

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, 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.

Licensee

1. The Terracon Companies, Inc.

2. 16000 College Boulevard
Lenexa, Kansas 66219In accordance with letter dated
April 4, 19973. License number 15-27070-01 is amended in
its entirety to read as follows:

4. Expiration date February 28, 2003

5. Docket or
Reference No 030-321766. Byproduct, source, and/or
special nuclear material7. Chemical and/or physical
form8. Maximum amount that licensee
may possess at any one time
under this license

A. Cesium-137

A. Sealed sources
(Campbell Pacific
Nuclear Model
CPN-131)A. 36 sources not to
exceed 10
millicuries per
source

B. Americium-241

B. Sealed neutron
sources (Campbell
Pacific Nuclear
Model CPN-131)B. 36 sources not to
exceed 50
millicuries per
source

C. Cesium-137

C. Sealed sources
(Troxler Dwg. No.
A-102112)C. 36 sources not to
exceed 10
millicuries per
source

D. Americium-241

D. Sealed neutron
sources (Troxler
Dwg. No. A-102451)D. 36 sources not to
exceed 50
millicuries per
source

E. Americium-241

E. Sealed neutron
sources (CPN Dwg.
No. CPN-131)E. 10 sources not to
exceed 100
millicuries per
source

F. Americium-241

F. Sealed neutron
sources (Troxler
Dwg. No. A-100608)F. 10 sources not to
exceed 100
millicuries per
source

150018



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PDR ADOCK 03032176
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**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number

15-27070-01

Docket or Reference Number

030-32176

Amendment No. 07

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

G. Cesium-137/
Americium-241

G. Sealed sources
(Troxler Dwg. No.
A-100281)

G. 36 sources not to exceed 10 millicuries of Cs-137 or 50 millicuries of Am-241

H. Americium-241

H. Sealed neutron sources (Troxler Dwg. No. A-100337)

H. 10 sources not to exceed 300 millicuries per source

9. Authorized use

A. and B. For use in Campbell Pacific Nuclear Corporation, MC Series, MD Series, and Model 500 Series portable moisture/density gauges for measurement of properties of materials.

C. and D. For use in Troxler Series 3400 portable nuclear moisture/density gauges for measurement of properties of materials.

E. For use in Campbell Pacific Nuclear Corporation AC Series portable moisture/density gauges for measurement of properties of materials.

F. For use in Troxler Model 3241-C portable nuclear moisture/density gauges for measurement of materials.

G. For use in Troxler Model 2401 portable nuclear moisture density gauges for measurement of properties of materials.

H. For use in Troxler Model 3241 asphalt content gauge for measurement of the asphalt content of paving mixes.

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CONDITIONS

10. Licensed material may be stored at the licensee's facilities at 13665 E. 42nd Terrace, Suite H, Independence, MO; 832 NW 67th Street, Suite 1, Oklahoma City, OK; 5865 South Garnett Road, Tulsa, OK; 10840 Executive Drive, Boise ID; 2701 Westland Court, Cheyenne, WY; 2110 Overland Avenue, Suite 124, Billings, MT; 3535 Hoffmann Road E., White Bear Lake, MN; 2220 Welsch Industrial Drive, St. Louis, MO; 2306 Industrial Drive, Columbia, MO; Kansas City International Airport, Kansas City, MO; and used at temporary job sites of the licensee anywhere in the United States where the U.S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material.
11. A. Licensed material shall only be used by, or under the supervision and in the physical presence of, individuals who have received the training described in letter dated May 24, 1994, and have been approved in writing by the Radiation Safety Officer.
- B. The Radiation Safety Officer for this license is Gary K. Bradley.
12. A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed 6 months or at such other intervals as specified by the certificate of registration referred to in 10 CFR 32.210.
- 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 3 months.
- C. In the absence of a certificate from a transferor indicating that a leak test has been made within 6 months prior to the transfer, a sealed source received from another person shall not be put into use until tested.
- D. Sealed sources 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

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12. (Continued)

(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 transferred 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 shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.

E. The leak 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 in accordance with 10 CFR 30(b)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within 5 days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011, ATTN: Director, Division of Radiation Safety and Safeguards. The report shall specify the source involved, the test results, and corrective action taken.

F. The licensee is authorized to collect leak test samples for analysis by Campbell Pacific Nuclear Corporation, Troxler Electronics, Nuclear Testing Service, or Pacific Nuclear Technology Co. 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 containing licensed material shall not be opened or sources removed from source holders by the licensee.

14. Any cleaning, maintenance, or repair of the gauge(s) that requires removal of the source rod shall be performed only by the manufacturer or by other persons specifically licensed by the Commission or an Agreement State to perform such services.

15. The licensee shall conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the license.

16. The licensee may transport licensed material only in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

17. Each portable nuclear gauge shall have a lock or outer locked container designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. The gauge or its container must be locked when in transport, storage, or when not under the direct surveillance of an authorized user.

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18. 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. Letter dated September 14, 1992
- B. Letter dated April 19, 1994
- C. Letter dated May 5, 1994
- D. Letter dated May 24, 1994
- E. Facsimile received May 26, 1994
- F. Letter dated August 22, 1994
- G. Letter dated October 15, 1996
- H. Letter dated March 12, 1997
- I. Letter dated April 4, 1997

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date APR 21 1997

By

Vivian H. Campbell

Vivian H. Campbell
Nuclear Materials Licensing Branch
Region IV
Arlington, Texas 76011



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

April 21, 1997

The Terracon Companies, Inc.
ATTN: Gary K. Bradley
16000 College Boulevard
Lenexa, Kansas 66219

SUBJECT: LICENSE AMENDMENT

Please find enclosed License No. 15-27070-01. You should review this license carefully and be sure that you understand all conditions. If you have any questions, you may contact the reviewer who signed your license at 817-860-8143.

NRC expects licensees to conduct their programs with meticulous attention to detail and a high standard of compliance. Because of the serious consequences to employees and the public which can result from failure to comply with NRC requirements, you must conduct your program involving radioactive 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: Inspection and Investigations," 10 CFR Part 20, "Standards for Protection Against Radiation," and other applicable regulations.
2. Possess radioactive material only in the quantity and form indicated in your license.
3. Use radioactive material only for the purpose(s) indicated in your license.
4. Notify NRC in writing of any change in mailing address (no fee required if the location of radioactive material remains the same).
5. Request and obtain written NRC consent before transferring your license or any right thereunder, either voluntarily or involuntarily, directly or indirectly, through transfer of control of your license to any person or entity. A transfer of control of your license includes not only a total change of ownership, but also a change in the controlling interest in your company whether it is a corporation, partnership, or other entity. In addition, appropriate license amendments must be requested and obtained for any other planned changes in your facility or program that are contrary to your license or contrary to representations made in your license application, as well as supplemental correspondence thereto, which are incorporated into your license. A license fee may be charged for the amendments if you are not in a fee-exempt category.

6. Maintain in a single document decommissioning records that have been certified for completeness and accuracy listing all the following items applicable to the license:
 - Onsite areas designated or formerly designated as restricted areas as defined in 10 CFR 20.3(a)(14) or 20.1003.
 - Onsite areas, other than restricted areas, where radioactive materials in quantities greater than amounts listed in Appendix C to 10 CFR 20.1001-20.2401 have been used, possessed, or stored.
 - Onsite areas, other than restricted areas, where spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site have occurred that required reporting pursuant to 10 CFR 30.50(b)(1) or (b)(4), including areas where subsequent cleanup procedures have removed the contamination.
 - Specific locations and radionuclide contents of previous and current burial areas within the site, excluding radioactive material with half-lives of 10 days or less, depleted uranium used only for shielding or as penetrators in unused munitions, or sealed sources authorized for use at temporary job sites.
 - Location and description of all contaminated equipment involved in licensed operations that is to remain onsite after license termination.
7. Submit a complete renewal application with proper fee, or termination request at least 30 days before the expiration date on your license. You will receive a reminder notice approximately 90 days before the expiration date. Possession of radioactive material after your license expires is a violation of NRC regulations.
8. Request termination of your license if you plan to permanently discontinue activities involving radioactive material.

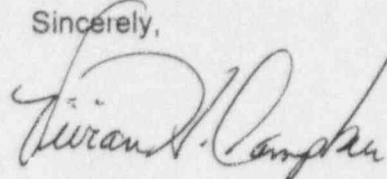
You will be periodically inspected by NRC. Failure to conduct your program in accordance with NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC will result in enforcement action against you. This could include issuance of a notice of violation; 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), 60 FR 34381, June 30, 1995.

The Terracon Companies, Inc.

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Thank you for your cooperation.

Sincerely,

A handwritten signature in cursive script, appearing to read "Vivian H. Campbell".

Vivian H. Campbell
Senior Radiation Specialist
Nuclear Materials Licensing Branch

Docket: 030-32176
License: 15-27070-01
Control: 466361

Enclosures: As stated

APR 21 1997

The Terracon Companies, Inc.

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DOCUMENT NAME: P:\terracon.mlc

To receive copy of document, indicate in box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

RIV:NMLB	N	RIV:					
VHCampbell	N						
4 / 21 / 97							

OFFICIAL RECORD COPY

BETWEEN:

License Fee Management Branch, ARM
and
Regional Licensing Sections

(FOR LFMS USE)
INFORMATION FROM LTS

Program Code: 03121
Status Code: 0
Fee Category: 3P
Exp. Date: 20030228
Fee Comments:
Decom Fin Assur Req'd: N

1997 APR -9 PM 3:17

LICENSE FEE TRANSMITTAL

A. REGION IV

1. APPLICATION ATTACHED

Applicant/Licensee: TERRACON COMPANIES, INC., THE
Received Date: 970408
Docket No: 3032176
Control No.: 466361
License No.: 15-27070-01
Action Type: Amendment

2. FEE ATTACHED

Amount: 11
Check No.: 11

3. COMMENTS

* See below Signed Bill G. Gusevski
Date 4/8/97

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered (X))1. Fee Category and Amount: 3P

2. Correct Fee Paid. Application may be processed for:

Amendment ✓
Renewal
License

FEE NOT REQUIRED

Cont 466338

3. OTHER

Signed Rita Mergin
Date 4/10/97

* Continuation of M/C # 466338. Ag



RECEIVED BY LFMS	
Date	4/9/97
Log	Opers 2 IV
By	Rm
Date Completed	4/10/97

April 4, 1997

Ms. Vivian H. Campbell
US Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011



Terracon

THE TERRACON COMPANIES, INC.
16000 Collage Boulevard
Lenexa, Kansas 66219
(913) 599-6886 Fax: (913) 599-0574

466 338
RE: Amendment #6, License # 15-27070-01

Dear Ms. Campbell:

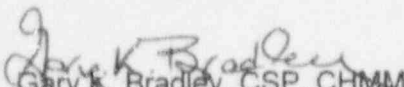
In your correspondence of March 26, 1997 which accompanied our license amendment #6, you requested leak tests for gauges stored at our previous St. Louis, MO area storage facility at 800 Fee Fee Road prior to removal of this storage location from our license.

Attached please find the most recent leak test for the single nuclear density/moisture gauge that was stored at the 800 Fee Fee Road location. With submission of this document, we hereby request that the former storage location be removed from License # 15-27070-01.

As indicated in your March 26, 1997 correspondence, this request represents a "fee exempt" amendment. If you require additional information, please contact the undersigned at your convenience.

Sincerely,

THE TERRACON COMPANIES, INC.


Gary K. Bradley, CSP, CHMM
Corporate Safety and Health Manager/
Corporate Radiation Safety Officer

Offices of The Terracon Companies, Inc.

Arizona ■ Arkansas ■ Colorado ■ Idaho ■ Illinois ■ Iowa ■ Kansas ■ Minnesota
Missouri ■ Montana ■ Nebraska ■ Nevada ■ Oklahoma ■ Tennessee ■ Texas ■ Utah ■ Wyoming

Geotechnical, Environmental and Materials Engineers

QUALITY ENGINEERING SINCE 1965

4 6 6 3 6 1

Pacific Nuclear Technology Co.

2545 W 10th St Ste N

Antioch CA, 94509

(510) 706-8300

(510) 706-8396 FAX

REPORT OF LEAK TEST

CUSTOMER: TERRACON CONSULTANTS
800 FEE FEE RD
MARYLAND HEIGHTS, MO 63043
MARK ROENFELDT

MODEL NO: CPN MC1DR

SERIAL NO: MD61003455

ISOTOPE: Cs-137 10 mCi
Am-241 50 mCi

DATE OF TEST: 1/07/1997

The sample identified above was submitted for leak test analysis.

DATE OF ANALYSIS: 1/11/1997 ANALYSIS NUMBER: 17376

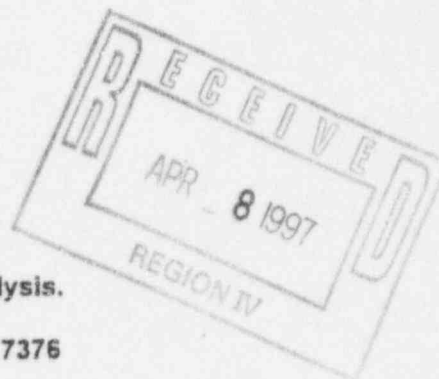
RESULTS: BACKGROUND COUNT: 282 cpm
GROSS COUNT: 281 cpm

REMOVABLE
CONTAMINATION: NIL microcurie

NOTE: The US Nuclear Regulatory Commission and the Agreement States require that the analysis of the wipe from a sealed source must be capable of detecting the presence of 0.005 microcurie (185 Bq) on the sample. The count on the wipe was below a Lower Limit of Detection of 0.0001 microcurie. The source is not considered leaking. This report should be retained three years for viewing by regulatory agencies.

SIGNED

[Signature]
Office of Radiation Safety
Calif RM Lic No 5634-07



466361