



RECEIVED
REGION 1

'05 FEB 14 ^{February 10, 2005} PT:00

Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

RE: Application For Material License

LL 31011
03036859
03121

To Whom It May Concern:

(45-31011-01)

Submitted herewith are the completed NRC Form 313 (Application for Material License) and a check for \$1,200 for the application fee. This application is for a new license; therefore, supporting information for Form 313 has been provided using Appendix B. Two copies of the application are provided (one with an original signature and one copy).

Considering that we are in the beginning of the typical construction period in central Virginia, we request expeditious handling and processing of the application. Untimely delays will potentially result in a loss of income.

Balzer and Associates, Inc. appreciate your assistance in this matter. Please call if you have any questions or if we can be of any further assistance.

Respectfully,
BALZER AND ASSOCIATES, INC.

David E. Stinnette, P.E.
Geotechnical Services Manager

Enclosure(s): NRC Form 313 (with Appendix B)
B&A Check No. 24130 / 2-8-05 (First Citizens Bank)

Estimated burden per response to comply with this mandatory collection request: 7 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. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

APPLICATION FOR MATERIAL LICENSE

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:

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, MISSISSIPPI, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

LICENSING ASSISTANCE TEAM
DIVISION OF NUCLEAR MATERIALS SAFETY
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

IF YOU ARE LOCATED IN:

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

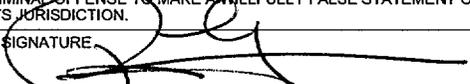
MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

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 BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-4005

LL 31011
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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.

<p>1. THIS IS AN APPLICATION FOR (Check appropriate item)</p> <p><input checked="" type="checkbox"/> A. NEW LICENSE</p> <p><input type="checkbox"/> B. AMENDMENT TO LICENSE NUMBER _____</p> <p><input type="checkbox"/> C. RENEWAL OF LICENSE NUMBER _____</p>		<p>2. NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP code)</p> <p>Balzer and Associates, Inc. (Corporate Office) 1208 Corporate Circle Roanoke, VA 24018 (Phone) 540-772-9580 / (Fax) 540-772-8050</p>	
<p>3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED</p> <p>Balzer and Associates, Inc. (Branch Office) 880 Technology Park Drive, Suite 200 / Glen Allen, VA 23059 (Phone) 804-553-0132 / (Fax) 804-553-0133 Note: Address is storage facility for "Portable Gauge". Gauge will NOT be stored at a dispatch site or temporary job site.</p>		<p>4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION</p> <p>David E. Stinnette</p> <p>TELEPHONE NUMBER</p> <p>(804) 553-0132</p>	
<p>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.</p>			
<p>5. RADIOACTIVE MATERIAL</p> <p>a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.</p>		<p>6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.</p>	
<p>7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.</p>		<p>8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.</p>	
<p>9. FACILITIES AND EQUIPMENT.</p>		<p>10. RADIATION SAFETY PROGRAM.</p>	
<p>11. WASTE MANAGEMENT.</p>		<p>12. LICENSE FEES (See 10 CFR 170 and Section 170.31)</p> <p>FEE CATEGORY 3P AMOUNT ENCLOSED \$ 1,200.00</p>	
<p>13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.</p> <p>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.</p> <p>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.</p>			
<p>CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE</p> <p>Ron R. Green / Senior Vice President</p>		<p>SIGNATURE</p> 	<p>DATE</p> <p>02/01/2005</p>

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			\$		
APPROVED BY				DATE	
					136454

ITEMS 5 AND 6: MATERIALS TO BE POSSESSED AND PROPOSED USES

Yes	No	Radioisotope	Manufacturer or Distributor Model No.	Quantity	Use As Listed on SSD Certificate	Specify Other Uses Not Listed on SSD Certificate
X		Cesium-137	<p>Sealed source manufacturer or distributor and model number: CPN MC-1DR-P-122</p> <p>Device manufacturer or distributor and model number: CPN MC-1DR-P-122</p> <p>CPN International, Inc. 2830 Howe Road Martinez, CA 94553 (925) 228-9770</p>	Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate	<p>Yes <input checked="" type="checkbox"/></p> <p>Specific description of the gauge use:</p> <p>To measure physical properties of materials.</p>	<p><input type="checkbox"/> Not applicable</p> <p><input type="checkbox"/> Uses are:</p> <p>(Submit safety analysis supporting safe use)</p>
X		Americium-241	<p>Sealed source manufacturer or distributor and model number: CPN MC-1DR-P-122</p> <p>Device manufacturer or distributor and model number: CPN MC-1DR-P-122</p> <p>CPN International, Inc. 2830 Howe Road Martinez, CA 94553 (925) 228-9770</p>	Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate	<p>Yes <input checked="" type="checkbox"/></p> <p>Specific description of the gauge use:</p> <p>To measure physical properties of materials.</p>	<p><input type="checkbox"/> Not applicable</p> <p><input type="checkbox"/> Uses are:</p> <p>(Submit safety analysis supporting safe use)</p>

APPENDIX B

Yes	No	Radioisotope	Manufacturer or Distributor Model No.	Quantity	Use As Listed on SSD Certificate	Specify Other Uses Not Listed on SSD Certificate
		Californium-252	Sealed source manufacturer or distributor and model number: _____ Device manufacturer or distributor and model number: _____	Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate	Yes <input type="checkbox"/> Specific description of the gauge use: _____ _____ _____ _____ _____	<input type="checkbox"/> Not applicable _____ <input type="checkbox"/> Uses are: _____ (Submit safety analysis supporting safe use)
		Other Isotope (Specify):	Sealed source manufacturer or distributor and model number: _____ Device manufacturer or distributor and model number: _____	Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate	Yes <input type="checkbox"/> Specific description of the gauge use: _____ _____	<input type="checkbox"/> Not applicable _____ <input type="checkbox"/> Uses are: _____ (Submit safety analysis supporting safe use)
<i>Financial Assurance Required and Evidence of Financial Assurance Provided</i>						

ITEMS 7 THROUGH 11: TRAINING AND EXPERIENCE, FACILITIES AND EQUIPMENT, RADIATION SAFETY PROGRAM, AND WASTE DISPOSAL

Item No. And Title	Suggested Response	Yes	Alternative Procedures Attached
7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE – RADIATION SAFETY OFFICER Name: <u>David E. Stinnette</u>	Before obtaining licensed materials, the proposed RSO will have successfully completed one of the training courses described in Criteria in the section entitled "Individual(s) Responsible for Radiation Safety Program and Their Training and Experience – Radiation Safety Officer" in NUREG-1556, Vol. 1, Rev. 1, dated November 2001.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS	Before using licensed materials, authorized users will have successfully completed one of the training course described in Criteria in the section entitled "Training for Individuals Working In or Frequenting Restricted Areas" in NUREG-1556, Vol. 1, Rev 1, dated November 2001.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. FACILITIES AND EQUIPMENT	No information needs to be submitted in response to this item; key issues are addressed under "Radiation Safety Program – Public Dose" and "Radiation Safety Program – Operating and Emergency Procedures."	Separate Item 9 Response Need Not Be Submitted With Application	
10. RADIATION SAFETY PROGRAM – AUDIT PROGRAM	The applicant is <i>not</i> required to, and should not, submit its audit program to NRC for review during the licensing phase.	Need Not Be Submitted With Application	
10. RADIATION SAFETY PROGRAM – TERMINATION OF ACTIVITIES	The applicant is <i>not</i> required to submit a response to the termination of activities section during the initial application. However, when the license expires when the licensee ceases operation, NRC Form 314 must be submitted.	Need Not Be Submitted With Application	
10. RADIATION SAFETY PROGRAM – SURVEY INSTRUMENTS	We will either possess and use, or have access to and use, a radiation survey meter that meets the Criteria in the section entitled "Radiation Safety Program – Instruments" in NUREG-1556, Vol. 1, Rev. 1, dated November 2001.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

North East Technical Services, Inc.

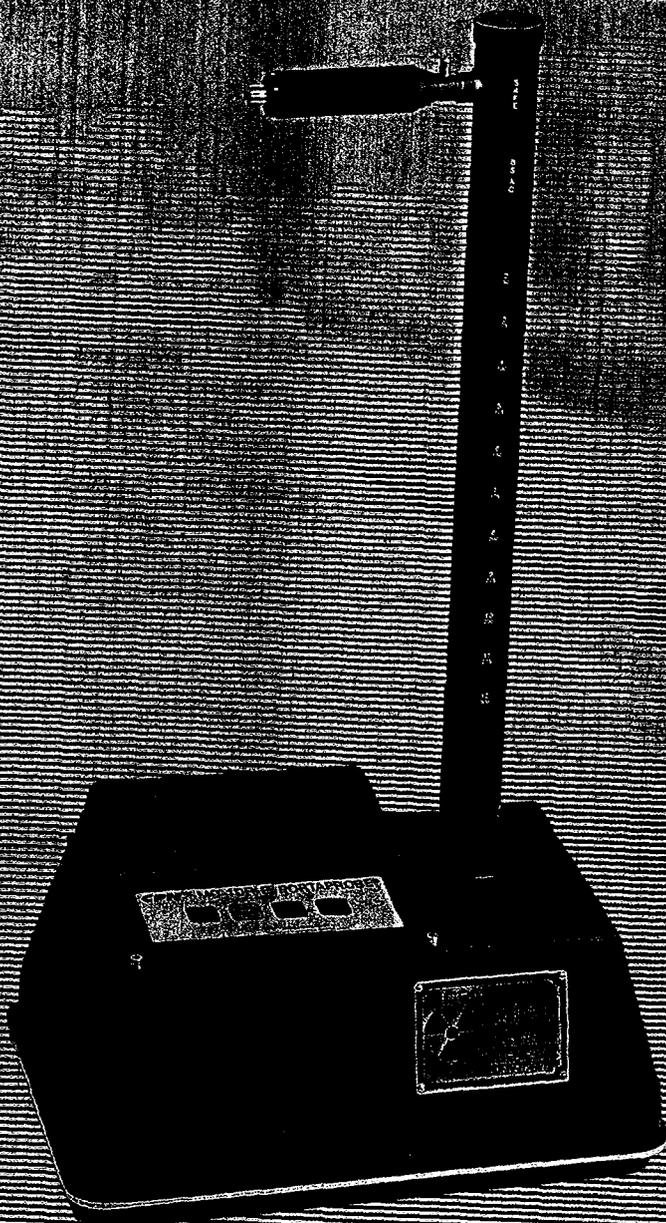
NETS Innovative Products for the Construction Industry

Douglas C. Sims

1280 Landing Lane, Suite 3
Westminster, MD 21157
410.751.5090 Voice 410.751.5091 Fax
866.868.2382 Toll Free netsinc@verizon.net

CPN

MC-1DR-P Portaprobe®



Direct Readout
Moisture/Density Gauge

- ▶ Portable, Fast and Accurate.
- ▶ For use on Soil, Asphalt and Concrete.

CPN® MC-1DR-P Portaprobe®

The MC-1DR-P Portaprobe® is the most accurate, rugged, and easy to use density/moisture testing instrument available.

Features

- Automatic depth sensing.
- Dual-depth backscatter positions.
- Field service and component exchange with a screwdriver.
- Direct readout of total density, total moisture, dry density and % water after one-minute test.
- Easy to learn operation - only four keys - START, STEP, STANDARD, and MAXIMUM.
- Operator entry of laboratory maximum values - calculation and display of relative or % compaction.
- Operator entry of density and moisture biases.
- Automatic statistical check of standard count assures proper operation.
- No battery charging - alkaline cells last more than 1 year.

Applications

EARTH CONSTRUCTION

For compaction control of highways, airports, railway embankments, trench backfills and other earthworks such as dams and foundations. This precision instrument complies with ASTM Standard Test Methods D2922 & D3017, *Density and Moisture Content of Soil and Soil-Aggregates in Place by Nuclear Methods*.

ASPHALT PAVING

For rapid, accurate density and percent air void tests on asphalt pavements, such as highways, airports and parking lots. The MC-1DR-P Portaprobe® complies with ASTM Standard Test Method D2950, *Density of Bituminous Concrete in Place by Nuclear Methods*.

Simplicity of Operation

This state-of-the-art instrument offers a simple to operate but superior alternative to other methods of in-place density and moisture testing. The MC-1DR-P operator needs minimal instruction. The standard count each day includes a statistical check to insure proper gauge performance. Displayed test results are recorded on a field inspection report.

MC-1DR-P Portaprobe® operation is nearly foolproof. The operator begins the test by pressing START . . . in one minute, the 32 character display provides a direct readout of the following data in English or metric units:

- Wet Density
- Moisture Content
- Dry Density
- Percent Moisture

NEW!

Easy keyboard entry of density and moisture biases





Field Applications: (1) asphalt pavement testing on a roadway; (2) foundation testing at an industrial site; (3) asphalt pavement testing at an airport; (4) transmission testing of earth embankments.



MC-1DR-P Keyboard/Display

The operator may enter target maximum values determined by standard laboratory tests (ASTM or comparable) before or after a test is taken. Options are: Proctor value, Marshall value, or Theoretical Maximum Density. The MC-1DR-P will calculate and display the following relative or % compactions:

- % Proctor
- % Marshall
- % Air Voids

Test results are displayed in English or Spanish language.

To measure density of pavements, the Portaprobe[®] is simply positioned on a surface that is relatively smooth and free of voids. Accurate density measurements are made to depths of 2.0 or 3.0" (50 or 75 mm), using the dual backscatter positions.

To measure compaction of soils, a test hole is prepared in the soil with a drill pin or slide hammer. The source rod is extended into the hole and density measurements are taken in 1 or 2" (25 or 50 mm) increments to a depth of 8 or 12" (200 to 300 mm).

Moisture measurements are made from the surface. The depth of measurement averages 6 in (150 mm). The moisture test is taken simultaneously with density.

Battery Pack

The welded battery pack of six D size cells normally lasts for over a year of operation (100 readings per day, 5 days per week, and 50 weeks per year). The percent remaining

battery capacity is displayed at the start of each test. When depleted, the battery pack is replaced. As a back-up, the gauge may be operated from a 9V transistor radio battery for 500 readings.

Rugged and Reliable

There are fewer connections for greater reliability. Integrated circuits are soldered; even the battery pack is a welded assembly. All electronic circuits are sealed in dust-resistant compartments. All circuit boards are coated to reduce the effects of severe environmental conditions. The MC-1DR-P, constructed of cast aluminum, is lightweight and extremely resistant to shock.

Precision

Instrument precision, for a one minute test at 125 pcf (2.0 gcc) wet density and 10 pcf (0.16 gcc) moisture.

Backscatter test:	±1.00 pcf (0.016 gcc)
Transmission test:	±0.25 pcf (0.004 gcc)
	8.0 in (200 mm) depth.
Moisture test:	±0.25 pcf (0.004 gcc)

Specifications

Ordering Information

No. 114082 CPN MC-1DR-P-82 Portaprobe Density Moisture Surface Gauge, 8" depth of measurement in 2" increments, for the on-site measurement of density and moisture content of construction materials including soils, aggregates, concrete and asphalt pavements. Direct reading of wet density, moisture, dry density, and percent moisture upon completion of a one minute test. Complete with molded, plastic shipping and storage case, lock and two keys, standard block, guideplate/scrapper, drill pin, lubricant, sign kit, wipe test kit and certificate, and battery pack of welded alkaline cells. Operating manual (also available in Spanish).

No. 114081 CPN MC-1DR-P-81 Portaprobe, same as above except 6" depth of measurement in 1" increments.

No. 114122 CPN MC-1DR-P-122 Portaprobe, same as above except 12" depth of measure in 2" increments.

No. 114121 CPN MC-1DR-P-121 Portaprobe, same as above except 12" depth of measurement in 1" increments.

Optional backlight display available upon request. Dual English and metric depth markings and display units. English or Spanish language display.

No. 101050 Campbell Hammer, impact type.

No. 700496 Survey Meter, Monitor 4, All purpose Gamma Meter.

Performance

Function

In-place density/moisture measurements for compaction control of construction materials.

Range

Density..... 70 to 170 pcf (1.120 to 2.73 gcc)
Moisture..... 0 to 40 pcf (0 to 0.64 gcc).

Precision:

One Minute Test:
Backscatter ±1.00 pcf (±0.016 gcc) (at 125 pcf).
Transmission..... ±0.25 pcf (±0.004 gcc) (at 125 pcf).
Moisture..... ±0.25 pcf (±0.004 gcc) (at 10 pcf).

Chemical Error:

Backscatter ±1.00 pcf (±0.016 gcc).
Transmission..... ±0.75 pcf (±0.012 gcc).

Roughness Error:

(0.05 in., 100% void)
Backscatter -4.00 pcf (-0.064 gcc).
Transmission..... -0.50 pcf (-0.008 gcc).

Dimensions/Shipping Weights

Model Number	Width	Depth	Height	Weight
MC-1DR-P All Models	14.1" (358 mm)	9.4" (240 mm)	22.8" (579 mm)	31.0 lbs (14.1 kg)
Instrument in Case MC-1DR-P All Models	30.0" (762 mm)	16.0" (406 mm)	16.5" (419 mm)	92.0 lbs (41.7 kg)

All features and specifications are subject to change without notice.

Counting Time

1 minute or 15 seconds.

Operating Temp

32° to 167°F (0° to 75°C).

Power

Battery pack of 6 D size alkaline cells.

Battery Life

Over 1 year of operation (more than 25,000 1 minute tests).

Display

32 character liquid crystal display (2 lines by 16 characters).
Easily readable in direct sunlight from a standing position.

Units

Internal selection: pcf, gcc, or cpm.

Calibration

Factory calibration.

RADIOLOGICAL

Gamma Source

10 mCi (370 MBq) Cesium-137.

Neutron Source

50 mCi (1.85 GBq) Americium-241/Ba.

Encapsulation

Double-sealed capsule, CPN-131.

Dose Rate At Handle

Less than .5 mrem/hr (5 µSv/hr).

Shipping

Radioactive Material, Special Form, 7
UN3332, R.Q., Transport Index 0.4, Yellow II Label,
USA DOT 7A, Type A Package.

Special Form Approval

USA/0634/S, USA/0627/S.

An NRC or Agreement State license is required for domestic use. Contact CPN for assistance in obtaining the operator training required for a license.

Service

The modular design of the MC-1DR-P allows repairs by simple component exchange. Replacement parts can be shipped within one working day.

Training

CPN offers required certification training on the use of CPN instruments, either at your facility or ours. Topics include safety, equipment operation, applications and field maintenance.

Warranty

18 months materials and workmanship.

CPN International, Inc.
2830 Howe Road
Martinez, CA 94553 USA
Telephone: 925-228-9770
Fax: 925-228-3183
E-mail: cpn@cpn-intl.com

CPN



This is to acknowledge the receipt of your letter/application dated

2/1/2005, and to inform you that the initial processing which includes an administrative review has been performed.

New License Application C03036859
There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

Please provide to this office within 30 days of your receipt of this card

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned Mail Control Number 136454.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.

BETWEEN: : (FOR LFMS USE)
 : INFORMATION FROM LTS
 : -----
 :
 License Fee Management Branch, ARM : Program Code: 03121
 and : Status Code: 3
 Regional Licensing Sections : Fee Category: _____
 : Exp. Date: 0
 : Fee Comments: _____
 : Decom Fin Assur Req'd: _
 :

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED
 Applicant/Licensee: BALZER AND ASSOCIATES, INC.
 Received Date: 20050214
 Docket No: 3036859
 Control No.: 136454
 License No.:
 Action Type: New License

2. FEE ATTACHED
 Amount: \$1,200.00
 Check No.: 2430

3. COMMENTS

Signed Rebecca J. Jarnal
 Date 2/15/2005

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered /_/)

1. Fee Category and Amount: _____
2. Correct Fee Paid. Application may be processed for:
 - Amendment _____
 - Renewal _____
 - License _____
3. OTHER _____

Signed _____
 Date _____