

FORM NRC-313 I (6-78) 10 CFR 30	U.S. NUCLEAR REGULATORY COMMISSION	1. APPLICATION FOR: (Check and/or complete as appropriate)
APPLICATION FOR BYPRODUCT MATERIAL LICENSE INDUSTRIAL		a. NEW LICENSE
See attached instructions for details. Completed applications are filed in duplicate with the Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety, and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555 or applications may be filed in person at the Commission's office at 1717 H Street, NW, Washington, D. C. or 7915 Eastern Avenue, Silver Spring, Maryland.		b. AMENDMENT TO: LICENSE NUMBER 29010646-02/29-01686-01
		c. RENEWAL OF: LICENSE NUMBER

2. APPLICANT'S NAME (Institution, firm, person, etc.) Nuodex, Inc. TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION 287-5000 201 5825	3. NAME OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION James J. Pardini TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION 287-5000 201 5825
4. APPLICANT'S MAILING ADDRESS (Include Zip Code) 40 Nixon Lane Edison, New Jersey 08837	5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED (Include Zip Code) 40 Nixon Lane Edison, New Jersey 08837

(IF MORE SPACE IS NEEDED FOR ANY ITEM, USE ADDITIONAL PROPERLY KEYED PAGES.)

6. INDIVIDUAL(S) WHO WILL USE OR DIRECTLY SUPERVISE THE USE OF LICENSED MATERIAL
(See Items 16 and 17 for required training and experience of each individual named below)

FULL NAME	TITLE
a. James J. Pardini	Manager of Engineering
b. Alfred E. Smith	Plant Engineer
c.	

7. RADIATION PROTECTION OFFICER
James J. Pardini

Attach a resume of person's training and experience as outlined in Items 16 and 17 and describe his responsibilities under Item 15.

8. LICENSED MATERIAL

L I N E NO.	ELEMENT AND MASS NUMBER A	CHEMICAL AND/OR PHYSICAL FORM B	NAME OF MANUFACTURER AND MODEL NUMBER (If Sealed Source) C	MAXIMUM NUMBER OF MILLCURIES AND/OR SEALED SOURCES AND MAXIMUM ACTI- VITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME D
(1)	Strontium 90	Sealed Sources	Tracerlab Model S-1A	30 millicuries (2 sources of 15 millicuries)
(2)	Krypton 85	Sealed Sources	Radiochemical Centre Model K A C 4	4 sources of 55 millicuries each
(3)	Cesium 137	Sealed Sources	Tracerlab Model S-3	40 millicuries
(4)	Krypton 85	Sealed Sources	LFE Model S-70A	1200 millicuries
DESCRIBE USE OF LICENSED MATERIAL E				
(1)	Used in Tracerlab S-1A Beta Gauge to measure thickness of PVC sheet.			
(2)	Used in Baldwin Industrial Controls Type B Series 1 gauge to measure thickness of PVC.			
(3)	Used in Tracerlab BG-5 Beta Gauge to measure thickness of PVC sheet.			
(4)	Used in Tracerlab SCL-77A Beta Gauge to measure thickness of PVC sheet.			

FORM NRC 313 I (6-78)

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9. STORAGE OF SEALED SOURCES			
LINE NO.	CONTAINER AND/OR DEVICE IN WHICH EACH SEALED SOURCE WILL BE STORED OR USED. A.	NAME OF MANUFACTURER B.	MODEL NUMBER C.
(1)	Sealed Sources in Beta Gauge	Tracerlab	S-1A
(2)	Sealed Sources in Beta Gauge	Baldwin Industrial Controls Radio Chemical Centre	K A C 4
(3)	Sealed Sources in Beta Gauge	Tracerlab	S-3
(4)	Sealed Sources in Beta Gauge	LFE	S-70A

10. RADIATION DETECTION INSTRUMENTS						
LINE NO.	TYPE OF INSTRUMENT A	MANUFACTURER'S NAME B	MODEL NUMBER C	NUMBER AVAILABLE D	RADIATION DETECTED (alpha, beta, gamma, neutron) E	SENSITIVITY RANGE (milliroentgens/hour or counts/minute) F
(1)	N/A	Wipe tests performed semi-annually by LFE Corporation				
(2)	N/A	and/or John Potter Associates.				
(3)	N/A					
(4)	N/A					

11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10	
☐ a. CALIBRATED BY SERVICE COMPANY NAME, ADDRESS, AND FREQUENCY N/A, wipe tests by LFE or John Potter Associates	☐ b. CALIBRATED BY APPLICANT Attach a separate sheet describing method, frequency and standards used for calibrating instruments.

12. PERSONNEL MONITORING DEVICES		
TYPE (Check and/or complete as appropriate.) A	SUPPLIER (Service Company) B	EXCHANGE FREQUENCY C
☐ (1) FILM BADGE N/A ☐ (2) THERMOLUMINESCENCE DOSIMETER (TLD) ☐ (3) OTHER (Specify): _____ _____ _____		☐ MONTHLY ☐ QUARTERLY ☐ OTHER (Specify): _____ _____ _____

13. FACILITIES AND EQUIPMENT (Check where appropriate and attach annotated sketch(es) and description(s).)	
☐ a. LABORATORY FACILITIES, PLANT FACILITIES, FUME HOODS (Include filtration, if any), ETC. ☐ b. STORAGE FACILITIES, CONTAINERS, SPECIAL SHIELDING (fixed and/or temporary), ETC. ☐ c. REMOTE HANDLING TOOLS OR EQUIPMENT, ETC. ☐ d. RESPIRATORY PROTECTIVE EQUIPMENT, ETC.	SEE ATTACHMENT

14. WASTE DISPOSAL	
a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED -When use is discontinued, sealed sources will be returned to either equipment manufacturer, source manufacturer or other	
b. IF COMMERCIAL WASTE DISPOSAL SERVICE IS NOT EMPLOYED, SUBMIT A DETAILED DESCRIPTION OF METHODS WHICH WILL BE USED FOR DISPOSING OF RADIOACTIVE WASTES AND ESTIMATES OF THE TYPE AND AMOUNT OF ACTIVITY INVOLVED. IF THE APPLICATION IS FOR SEALED SOURCES AND DEVICES AND THEY WILL BE RETURNED TO THE MANUFACTURER, SO STATE.	
a. cont'd.: individual properly licensed to handle such material.	

INFORMATION REQUIRED FOR ITEMS 15, 16 AND 17

Describe in detail the information required for Items 15, 16 and 17. Begin each item on a separate page and key to the application as follows:

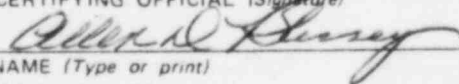
15. RADIATION PROTECTION PROGRAM. Describe the radiation protection program as appropriate for the material to be used including the duties and responsibilities of the Radiation Protection Officer, control measures, bioassay procedures (if needed), day-to-day general safety instruction to be followed, etc. If the application is for sealed source's also submit leak testing procedures, or if leak testing will be performed using a leak test kit, specify manufacturer and model number of the leak test kit.
16. FORMAL TRAINING IN RADIATION SAFETY. Attach a resume for each individual named in Items 6 and 7. Describe individual's formal training in the following areas where applicable. Include the name of person or institution providing the training, duration of training, when training was received, etc.
 - a. Principles and practices of radiation protection.
 - b. Radioactivity measurement standardization and monitoring techniques and instruments.
 - c. Mathematics and calculations basic to the use and measurement of radioactivity.
 - d. Biological effects of radiation.
17. EXPERIENCE. Attach a resume for each individual named in Items 6 and 7. Describe individual's work experience with radiation, including where experience was obtained. Work experience or on-the-job training should be commensurate with the proposed use. Include list of radioisotopes and maximum activity of each used.

18. CERTIFICATE

(This item must be completed by applicant)

The applicant and any official executing this certificate on behalf of the applicant named in Item 2, certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, Part 30, and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.

WARNING.—18 U.S.C., Section 1001; Act of June 25, 1948; 62 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.

a. LICENSE FEE REQUIRED (See Section 170.31, 10 CFR 170)	b. CERTIFYING OFFICIAL (Signature) 
\$40.00	c. NAME (Type or print) Allen D. Blossey
(1) LICENSE FEE CATEGORY: 3-E	d. TITLE Plant Manager
(2) LICENSE FEE ENCLOSED: \$	e. DATE June 24, 1983

Item 13. Facilities and Equipment

All sealed sources are used in equipment for monitoring the thickness of PVC film and sheet. Sealed sources are mounted on frames through which the PVC web passes. Such frames are mounted in relatively inaccessible locations and the opening through which the beam passes is less than one inch in all cases, making it difficult for an individual to be exposed to the radiation beam. A sketch of a typical installation is attached.

Item 15. Radiation Protection Program

Radioactive material is in sealed sources which are installed in the gauging head on our calender lines. Shutters on source open only when gauge is measuring thickness of our rigid PVC film or sheet, and close automatically when gauge is turned off. All radioactive sources are plainly marked "DANGER RADIOACTIVE MATERIAL." All servicing, leak testing, radiation surveys or other work associated with these sources is performed by John Potter Associates, 53 Tabago Avenue, Toms River, New Jersey 08753 (201) 929-2496, (NRC License 29-14814-01).

Access to these sources is controlled by signs, by their relatively inaccessible location, and by automatic shuttering when the systems are turned off.

The radiation protection program is administered by the Radiation Protection Officer. His duties and responsibilities are:

1. Insure that operating personnel are aware of the dangers involved in use of byproduct material.
2. Contact the proper outside individual whenever servicing, testing or any related work is needed.
3. Maintain the plant in compliance with all NRC regulations which apply.

Item 16. Formal Training in Radiation Safety

Item 17. Experience

James J. Pardini
M.S. in Chemical Engineering 1970
Manhattan College
P.E. State of N.J. License No. 22389

Received training from Measurex Corp. Has been involved with beta gauges at this plant since 1980.

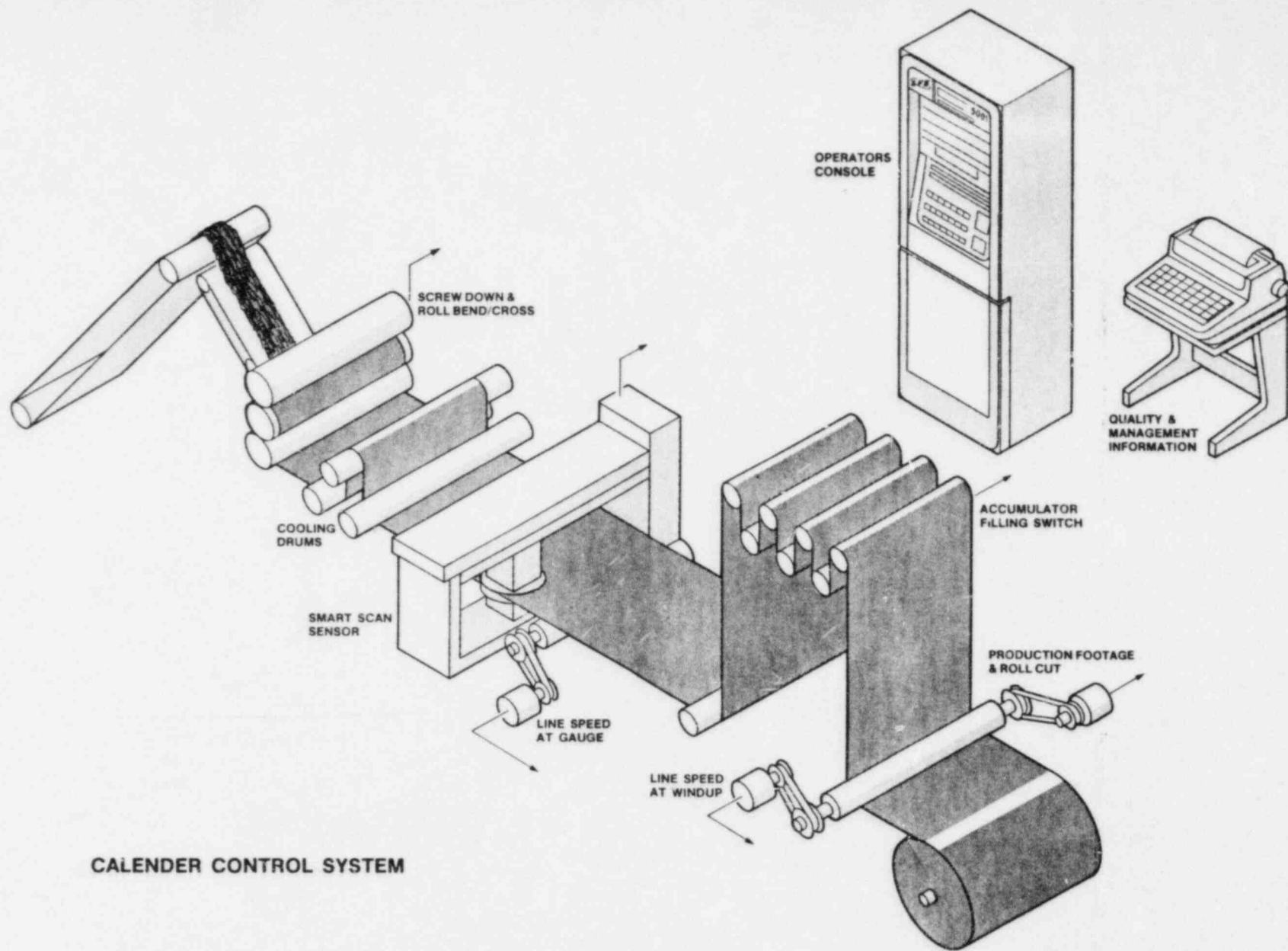
Radioisotopes used at the Nixon Plant of Nuodex, Inc. are:

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Item 17. Experience (cont'd.)

Strontium 90	30 millicuries
Krypton 85	55 millicuries
Cesium 137	40 millicuries
Krypton 85	1200 millicuries



CALENDER CONTROL SYSTEM