

**SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION**

<p>1. LICENSEE/LOCATION INSPECTED:</p> <p>California Institute of Technology 1200 East California Boulevard Pasadena, CA 91125 Location Inspected: Pellston, MI REPORT NUMBER(S) 2016007</p>	<p>2. NRC/REGIONAL OFFICE</p> <p>Region III U. S. Nuclear Regulatory Commission 2443 Warrenville Road, Suite 210 Lisle, IL 60532-4352</p>	
<p>3. DOCKET NUMBER(S)</p> <p>150-00004</p>	<p>4. LICENSE NUMBER(S)</p> <p>CA-0314-19</p>	<p>5. DATE(S) OF INSPECTION</p> <p>September 14, 2016</p>

**LICENSEE:**

The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

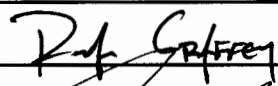
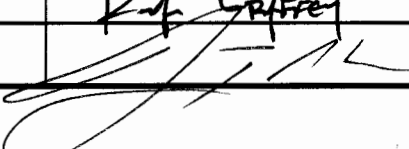
- 1. Based on the inspection findings, no violations were identified.
- 2. Previous violation(s) closed.
- 3. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy, to exercise discretion, were satisfied.

\_\_\_\_\_ Non-cited violation(s) were discussed involving the following requirement(s):

- 4. During this inspection, certain of your activities, as described below and/or attached, were in violation of NRC requirements and are being cited in accordance with NRC Enforcement Policy. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.  
(Violations and Corrective Actions)

**Statement of Corrective Actions**

I hereby state that, within 30 days, the actions described by me to the Inspector will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested.

TITLE	PRINTED NAME	SIGNATURE	DATE
LICENSEE'S REPRESENTATIVE			
NRC INSPECTOR	Ryan Craffey		9/22/16
BRANCH CHIEF	Aaron McCraw		9/23/16

**Docket File Information**

**SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION**

1. LICENSEE/LOCATION INSPECTED:  California Institute of Technology 1200 East California Boulevard Pasadena, CA 91125 Location Inspected: Pellston, MI  REPORT NUMBER(S) 2016007	2. NRC/REGIONAL OFFICE  Region III U. S. Nuclear Regulatory Commission 2443 Warrenville Road, Suite 210 Lisle, IL 60532-4352
---	---

3. DOCKET NUMBER(S)  150-00004	4. LICENSE NUMBER(S)  CA-0314-19	5. DATE(S) OF INSPECTION  September 14, 2016
--------------------------------------	--	--

6. INSPECTION PROCEDURES USED  87126	7. INSPECTION FOCUS AREAS  FE 1-3, 6, 7
--	---

**SUPPLEMENTAL INSPECTION INFORMATION**

1. PROGRAM CODE(S)  03620	2. PRIORITY  5	3. LICENSEE CONTACT  Haick Issaian - RSO	4. TELEPHONE NUMBER  (626) 396-6727
---------------------------------	----------------------	--	---

Main Office Inspection                      Next Inspection Date:           TBD          

Field Office Inspection \_\_\_\_\_

Temporary Job Site Inspection 9133 Biological Road, Pellston, MI

**PROGRAM SCOPE**

This was an unannounced field inspection of a private university (2,300 students, 300 faculty) authorized by the State of California to conduct research and development at its campus in Pasadena, California, at a laboratory in Corona del Mar, California, and at temporary job sites within the State. The licensee conducted these activities in NRC jurisdiction under a reciprocity request filed in January 2016 for the calendar year. This inspection was limited to a review of the licensee's use of two in-line air ionizers, each nominally containing 10 mCi of polonium-210, for atmospheric research at the University of Michigan's Biological Research Station in Pellston, Michigan. The licensee conducted these studies between June and August 2016, but amended the request to include most of September to accommodate delays in the returning the sources. At the time of the inspection, the licensee's California-based research staff had left the station for the summer. In their absence, the licensee had retained the services of a research laboratory specialist with the University of Michigan on a contract basis to maintain control of the sources, and to oversee their return.

**PERFORMANCE OBSERVATIONS:** The inspector toured the facility where the ionizers were currently stored. The inspector found that the devices were kept in the contracted staff member's laboratory, which was locked when unoccupied. At the time of the inspection, the sources were packaged in a Type A transportation container. Independent surveys of this package found no readings distinguishable from background. The inspector interviewed University of Michigan and, via telephone, Cal Tech staff who were involved with licensed activities, and found that these individuals were knowledgeable of radiation protection principles and regulatory requirements. The inspector discussed with these individuals the licensee's use and control of the material, as well as the plans to return the sources via common carrier. The licensee's staff stated that, because of multiple delays in attempting to ship a Type A package, the contracted lab specialist would, once trained in Cal Tech's material handling and shipping procedures, ship the devices individually as instruments in excepted packages, once decayed below the applicable limit of activity (5.3 mCi) for such a shipment. The inspector confirmed that the licensee should be able to ship the material in this manner as soon as September 20, 2016. On September 21, 2016, the licensee's RSO confirmed that both sources had been successfully returned to California via overnight delivery.

No violations of significance were identified as a result of this inspection.