



**Met One
Instruments**

November 28, 2001

Met One Instruments, Inc.

1600 Washington Blvd.

Grants Pass, Oregon 97526

Phone (541) 471-7111

Fax (541) 471-7116

www.metone.com

REGIONAL OFFICE

3206 Main St., Ste. 106

Rowlett, Texas 75088

Phone (972) 412-4747

Fax (972) 412-4716

**Michelle Burgess
United State Nuclear Regulatory Commission
2 White Flint North, 11545 Rockville Pike
Rockville, MD 20852**

Michelle,

This letter is to inform you that Met One Instruments has taken the Copyright off the "E-BAM Operational Manual". Furthermore, the "E-BAM Operational Manual" is releasable to the public. As owner and President of Met One Instruments, I am authorized to make binding commitments and sign official documents on behalf of Met One Instruments.

Sincerely,

Tom Pottberg



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Sincerely,

Tom Pottberg

APPENDIX C

SUMMARY DATA

| | | | |
|---|--|---|-------------------------------|
| Name and Complete Mailing Address of the Applicant: | | Name, Title, and Telephone Number of the Individual to Be Contacted If Additional Information or Clarification Is Needed by the NRC: | |
| The Applicant is (check one): | | If the Applicant Is Not the Manufacturer, Provide the Name and Complete Mailing Address of the Manufacturer: | |
| <input type="checkbox"/> | Custom User | | |
| <input type="checkbox"/> | Manufacturer | | |
| <input type="checkbox"/> | Distributor | | |
| <input checked="" type="checkbox"/> | Manufacturer and Distributor | | |
| If the Applicant Is a Custom User, Provide the Name and Complete Mailing Address of the Distributor: | | Provide the Name, Complete Mailing Address, and Function of Other Companies Involved: | |
| Model Number: | | Principal Use Code (see Appendix F): | |
| Name Used by the Industry to Identify the Product (e.g., Radiography Exposure Device, Teletherapy Source, Calibration Source, etc.): | | For Use by: | |
| | | <input type="checkbox"/> | Specific Licensees Only |
| | | <input type="checkbox"/> | General Licensees Only |
| | | <input checked="" type="checkbox"/> | Persons Exempt from Licensing |
| Leak-Test Frequency: | | Principal Section of the 10 CFR that Applies to the User (e.g., General Licensees under 10 CFR 31.5): | |
| <input checked="" type="checkbox"/> | Periodic Leak-Testing is Not Required | Radionuclides and Maximum Activities (including loading tolerance): 60mCi 14C ±25% | |
| <input type="checkbox"/> | 6 Months | | |
| <input type="checkbox"/> | Attached is justification for a leak test frequency of greater than 6 months | | |

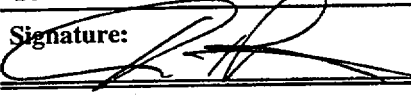
CERTIFICATION:

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 AND 32 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 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.

Certifying Officer Typed Name and Title
 Tom Pottberg President Met One Instruments

Signature:  **Date:** 11/28/2001

Pending Sealed Source & Device Actions
By Reviewer for the period 01/01/1901 to 01/14/2002
Actions recorded as of Monday, January 14, 2002

Bhachu

† Case(s) Assigned to Reviewer Totaling 1 Action(s)

| Date Assigned | Assign. Number | Actions | Company | Model Numbers | Status |
|---------------|----------------|---------|---------------------|---------------|--|
| 12/10/2001 | 01-50 | 1 | Met One Instruments | E-Bam | Notification of lifting copyright off the E-Bam Operational Maual. 1st reviewer: Ujagar Bhachu 2nd reviewer: John Jankovich Ret'd from Fees 12/20/2001. |

Exempt Use Products Tracking Sheet

This form is to used on all SSD and Licensing cases involving 10 CFR 32.22 (gun sights, program code 03254) and 32.26 products (smoke and aerosol detectors, program code 03255). The SSD acceptance reviewer or the License reviewer should initiate this form. An electronic copy is on the H: drive (directories EXEMPT and SSDFILE), named EXEMPT PRODUCT COORD.WPD. Due to the need to coordinate these cases between both groups, efforts should be made to complete each review as quickly as possible. SSD Reviewers should note that the licensing due date may be 90 days. If more than one RAI is required, repeat steps 3-5. All packages should stay on desktop in accessible location, while RAI is out.

Date of Application: 11-28-2001 Date Received: 12-14-2001

Applicant: MET ONE INSTRUMENTS

SSD Case #: 01-50 License #: 36-23875-01E

SSD Due Date: 6-5-2002 Licensing Due Date: 03-14-2002
(180 days) (90 or 180 days)

SSD Reviewer 1: U. Bhachu Docket #: 030-35578 Mail Control # 022199

SSD Reviewer 2: J. Jankovich License Reviewer: BRUCE CARRICO

SSD Registration Certificate #: _____

Incoming to John J.

(initials & date)

U 12/17/01

J 12/19/01

1. Determine that the case involves 32.22 or 32.26 products. If not then do not use this form. If yes, make a copy of the form and place in Traci's box. (John J.)
2. Review by incoming review group. Fill in the case information above. Generate SSD or License. Generate outgoing with second review group on concurrence. Forward package to second review group.
3. Initial review by second review group. Fill in the case information above. Generate SSD or License. Retain a copy of this sheet for reference. Provide comments for outgoing to incoming review group. Return package to assigned Reviewer from incoming review group.
4. RAI#1 distributed by incoming review group.
5. RAI#1 response reviewed by incoming review group. Generate outgoing with second review group on concurrence.
6. Review by second review group. Provide comments for outgoing completion letter to initial review group.
7. Completed cases distributed.
8. Put package in ADAMS. Reviewer for Incoming review group responsible for getting background materials and outgoing into ADAMS (with assistance from Reviewer from second review group, as necessary). Put SSD or License in ADAMS, as applicable. Forward document location information to Reviewer from second review group.
9. Second review group complete ADAMS filing for your case. Put SSD or License in ADAMS, as applicable.

Skip to Step 6 if no RAI.



State of Oregon
Health Services
Radiation Protection Services
(503)731-4014
FAX: (503)731-4081

FAX

DATE:

1/22/02

TO:

Toni of NRC

FROM:

Deborah Ward

PAGES (including this cover page):

4

Message: Hi Toni, Enclosed please

find the copy of Met One's Oregon
license # 90741 amendment # 3 as
requested.

Should you need anything further, please
don't hesitate to contact me -

STATE OF OREGON
 OREGON STATE HEALTH DIVISION
 DEPARTMENT OF HUMAN SERVICES

Page 1 of 3 Pages
 License No. ORE-90941
 Amendment Number 3

RADIOACTIVE MATERIALS LICENSE

Pursuant to the Radiation Control Act and the Oregon Rules for the Control of Radiation, and in reliance on statements and representations heretofore made by the Licensee designated below, a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive material(s) designated below; and to use such radioactive materials for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders now or hereafter in effect of the State Health Division and to any and all conditions specified below.

In accordance with facsimile document dated July 10, 2001, letter dated July 18, 2001, and E-mail correspondence dated July 20, 2001, Oregon Radioactive Material License ORE-90941 is amended to read as follows:

| | |
|--|---|
| 1. Name Met One Instruments, Inc. | 3. License Number ORE-90941 |
| 2. Address 1600 NW Washington Boulevard Grants Pass, Oregon 97526 | 4. Expiration Date August 31, 2005 |
| | 3. Reference Number Priority 3/Program Code 03214 Manufacturing & Distribution |

| 6. Radioactive materials (element and mass number) | 7. Chemical and/or physical form | 8. Maximum quantity licensee may possess at any one time |
|---|---|---|
| A. Carbon-14 | A. AEA Technology Drawing No. VZ623 sealed source as BaCO3 foil | A. No single source to exceed 3.7 Megabequerels (100 microcuries) for BAM-1020 devices ; no single source to exceed 2.22 Megabequerels (60 microcuries) for E-BAM devices . Total possession not to exceed 185 Megabequerels (5 millicuries) [Nominal activity = 2.22 Mbq/source] |
| B. Carbon-14 | B. AEA Technology Drawing No. VZ623 sealed source as BaCO3 foil | B. One single source at nominal activity of 2.22 Megabequerels (60 microcuries) NIST (+/- 3%) |
| C. Carbon-14 | C. AEA Technology Drawing No. VZ623 sealed source as BaCO3 foil | C. One single source at nominal activity of 2.96 Megabequerels (80 microcuries) NIST (+/- 3%) |

9. Authorized use:
- A. For possession and use of sources listed in items 6.A., 7.A., and 8.A. above to be installed in Met One Instruments, Inc. Model BAM-1020 and E-BAM devices during manufacturing process and quality control testing for the production of air quality monitoring devices.
 - B and C. For Quality Assurance and Research & Development testing for production of air quality monitoring devices.

State of Oregon
OREGON STATE HEALTH DIVISION
Department of Human Services

Page 2 of 3 Pages
License No. ORE-90941
Amendment Number 3

RADIOACTIVE MATERIALS LICENSE

Continued from Page 1

CONDITIONS

10. This license authorizes storage of licensed sources and devices at the licensee's facility located at 1600 ^{NW} Washington Boulevard, Grants Pass, Oregon 97526. This license also authorizes transport of licensed devices to a specific licensee's facility for demonstration or transfer; or use of licensed devices at temporary job sites for demonstration purposes only.
11. This license is subject to and void without an annual validation certificate. Insofar as the licensee has submitted the proper fee prior to the expiration of a validation certificate, such existing validation certificate shall not expire until the issuance of a new validation certificate for the then current fiscal year.
12. The Radiation Safety Officer for the activities authorized by this license is John Armstrong.
13. Licensed devices may only be transported or demonstrated by trained personnel designated by the Radiation Safety Officer. Records of Radiation Safety training shall be maintained by the licensee for review by Division inspection personnel.
14. The licensee shall ensure that each device transferred under this license is tested for leakage or contamination prior to transfer, pursuant to OAR 333-120-460, and that each device meets all safety requirements of the manufacturer, pursuant to manufacturer's safety directives, prior to receipt by the specific licensee.
15. Insofar as the licensee restricts the possession of radioactive material to quantities below the minimum limit specified in Appendix B of 10 CFR 30.35, the licensee is not required to provide financial assurance pursuant to OAR 333-102-200(6).
16. The licensee shall report all transfers of devices to persons authorized by specific license in OAR 333-102-200 or equivalent regulations of the U.S. Nuclear Regulatory Commission or an Agreement State to: Manager, Radioactive Materials Program, 800 NE Oregon Street, Suite 260, Portland, Oregon 97232. The report shall identify each specific licensee by name and address, the type of device transferred, the leak test and safety check date, and the quantity and type of licensed material contained in the device. The report shall be submitted within thirty (30) days after the end of each calendar year quarter in which any such device is transferred to a specific licensee.
17. The Licensee shall comply with provisions of OAR 333-102-305(9) (NRC sealed source & device registration), 333-102-305(11) (6-month inventory), 333-102-305(12) (U.S. D.O.T. transportation regulations), 333-102-305(13) (inspection of sources every 6 months), 333-102-305(14) (prohibition to open sources), 333-102-305(15) (prohibition to repair devices), and 333-102-305(18) (leak testing sealed sources), "Terms and Conditions of Licenses".
18. This license prohibits any maintenance or calibration of devices unless specifically certified and authorized by the manufacturer in writing. Maintenance or calibration of devices may only be performed pursuant to manufacturer's written specific procedures.

State of Oregon
OREGON STATE HEALTH DIVISION
Department of Human Services
RADIOACTIVE MATERIALS LICENSE

Page 3 of 3 Pages
License No. ORE-90941
Amendment Number 3

Continued from Page 2

CONDITIONS (cont.)

19. Any licensee authorized and certified by the manufacturer to perform maintenance and calibration of devices shall have the manufacturer's certification and authorization documentation at any site where materials or devices are being serviced or where device calibration or maintenance is being performed.
20. The Licensee is required to prepare and file an annual report per OAR 333-102-245(2) for each year ending June 30th. This report shall be filed with the Agency by August 1st of each year.
21. 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 Oregon Rules for the Control of Radiation shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
 - A. Application dated July 19, 2000, signed by Thomas Pottberg, President.
 - B. Facsimile document dated August 4, 2000, sent by David Gobeli, Ph.D. (Add NIST sources)
 - C. Facsimile document dated August 4, 2000, sent by David Gobeli, Ph.D. (Amend Activity ~100 uCi)
 - D. Facsimile document dated August 7, 2000, signed by David Gobeli, Ph.D. (Copy of Draft NRC Form 313 + Draft application for exempt distribution without appendices)
 - E. Letter dated September 11, 2000, signed by James Cornish.
 - F. Facsimile document dated November 27, 2000, signed by John Armstrong.
 - G. Facsimile document dated July 10, 2001, signed by Steve D. Estrada.
 - H. Letter dated July 18, 2001, signed by Ron Siebert, Tom Pottberg, and John Armstrong.
 - I. E-mail correspondence dated July 20, 2001, from Ron Siebert.

Date August 13, 2001

FOR THE OREGON HEALTH DIVISION

By



Terry D. Lindsey, Acting Manager
Radiation Protection Services

MATERIALS LICENSE

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.

CORRECTED COPY

| | |
|--|---|
| <p>Licensee</p> <p>1. Met One Instruments</p> <p>2. 1600 Washington Blvd Grants Pass, Oregon 97526</p> | <p>In accordance with letter dated August 17, 2000</p> <p>3. License number: 36-23875-01E is issued in its entirety to read as follows:</p> <hr/> <p>4. Expiration date: November 30, 2010</p> <hr/> <p>5. Docket No. 030-35578 Reference No.</p> |
|--|---|

| | | |
|--|--|---|
| <p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Carbon-14</p> | <p>7. Chemical and/or physical form</p> <p>A. AEA Technology Check Source (Barium Carbonate)</p> | <p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. Not Applicable (See License Condition No. 10)</p> |
|--|--|---|

9. Authorized use:

Pursuant to Section 32.26, 10 CFR Part 32, the licensee is authorized to distribute aerosol detectors as specified in Condition 10 to persons exempt from the requirements for a license pursuant to Section 30.20, 10 CFR Part 30, or equivalent provisions of the regulations of any Agreement State.

CONDITIONS

10. The following aerosol detector devices may be distributed pursuant to this license provided the amount of carbon-14 contained in the devices does not exceed the amounts specified in the following table:

| <u>Device Model</u> | <u>Maximum Quantity per Device</u> |
|----------------------------|------------------------------------|
| BAM-1020 <i>(E-BAM)</i> | 75 microcuries (maximum) |

11. This license does not authorize possession or use of licensed material.

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**License Number
36-23875-01EDocket or Reference Number
030-35578**CORRECTED COPY****CONDITIONS**

(Continued)

12. The licensee may distribute only from its facility located at 1600 Washington Blvd., Grants Pass, Oregon.
13. The licensee shall file periodic reports as specified in Section 32.29(c) of 10 CFR Part 32.
14. Except as specifically provided otherwise by 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 U.S. 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. Letter and application dated August 17, 2000;
 - B. Facsimiles dated August 21, 2000, September 14, 2000, September 15, 2000, September 22, 2000, September 29, 2000; and October 31, 2000;
 - C. Registration Certificate NR-1124-D-101-E.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

DATE: November 30, 2000BY: _____ /RA/
Susan L. Greene
Materials Safety and Inspection Branch
Division of Industrial and Medical Nuclear Safety
Office of Nuclear Material Safety and Safeguards
Washington, DC 20555

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES
SAFETY EVALUATION OF DEVICE

NO: NR-1124-D-101-E DATE: November 13, 2000 PAGE 2 OF 3

DEVICE TYPE: Aerosol detector

DESCRIPTION:

The Model BAM-1020 device is a continuous ambient aerosol and particulate monitor which involves the measurement of the attenuation of beta rays emanating from the 60 ± 15 microcurie (2.22 ± 0.55 MBq) Carbon-14 source through a filter paper that has collected ambient particulate matter. A scintillation based beta radiation detector monitors the degree of attenuation of the beta radiation emanating from the source. A microprocessor inside of the Model BAM-1020 device then calculates the ambient aerosol concentrations as a function of the degree of attenuation.

The source in the device is a Model VZ-623 beta source, manufactured by AEA Technology QSA, Inc. The Model VZ-623 source was subjected to the tests provided in ISO-2919 and the manufacturer reported that the source achieved a classification of C.34242. The maximum activity of the source to be used in the Model BAM-1020 device is $75 \mu\text{Ci}$ (2.77 MBq). The Model VZ-623 source is registered hereby for use in the Model BAM-1020 device. The activity level in the Model VZ-623 source is less than specified in 10 CFR 30.71, Schedule B, and therefore, no separate sealed source evaluation was conducted for the source.

In the device, the source is mounted in a sleeve type aluminum source holder, secured with set screws, and the set screws are secured with an adhesive such as Loctite 222. The source holder is housed in solid block of aluminum, called beta block. Set screws secure the source holder into the beta block. The beta block also serves as housing for other components which are not related to radiological protection. The beta block is located inside the Model BAM-1020 device under the cover door of the instrument.

DIAGRAM:

See Attachment.

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES
SAFETY EVALUATION OF DEVICE

NO: NR-1124-D-101-E DATE: November 13, 2000 PAGE 3 OF 3

DEVICE TYPE: Aerosol detector

REFERENCES:

The following supporting documents for the Met One Instruments, Inc. Model BAM-1020 aerosol monitor are hereby incorporated by reference and made a part of this registry document:

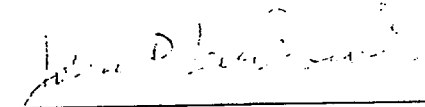
- Application dated August 17, 2000, with enclosures thereto.
- Facsimiles dated August 21, 2000, September 14, 2000, September 15, 2000, September 22, 2000, September 29, 2000, and October 31, 2000, with enclosures thereto.

ISSUING AGENCY:

U.S. Nuclear Regulatory Commission

Date: November 13, 2000

Reviewer: _____


John P. Jankovich

Date: November 13, 2000

Concurrence: _____


Seung J. Lee

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES
SAFETY EVALUATION OF DEVICE

NO: NR-1124-D-101-E

DATE: November 13, 2000

ATTACHMENT

