



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION I  
2100 RENAISSANCE BLVD.  
KING OF PRUSSIA, PA 19406-2713

January 14, 2019

James Nave, Operations Manager  
Phoenix Environmental Laboratories  
587 Middle Turnpike East  
Manchester, CT 06040

SUBJECT: PHOENIX ENVIRONMENTAL LABORATORIES - NRC INSPECTION NO.  
99990001/2018006 AND NOTICE OF VIOLATION

Dear Mr. Nave:

This letter refers to the inspection conducted on November 14, 2018, at your Manchester, Connecticut facility with continuing in-office review through December 17, 2018. This inspection examined activities conducted under your license as they relate to public health and safety, and to confirm compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel. On December 19, 2018, Mr. Courtemanche conducted an exit meeting with you and Keith Aloisa of your staff concerning the findings of the inspection.

Based on the results of this inspection, the NRC has determined that four Severity Level IV violations of NRC requirements occurred. These violations were evaluated in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at <https://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The violations are cited in the enclosed Notice of Violation (Notice) because the violations were identified by the NRC.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC review of your response to the Notice will also determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

If you have any questions regarding this matter, please contact Steven Courtemanche of my staff at (610) 337-5075 or via electronic mail at [Steven.Courtemanche@nrc.gov](mailto:Steven.Courtemanche@nrc.gov).

Thank you for your cooperation.

Sincerely,

**/RA/**

Arthur L. Burritt, Chief  
Commercial, Industrial, R&D  
and Academic Branch  
Division of Nuclear Materials Safety  
Region I

Docket No. 99990001  
General License

Enclosures:

1. Notice of Violation
2. List of Electron Capture Detectors Not Reported as Possessed by Licensee (Att. 1)
3. List of Electron Capture Detectors Transferred or Disposed by Licensee (Att. 2)

cc w/Encls: Keith Aloisa, Chemist  
State of Connecticut

PHOENIX ENVIRONMENTAL LABORATORIES - NRC INSPECTION NO. 99990001/2018006  
 AND NOTICE OF VIOLATION DATED January 14, 2019

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## **NOTICE OF VIOLATION**

Phoenix Environmental Laboratories  
Manchester, Connecticut

Docket No. 99990001  
General License

During an NRC inspection conducted on November 14, 2018, with continuing in-office review through December 17, 2018, four violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

- A. 10 CFR 31.5(a) states, in part, that a general license is hereby issued to commercial and industrial firms to acquire, receive, possess, use, or transfer, in accordance with provisions of paragraphs (b), (c) and (d) of this section, byproduct material contained in devices designed and manufactured for the purpose of detecting, measuring, or qualitative or quantitative chemical composition.

10 CFR 31.5(b)(1) requires that the general license in paragraph (a) of this section applies only to byproduct material contained in devices which have been manufactured or initially transferred and labeled in accordance with the specifications contained in a specific license under 10 CFR 32.51; or an equivalent specific license issued by an Agreement State; or an equivalent specific license issued by a State with provisions comparable to 10 CFR 32.51.

10 CFR 31.5(c)(9) requires, in part, any person who acquires, receives, possesses, uses, or transfers byproduct material in a device pursuant to the general license in paragraph (a) of this section shall transfer the device to another general licensee only if the device remains in use at a particular location; or the device is held in storage by an intermediate person in the original shipping container at its intended location of use prior to initial use by a general licensee.

10 CFR 31.5(b)(2) requires, in part, that the devices must have been received from one of the specific licensees described in paragraph (b)(1) of this section or through a transfer made under paragraph (c)(9) of this section.

Contrary to the above, as of December 19, 2018, devices were received by the licensee but not from one of the specific licensees described in paragraph (b)(1) of this section or through a transfer made under paragraph (c)(9) of this section. Specifically, the licensee received devices from public auctions and second-hand equipment vendors prior to January 1, 2010, not methods authorized by 10 CFR 31.5(b)(2) (See Attachment 1).

This is a Severity Level IV violation (Enforcement Policy Section 6.3).

- B. 10 CFR 31.5(c)(3)(i) requires, in part, that any person who possesses byproduct material in a device pursuant to the general license in paragraph (a) of this section shall assure that the device is tested for leakage of radioactive material at such intervals as are specified in the label, with exceptions. The labels on the general licensees' devices specified a testing frequency of six months. The exceptions included: Devices including only krypton need not be tested for leakage of radioactive material, and devices containing only tritium or not more than 100 microcuries of other beta and/or gamma emitting material or 10 microcuries of alpha emitting material and

devices held in storage in the original shipping container prior to initial installation need not be tested for any purpose.

Contrary to the above, as of December 19, 2018, the licensee possessed byproduct material in devices pursuant to the general license in paragraph (a) of this section did not assure that the device was tested for leakage of radioactive material at such intervals as were specified in the label and the exceptions did not apply. Specifically, the licensee possessed Gas Chromatographs with Electron Capture Detectors containing sealed sources of nickel-63, a byproduct material; tested for leakage of radioactive material at an annual interval; and the interval specified in the label required testing every six months.

This is a Severity Level IV violation (Enforcement Policy 6.7).

- C. 10 CFR 31.5(c)(5) requires, in part, that upon the detection of 185 bequerel (0.005 microcurie) or more removable radioactive material, the licensee must make a report containing a brief description of the event, the remedial action taken, and a plan for ensuring the premises and environs are acceptable for unrestricted use. The report must be furnished to the Director, Office of Nuclear Material Safety and Safeguards (NMSS), ATTN: GLTS, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Contrary to the above, as of December 19, 2018, upon the detection of 185 bequerel (0.005 microcurie) or more removable radioactive material, the licensee did not make a report containing a brief description of the event, the remedial action taken, and a plan for ensuring the premises and environs are acceptable for unrestricted use to the Director, NMSS. Specifically, between January 1, 2017 and November 14, 2018, the licensee identified four Electron Capture Detectors with leaking sealed sources of nickel-63 in excess of 185 bequerel (SN 1655, 4341, 5840, and 7193) and did not report the occurrence as required.

This is a Severity Level IV violation (Enforcement Policy Section 6.3).

- D. 10 CFR 35.15(c)(8)(ii) requires, in part, that within 30 days after the transfer of a device to a specific licensee, the licensee shall furnish a report containing the information required by this section to the Director, Office of Nuclear Material Safety and Safeguards, ATTN: Document Control Desk/GLTS, U.S. Nuclear regulatory Commission, Washington, DC 20555-0001.

Contrary to the above, as of December 19, 2018, within 30 days after the transfer of a device to a specific licensee, the licensee did not furnish a report containing the information required by this section to the Director, NMSS. Specifically, the licensee sent devices containing nickel-63, a byproduct material, to a licensed radioactive materials disposal firm without making the required report since the beginning of their licensed program (see Attachment 2).

This is a Severity Level IV violation (Enforcement Policy Section 6.3).

Pursuant to the provisions of 10 CFR 2.201, Phoenix Environmental Laboratories is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with a copy to the

Regional Administrator, Region I, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, any response which contests an enforcement action shall be submitted under oath or affirmation.

Your response will be placed in the NRC Public Document Room (PDR) and on the NRC Web site. To the extent possible, it should, therefore, not include any personal privacy, proprietary, or safeguards information so that it can be made publically available without redaction. However, if you find it necessary to include such information, you should clearly indicate the specific information that you desire not to be placed in the PDR, and provide the legal basis to support your request for withholding the information from the public.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated This 14th day of January 2019

**List of Electron Capture Detectors Not Reported as Possessed by Licensee**

Manufacturer	Model No.	Serial No.
Perkin Elmer Instr.	N610-0133	0195
Perkin Elmer Instr.	N610-0133	0774
Perkin Elmer Instr.	N610-0133	0777
Perkin Elmer Instr.	N610-0133	0781
Perkin Elmer Instr.	N610-0133	0783
Perkin Elmer Instr.	N610-0133	0893
Perkin Elmer Instr.	N610-0133	1418
Perkin Elmer Instr.	N610-0133	1655
Perkin Elmer Instr.	N610-0133	1656
Perkin Elmer Instr.	N610-0133	1705
Perkin Elmer Instr.	N610-0133	1963
Perkin Elmer Instr.	N610-0133	2161
Perkin Elmer Instr.	N610-0133	3328
Perkin Elmer Instr.	N610-0133	3500
Perkin Elmer Instr.	N610-0133	3913
Perkin Elmer Instr.	N610-0133	3914
Perkin Elmer Instr.	N610-0133	4450
Perkin Elmer Instr.	N610-0133	5804
Perkin Elmer Instr.	N610-0133	5805
Perkin Elmer Instr.	N610-0133	5827
Hewlett Packard	G1533A	K1921
Hewlett Packard	G1533A	K4747

**Electron Capture Detectors Transferred or Disposed By Licensee**

Manufacturer	Model No.	Serial No.	Manufacturer	Model No.	Serial#
C. J. Bruyn and Co.	N610-0133	0611	Perkin Elmer Instr.	N610-0063	5805
C. J. Bruyn and Co.	N610-0133	0628	Perkin Elmer Instr.	N610-0063	6323
Perkin Elmer Instr.	L413-0128	3879	Perkin Elmer Instr.	N610-0063	6325
Perkin Elmer Instr.	N610-0063	2407	Perkin Elmer Instr.	N610-0063	6358
Perkin Elmer Instr.	N610-0063	3350			
Perkin Elmer Instr.	N610-0063	4340			
Perkin Elmer Instr.	N610-0063	4464			
Perkin Elmer Instr.	N610-0063	4707			
Perkin Elmer Instr.	N610-0063	4838			
Perkin Elmer Instr.	N610-0063	4842			
Perkin Elmer Instr.	N610-0063	4843			
Perkin Elmer Instr.	N610-0063	4850			
Perkin Elmer Instr.	N610-0063	4851			
Perkin Elmer Instr.	N610-0063	4852			
Perkin Elmer Instr.	N610-0063	5326			
Perkin Elmer Instr.	N610-0063	5327			
Perkin Elmer Instr.	N610-0134	5824			
Perkin Elmer Instr.	N610-0134	5825			
Perkin Elmer Instr.	N610-0063	5826			
Perkin Elmer Instr.	N610-0063	5827			
Perkin Elmer Instr.	N610-0063	5804			