20 mR/hour.

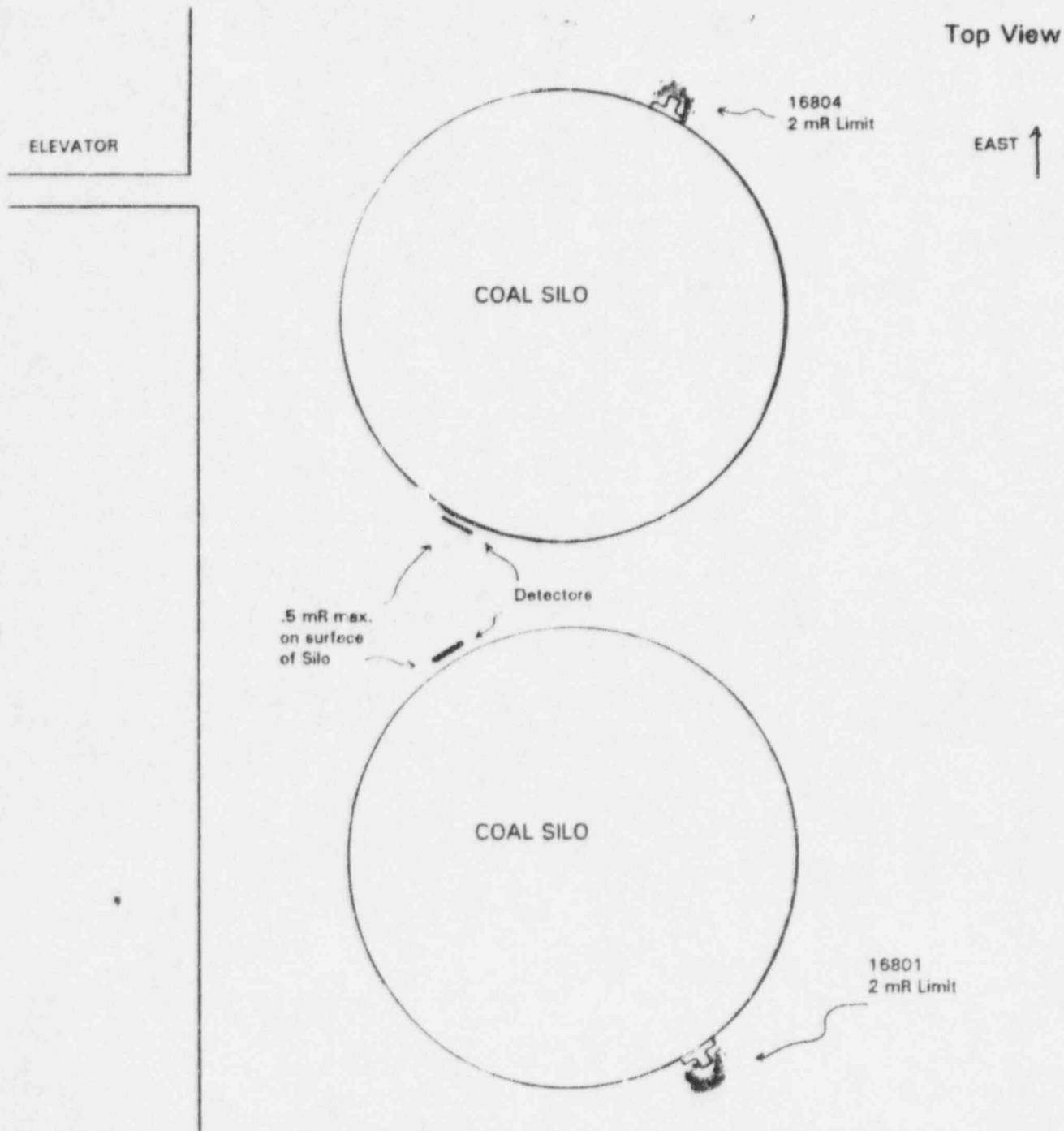
**Attachments:** Top View drawing.

  
James L. Wagner  
Sensor Services, Inc.  
March 7, 1995

*sensor*  
**SERVICES, Inc.**

# Radiation Survey

Radiological & Maintenance Services for Industrial Nuclear Gauging Systems  
P.O. Box 710, Lake Harmony, PA 18624-0710 (717) 722-3620 FAX (717) 722-3567



Client: Kraft Foods  
Location: Dover, DE  
Material: 16804 & 16801  
Quantity: 16804 & 16801  
Description: Lo Coal Silo Hoppers

Isotope: CS-137  
Curies: Both 50 mCi.  
Vendor: KayRay  
D.O.M.: Both 9-83  
Meter: Ludlum 3 (#71166)

Date: March 2, 1995  
By: Jim Wagner  
Scale: 3/16" = 1'  
Page: 2 of 2

Engineer's Signature: James L. Wagner

**KRAFT FOODS  
Cogeneration Plant  
Dover Delaware. 19903  
Date of Survey, March 2, 1995**

**ISOTOPES:** One source unit of Cs-137.

**LOCATION:** Coal Silo.

**ISOTOPE DATA:**

<u>Isotope:</u>	Cs-137
<u>Quantity:</u>	1000 mCi.
<u>Serial #:</u>	18730
<u>Vendor:</u>	KayRay
<u>Model #:</u>	7063P
<u>Frame #:</u>	18730
<u>Date of Measure:</u>	11-84
<u>Location:</u>	Lower Level

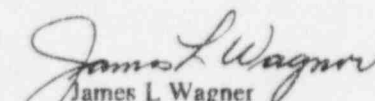
**Particulars:**

- \* The source and detector units are located approximately 30 feet above ground level on the lower end of a 110 foot concrete silo and used to detect an empty silo condition.
- \* Both source and detector units are only accessible by a specially built ladder and platform which is used only for detector and source service.
- \* The maximum radiation on the surface of the silo at the detector side is .25 mR.
- \* Survey was taken with silo empty, or worst case situation.

**Two Millirem Limit:** Approximately seven inches from the source unit's protective covering with the shutter open or closed.

**Personnel concerns:** Personnel enter source and detector area only for service on units. Approximately two minutes per month.

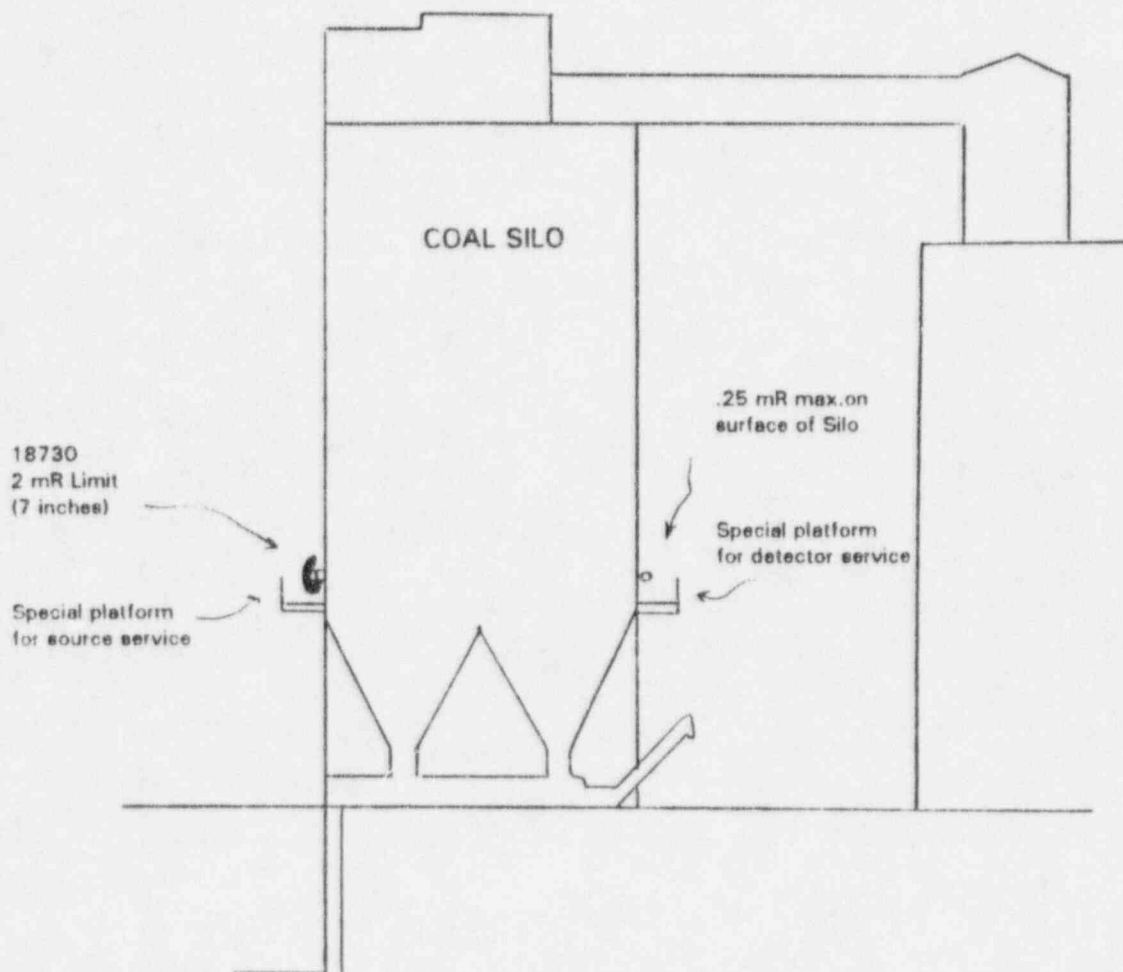
**Attachments:** Front View drawing and manufacturer's original device survey.

  
James L. Wagner  
Sensor Services, Inc.  
March 7, 1995

Front View

WEST

EAST



1# Kraft Foods  
Dover, DE  
18730  
18730  
Coal Silo

Isotope CS-137  
Curies 1000 mCi.  
Vendor KayRay  
D.O.M. 11-84  
Meter Ludlum 3 (#71166)

Date March 2, 1995  
By Jim Wagner  
Scale 1" = 30'  
Page 2 of 3

Engineer's Signature: James L. Wagner





KAY-RAY INC

INDUSTRIAL PROCESS CONTROL EQUIPMENT

516 West Campus Drive Arlington Heights Illinois 60004  
Phone (312) 259-5600 Cable Address KAYRAY Telex 281 085

# RADIATION SURVEY SINGLE POINT LEVEL

User General Foods.

Kay-Ray No. 4403

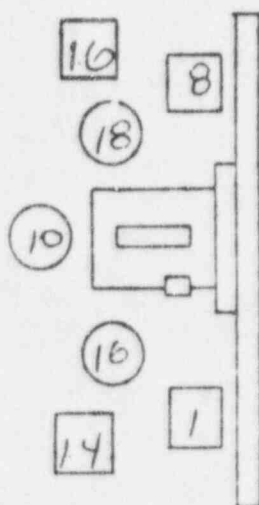
Location Dover Delaware

Date 2/8/85

Source in measure unless otherwise stated. Serial No. 18730

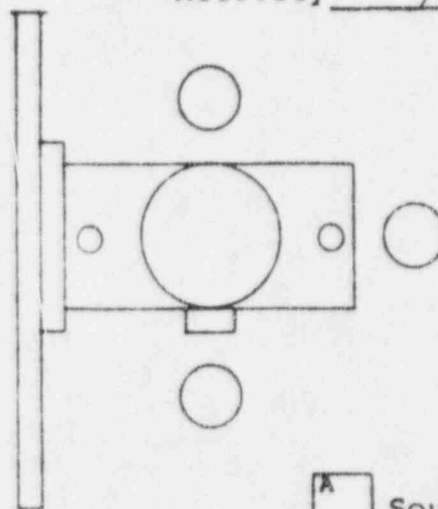
Model No. 7063 P

Activity 1000 mCi

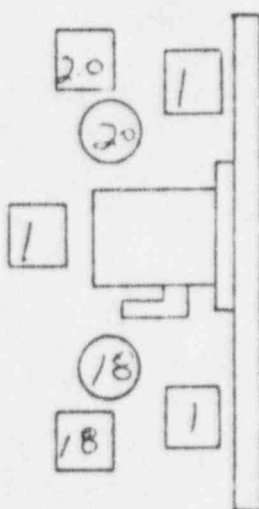


SIDE

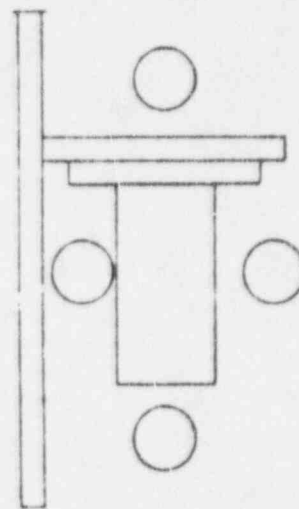
A



☐ Source in store  
☐ Calculated  
☐ Measured



TOP



Productive  
Silos (No Rad.  
at detector.)

Customer - White  
FES - Yellow

☐ Surface - mR/hr  
☐ 12 inches - mR/hr

Performed by Rich Kott

Apr 81

ATTACHMENT 4

# ***TN Technologies***

*A Thermo Instruments Company*

March 7, 1996

Mr. Steve Stepanik  
Weston  
One Weston Way  
West Chester, PA 19380

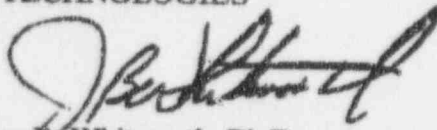
Dear Mr. Stepanik:

This letter is to certify that TN Technologies will take back the radioactive material contained in any of the devices manufactured by this company. It has been the policy of this company for the past 25 years to provide full circle support to our customers, which includes the transfer of radioactive material from our customers' licenses to our license once the customer has completed its use of the device(s). It is also TN's policy to accept other manufacturers sources for disposal where practical. These instances, however, are handled on a case-by-case basis and acceptance of these non-TN sources is at the discretion of TN Technologies, Inc.

TN provides a license-to-license transfer of radioactive material as specified in the NRC and Agreement State regulations, instead of a manifested waste shipment to a burial site. Our service is available for most sealed source devices regardless of origin. If the radioactive material can be re-used, we recycle it. The radioactive waste that is generated by TN is currently held in storage at our facility until the Texas low level waste site opens. When the site opens in 1997-1998, we will ship our waste material there to be permanently placed in below-ground disposal vaults. When TN Technologies accepts ownership of a source, we also assume all future liability for that radioactive material regardless of its final disposition.

If you have any questions or require additional information, please contact us.

Sincerely,  
TN TECHNOLOGIES



James B. Whitworth, Ph.D.  
Director, Technical Services

/ljp  
attachment

123288

JUL 3 1996

# DIVISION OF ACCOUNTING AND FINANCE

## REQUEST FOR REFUND TO EMPLOYEE/VENDOR

THE EMPLOYEE/VENDOR IDENTIFIED BELOW HAS OVERPAID THE NUCLEAR REGULATORY COMMISSION FOR GOODS AND/OR SERVICES PROVIDED AND IS DUE A REFUND

EMPLOYEE/VENDOR/PAYEE CODE: \_\_\_\_\_

NAME: EASTERN ENERGY MARKETING, INC.FOR: FIRST STATE POWER MANAGEMENT, INC.ADDRESS: ATTN: MARK L. EISENHOWER, EXECUTIVE VICE PRESIDENTADDRESS: 2900 EISENHOWER AVENUE, SUITE 300CITY: ALEXANDRIA STATE: VA ZIP: 22314TRANS CODE: PXTRANS TYPE: FE FUND: X5280 JOB CODE: \_\_\_\_\_ AMOUNT: \$240.00TRANS TYPE: IR FUND: R1435 JOB CODE: INTR AMOUNT: \_\_\_\_\_TRANS TYPE: IR FUND: R1099 JOB CODE: ADCH AMOUNT: \_\_\_\_\_TRANS TYPE: IR FUND: R1099 JOB CODE: FINE AMOUNT: \_\_\_\_\_TOTAL REFUND AMOUNT: \$240.00COMMENTS: LIC 07-14100-03 / CK 012991 / 3P AMO OVERPT

(Limit comments to 40 characters, including spaces)

PREPARED BY: Brynda Brown DATE: 6/25/96AUTHORIZED BY: Santha Liberty DATE: 7/3/96

ORIGINAL INV. NO: \_\_\_\_\_ DATE PAID: \_\_\_\_\_ AMOUNT: \_\_\_\_\_

REFUND ENTERED INTO COLLECT BY: \_\_\_\_\_

REFUND DETERMINED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

PLEASE ATTACH APPROPRIATE SUPPORTING DOCUMENTATION

June 16 I (96)  
APPL DTD 5/29/96  
3P AMO FEB 15 \$290  
(123288)

(FOR LFMS USE)  
INFORMATION FROM LTS  
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BETWEEN:

LICENSE FEE MANAGEMENT BRANCH, ARM  
AND  
REGIONAL LICENSING SECTIONS

PROGRAM CODE: 03120

STATUS CODE: 0

FEE CATEGORY: 3P

EXP. DATE: 20050430

FEE COMMENTS: -----

DECOM FIN ASSUR REQD: N

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LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED

APPLICANT/LICENSEE: FIRST STATE POWER MANAGEMENT, INC.

RECEIVED DATE: 960531

DOCKET NO.: 3020696

CONTROL NO.: 123288

LICENSE NO.: 07-14100-03

ACTION TYPE: AMENDMENT

2. FEE ATTACHED

AMOUNT: \$530.00

CHECK NO.: 012991

3. COMMENTS

SIGNED

DATE

M. C. Perkins  
6/14/96

B. LICENSE FEE MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED 1 ✓)

1. FEE CATEGORY AND AMOUNT: 3P \$290

2. CORRECT FEE PAID. APPLICATION MAY BE PROCESSED FOR:

AMENDMENT

RENEWAL

LICENSE

3. OTHER

Log	<u>June 16</u>	SIGNED	<u>[Signature]</u>
Remitter	<u>EASTERN ENERGY MARKETING, INC.</u>	DATE	<u>6/24/96</u>
Check No.	<u>012991</u>		
Amount	<u>\$530 Refunded 1240</u>		
Category	<u>3P</u>		
Fee Amt	<u>AMU</u>		
Check Rec'd	<u>[Signature]</u>		
Completed	<u>[Signature]</u>		

6/25/96  
Pa. Jersey (Seely) send check  
refund (\$240) to:  
Eastern Energy Marketing, Inc.  
ATTN: MARK L. EISENHOWER  
EXECUTIVE VICE PRESIDENT  
2900 EISENHOWER AVENUE, Suite 300  
Alexandria, VA 22314