NRC F((12 10 C	orm 313 I 2-81) FR 30	1. APPLICATION FOR: (Check and/or complete as appropriate)			
	APPLICATION FC	R BYPRODUCT MATERIA	AL LICENSE	a. NEW LICENSE	
See atta	ached instructions for detail	s.		b. AMENDMENT TO:	
Complete Office of Washingt 1717 H	ed applications are filed in f Nuclear Material Safety, ton, DC 20555 or applicat Street, NW, Washington, L	n duplicate with the Division of Fu and Safeguards, U.S. Nuclear Regu- tions may be filed in person at the D. C. or 7915 Eastern Avenue, Silv	uel Cycle and Material Safety, Jatory Commission, Commission's office at er Spring, Maryland.	X 06-17718-01	
2. APPLI	ICANT'S NAME (Institution	n, firm, person, etc.)	3. NAME AND TITLE OF PER REGARDING THIS APPLIC	SON TO BE CONTACTED ATION J. R. Fordham, Ph.I	
Nova	Laboratories, 1	lnc.	Manager, Regulatory . Patrs Greg Bidow		
TELEP) (203	HONE NUMBER: AREA C 3) 762-2401 Ext.	DDE - NUMBER EXTENSION	(203) 762-2401 Ext. 163 /21		
4. APPLI (Addre should	CANT'S MAILING ADDRI ass to which NRC correspon (be sent.)	ESS (Include Zin Code) dence, notices, bulletins, etc.,	5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USE (Include Zip Code)		
59 D Wilt	anbury Road	06897	Same		
6. INDI (See)	(IF MORE SPACE VIDUAL(S) WHO WILL tems 16 and 17 for required	IS NEEDED FOR ANY ITEM, USE OR DIRECTLY SUPERV d training and experience of each indi	USE ADDITIONAL PROPER ISE THE USE OF LICENSED	LY KEYED PAGES.) DMATERIAL	
	FULL	NAME		TITLE	
a Carol M. Beck, Ph.D.			Staff Researcher		
b Karen L. Lourd, B.S. R. Malley			Assistant Chemist Mgr., Nous DisLebs		
. Ann	M. Palmer, M.S.	R. Starnos	Supervisor, RIA Laboratory Grow, Lander		
7. RADIATION PROTECTION OFFICER			Attach a resume of person's training and experience as outlined in Items 16 and 17 and describe his responsibilities under Item 15.		
Kobe	rt L. Starnes, P	the bidow	Group Leader Ind	. Hyg.	
1	ELEMENT	CHEMICAL	NAME OF MANUFACTURER	MAXIMUM NUMBER OF	
I N E	AND MASS NUMBER	AND/OR PHYSICAL FORM	AND MODEL NUMBER (If Sealed Source)	MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTI- VITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME	
NO.	A	В	С	D	
(1)	н ³	Any form-principal labelled biologica	у 1	50 millicuries	
(2)	c ¹⁴	materials "		20 millicuries	
(3)	125			1 millicurie	
(4)	III	Prepachaged Kits		le millieuries total.	
	DESCRIBE USE OF LICENSED MATERIAL 45ml/				
(1) Re	search & Develop	ment: Immunoassay -	proteins/enzymes;met	abolic tracer -	
2)	tt	microbial			
3) 4	Dist. to Sphie.		Fel into	Next Page 12000	
4)		8903140020 88020	2		
		0001 1 1030			

		9	. STORAGE OF	SEALED SOURC	ES		
L-ZWZ	CONTAINER AND/OR DEVICE IN WHICH EACH SEAR SOURCE WILL BE STORED OR USED. A.			NAME OF MANUFACTURER B.		MODEL NUMBER	
(1)	N.A.						
(2)	An other states and states		the second second second second				
(3)							
(4)							
		10 04					
	TYPE	MANUFACTURER'S	MODEL	NUMBER	PADIATION	CENETIVITY	
LINEN	OF	NAME	NUMBER	AVAILABLE	DETECTED (alpha, beta, gamma, neutron)	RANGI: (milliroentge: s/hour or counts/rm. ute)	
	A	В	С	D	E	F	
(1)	Liquid scintil tion counter	a- Searle Analytic, Inc.	Delta-300	1	beta & gamma	Up to 800,000 CPM	
(2)	Gamma Counter	LKB Instru- ments, Inc.	1270	1	gamma	Up to 900,000 CPM	
(3)							
(4)							
		11. CALIBRA	ATION OF INSTR	UMENTS LISTE	D IN ITEM 10		
Xa.	CALIBRATED BY SE	RVICE COMPANY		E. CALIBRATE	D BY APPLICANT -8	all instruments	
LH Ir Ro	NAME, ADDRESS, AN CB 1270 - Calib Instruments, Incockville, Md. 2	ND FREQUENCY prated annually 2., 12221 Parkla 20852	by LKB awn Dr.,	Attach a separat used for calibrat Commercial for lecay;	te sheet describing meth ting instruments. ly available s instrument ca	od, frequency and standards standards corrected ulibrated routinely	
	TYPE	12. PEF	SONNEL MONT	I ORING DEVICE	S		
(Check and/or complete as appropriate.)			(Service Company) B			EXCHANGE FREQUENCY C	
K) (1	FILM BADGE (for using I ¹²⁵)	personnel	R. S. Landauer			MONTHLY	
(2) THERMOLUMINESCENCE DOSIMETER (TLD)						D QUARTERLY	
図(3	OTHER (Specify): No	one necessary				OTHER (Specify):	
f_c	r personnel us	ing microcurie					
am	ounts of C &	: Н					
	13. FACILITIES A	ND EQUIPMENT (Ch	eck were appropr	iate and attach an	notated sketch(es) a	nd description(s).	
K a	LAEDRATORY FAC	ILITIES, PLANT FACILI	TIES, FUME HOOD	DS (Include filtratio	in, if anyl, ETC.		
X D	BEMOTE HANDLING	ES, CONTAINERS, SPEC	TAL SHIELDING (lixed and/or tempor	ary), ETC.		
D d	RESPIRATORY PRO	TECTIVE FOLIPMENT	ETC				
			14. WASTE	DISPOSAL	and the second		
a. N.A	ME OF COMMERCIAL	WASTE DISPOSAL SEF	VICE EMPLOYED	DISTOSAL			
R	adiac, Inc. ,	Brooklyn, N.Y.					
b. IF BE TH	COMMERCIAL WASTE USED FOR DISPOSIN E APPLICATION IS FO	DISPOSAL SERVICE 12 G OF RADIOACTIVE W OR SEALED SOURCES A	NOT EMPLOYED, ASTES AND ESTIM	SUBMIT A DETAI ATES OF THE TYP THEY WILL BE R	LED DESCRIPTION OF PE AND AMOUNT OF ETURNED TO THE M	F METHODS WHICH WILL ACTIVITY INVOLVED. IF ANUFACTURER, SO STATE.	
IRC I	ORM 313 1 (12 81)						

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.

ApplicantOO4.8.19. Chack NoOO4.8.19. Amount/Fee Concerts and Sol (3K) Type of FeeDerensation Date Check Rood	CERTIFICATE t be completed by applicantly Orig. To Action Compl. 11/8/82
The applicant and any official executing th certify that this application is prepared in Part 30, and that all information contained and correct to the best of our knowledge of WARNING18 U.S.C., Section (001; Act of June 25, 1948; representation to any department or agency of the United Sta	is certificate on behalf of the applicant named in Item 2, conformity with Title 10, Code of Federal Regulations, herein, including any supplements attached hereto, is true and belief. 62 Stat. 749; makes it a criminal offense to make a willfaily false statement or tes as to any matter within its jurisdiction.
a. LICENSE FEE REQUIRED (See Section 170,31, 10 CFR 170) \$150.00	b. CERTIFYING OFFICIAL (Signature) Augmond Polymonite Ph.S. 20 CNAME (Type or print) Raymond P. Lanzilotta Ph.D.
(1) LICENSE FEE CATEGORY: 3-K Renewal	d. TITLE Vice President, Research & Development
(2) LICENSE FEE ENCLOSED: \$ 150.00	e. DATE October 28, 1982
NRC FORM 313 I (12-81)	GPO 886-426

Part 13. Facilities & Equipment

The research laboratory facility consists of 15,000 sq. ft. It is equipped with modular two-man bays. Common work and equipment areas include 120 running feet of centrally located and completely serviced benches, 200 sq. ft. reagents preparation area, 12 linear ft. of high vent velocity enclosed hoods, separate flammable solvents area, 400 sq. ft. cold room and separate enclosed rooms for specialized work such as microbiology, light sensitive materials, etc.

The work area to be designated for handling of radioisotopes will include a 4 linear ft. high vent velocity enclosed stainless steel hood, 8 linear ft. completely serviced bench area, and a 12 x 18 x 24" sink. Freezer and refrigerator space will be compartmentalized via scaled containers devoted solely to radioisotope sample storage. A segregated area including bench space is to be reserved in the cold room for radioisotope sample storage and low temperature work.

The entire laboratory area is protected by a Class AAA ceiling mounted fire extinguisher system. All laboratory functions and facilities are in compliance with OSHA regulations and are inspected annually by an outside consultant.

Part 14. Waste Disposal

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A licensed commercial vendor is to be used for disposal of solid wastes. Liquid wastes will be diluted for sewer disposal in compliance with 10 CFR part 20.303. No use of radioisotopically labeled volatile materials such as solvents is contemplated.

Part 15. Radiation Protection Program

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- 1. All protocols involving radioactive material will be reviewed and approved by the Radiation Safety Officer, (RSO).
- 2. All purchase orders for radioisotopes will be approved by the RSO.
- 3. Radioactive shipments will be monitored upon receipt to verify contents and to determine leaking or damaged shipments.
- 4. All users to handle radioactive samples will attend a seminar in which the training material required in 10CFR Part 19 will be presented.
- 5. Radioactive waste must be stored only in the designated area. Radioactive material may only be used in the designated areas.
- 6. Inventory records including a disposal log will be maintained.
- Monitoring of experiments will be accomplished by smear techniques and the liquid scintillation counter. The consultant will perform quarterly surveys of work areas and reports will be maintained on file by the RSO.
- 8. In case of a spill or emergency involving radioactive material contact the RSO for advice immediately.
- 9. The Laboratory Safety Rules will include:
 - a. Exposure to radioactive material shall be kept to a minimum consistent with the protocol.
 - Contamination control techniques shall be practiced by all using radioisotopes.
 - c. No eating, drinking or smoking is permitted in areas where radioactive material is used or stored.
 - d. Mouth pipetting of radioactive material is not permitted.
 - e. Gloves and lab coats shall be worn when using radioactive materials.
 - f. Iodine waste shall be stored only in closed containers.
 - g. Reterence: 10CFR Part 20.

16. & 17. Formal Training in Radiation Safety and Experience

1. Robert L. Starnes

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*Ph.D. (Biochemistry) - University of Pennsylvania.

*Formal course in "Radiochemistry", Worcester Polytechnic Inst. (1972) - included principles and practices of radiation protection; radioactivity measurement, standardization and monitoring techniques and instruments; mathematics and calibrations basic to the use and measurement of radioactivity; biological effects of radiation.

*Experience --

H'; 1	year;	20	20 microcuries;	Snythesis;			
	U.	. Penna			Equilibrium	binding	studies

2. Carol M. Beck

*Ph.D. (Biochemistry) - University of North Carolina

*Experience

- H³; 5 years; 1 millicurie; Invitro translation assay UNC
- C¹⁴; 5 years; 1 millicurie; Invitro translation assay UNC
- s³⁵; 5 years; 1 millicurie; Invitro translation assay UNC

3. Karen L. Lourd

*B.S. (Biology) - Cornell University

*Experience

- H³; ¹/₂ year ; 1 millicurie; Membrane transport Yale Univ.
- C¹⁴; ¹/₂ year ; ¹/₂ millicurie; Membrane transport Yale Univ.

Ann M. Palmer

4.

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1. 1.

*M.A. (Biochemistry and Bacteriology) - Brown University
*Experience
H³; 4 years; 10 microcuries; Radio immuno assay
C¹⁴; 2 years; 1 millicurie; Tissue culture
I¹²⁵; 7 years; 25 microcurie; Radio immuno assay;
Immuno electrophoresis
C⁵⁷; 4 years; 1 microcurie; Radio immuno assay

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APPLICATION FOR BYPRODUCT MATERIAL LICENSE

NRC FORR 3131, 10CFR30,

- Supplemental Sheet, Part 13 Facilities & Equipment
- Supplemental Sheet, Part 14 Waste Disposal
- Supplemental Sheet, Part 15 Radiation Protection Program
- Supplemental Sheets, Parts 16 & 17 Formal Training in Radiation Safety and Experience

Check for license



(FOR LEMS USE) INFORMATION FROM LMS : BETWEEN: PROGRAM CODE: 03620 LICENSE FEE MANAGEMENT BRANCH, ARM * STATUS CODE: 2 AND : : FEE CATEGORY: 38 REGIONAL LICENSING SECTIONS : EXP. DATE: 19871231 FEE COMMENTS: EFF. 2/5/86 : LICENSE FEE TRANSMITTAL REGION 4 -1. APPLICATION ATTACHED APPLICANT/LICENSEE: NOVO LABS., INC. RECEIVED DATE: 871112 DOCKET NO: 3013216 108043 CONTROL NO .: LICENSE NO.: 06-17718-01 ACTION TYPE: RENEWAL FRE ATTACHED 2. AMOUNT: CHECK NO.: 026156 SIGNED Deter 3. COMMENTS B. LICENSE FEE MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED / /) 8460 PEE CATEGORY AND AMOUNT: 1 . CORRECT FEE PAID. APPLICATION MAY BE PROCESSED FOR: 2 . AMENDMENT RENEWAL LICENSE OTHER 3 . SIGNED DATE