EPA REGION 2
CARIBBEAN ENVIRONMENTAL PROTECTION DIVISION

October 17, 2024

Via Electornic Mail

Mr. Jorge F. Ramos
Health, Occupational and
Environmental Safety Office Director
University of Puerto Rico Rio Piedras Campus
P.O. Box 22785 431 Ponce de Leon Ave.
Rio Piedras, Puerto Rico 00931
jorge.ramos10@upr.edu

RE: NOTICE OF VIOLATION, RCRA § 3007 Information Request
University of Puerto Rico Rio Piedras Campus
Ref. No. CEPD-RCRA-24-0442
EPA ID No. PRR000012088

Dear Mr. Ramos:

The U.S. Environmental Protection Agency (EPA) is charged with the protection of human health and the environment under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901 et seq. Pursuant to RCRA, as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), the EPA promulgated rules, regulations, and standards governing the handling and management of hazardous waste as set forth in Title 40 of the Code of Federal Regulations 40 C.F.R. Parts 260-272.

On September 10, 1992, EPA promulgated regulations under the RCRA program to establish Standards for the Management of Used Oil Destined for Recycling (57 Federal Register 41566). These regulations are in 40 C.F.R. Part 279 and the amended sections of 40 C.F.R. Parts 260, 261, 266 and 271. These regulations became effective on March 8, 1993.

The Commonwealth of Puerto Rico is not authorized by the EPA to conduct a hazardous waste program under Section 3006 of RCRA, 42 U.S.C. § 6926 and is not authorized to enforce RCRA. The EPA has retained its authority to enforce the hazardous waste rules and regulations in Puerto Rico.

The Notice of Violation (NOV) portion of this letter (see ATTACHMENT I) is issued pursuant to Section 3008 of RCRA. Issuance of this NOV and compliance or non-compliance with its terms does not in any way preclude EPA from the issuance of further NOVs, Information Requests, and/or taking formal enforcement action against the University of Puerto Rico Rio Piedras Campus (the "Facility") in Rio Piedras, Puerto Rico, including monetary penalties, under Section 3008 of RCRA, and any other

applicable regulation or statute.

Pursuant to the provisions of Section 3007 of RCRA, EPA may require parties who handle or have handled hazardous waste to provide information relating to such wastes. Pursuant to the statutory provisions cited above, EPA hereby requires that you provide the information requested in ATTACHMENT II, using the instructions and definitions included in ATTACHMENT III. This information is necessary to determine the compliance status of the Facility.

If you have not already done so, you must take immediate action to correct the numbered violations described in ATTACHMENT I. Please submit, within thirty (30) days of the receipt of this correspondence, a response which includes (1) a description of the actions you have taken to correct the numbered violations noted in ATTACHMENT I, (2) documentation that the numbered violations have been corrected, and (3) a description of the procedures that will be put into place to prevent such violations from occurring in the future.

Please provide the information requested no later than thirty (30) calendar days from receipt of this letter. Requests for additional time must be justified. Requests for additional time must be made within ten (10) calendar days of receipt of this letter. The response must be signed by a responsible official or agent of your Facility, using the form in ATTACHMENT IV to this letter.

The response to the request in the ATTACHMENT II must be mailed to the following address:

Mr. Eduardo R. González, P.E., Enforcement Officer
Response and Remediation Branch
U.S. Environmental Protection Agency - Region 2
Caribbean Environmental Protection Division
City View Plaza, Suite 7000
#48 PR-165 Km 1.2
Guaynabo, P.R. 00968-8069

You may, if you so desire, assert a business confidentiality claim covering all or part of the information herein requested. The claim may be asserted by placing on (or attaching to) the information at the time it is submitted, a cover sheet, stamped or typed with the legend, or other suitable form of notice, such as "trade secret," "proprietary," or "company confidential." The claim should set forth the information requested in 40 C.F.R. § 2.204(e)(4). Information covered by such a claim will be disclosed by EPA only to the extent permitted by, and by means of procedures set forth in, 40 C.F.R. Part 2. EPA will review the information to determine the extent of confidentiality of the information, and may, at its discretion, challenge the confidentiality claim pursuant to the procedures set forth at 40 C.F.R. Part 2. If no such claim accompanies the information when it is received by EPA, it may be made available to the public by EPA without further notice to you. If you contend that some or all the submitted information is entitled to confidential treatment, specify which portions of the information you consider confidential. For each item or class of information that you identify as being subject to your claim, please answer the questions in ATTACHMENT V, giving as much detail as possible. Please note that you bear the burden of substantiating your confidentiality claim. Conclusory allegations will be given little or no weight in the determination.

This information request is not subject to the requirements of the Paperwork Reduction Act (PRA), as amended, 44 U.S.C. §§ 3501 et seq.

Failure to respond in full to the above requirements is a violation of RCRA and will result in federal enforcement action pursuant to Section 3008 of RCRA, including the assessment of a monetary penalty. Such penalties may be up to $121,275 per day per violation as of December 27, 2023. [88 FR 89309]

When submitting your response, please attach to the Certification of Answers to Request for Information (ATTACHMENT IV, below), a list of persons, by name, position or title, and company, who prepared or assisted in the preparation of the responses to this information request.

Please also provide a brief description of the basis for their association with the Facility. Please enclose enough information to document your answers and refer to the Compliance Assistance Publications in ATTACHMENT VI.

If you have any questions regarding this matter, please contact Mr. Eduardo González, P.E. at (787) 977-5839 or e-mail at gonzalez.eduardo@epa.gov.

Sincerely,

CARMEN GUERRERO PEREZ

Digitally signed by CARMEN GUERRERO PEREZ
Date: 2024.10.17 11:34:57 -04'00'

Carmen R. Guerrero Pérez
Director

Enclosures:

1. ATTACHMENT I - Notice of Violation
2. ATTACHMENT II - Information Request
3. ATTACHMENT III - Instructions & Definitions
4. ATTACHMENT IV- Certification of Answers
5. ATTACHMENT V - Substantiation of Confidential Business Information Claim
6. ATTACHEMENT VI - Copies of Compliance Assistance Publications

cc: Maria V. Rodríguez, Chief
Land Pollution Control Division
Puerto Rico Department of Natural and Environmental Resources
P.O. Box 366147, Puerta de Tierra Station
San Juan, PR 00906-6600

ATTACHMENT I
Notice of Violation

University of Puerto Rico Rio Piedras Campus
Ref. No. CEPD-RCRA-24-0442
EPA ID No. PRR000012088

On or about June 27 thru 28, 2024, a duly authorized representative of EPA conducted a RCRA compliance evaluation inspection (the "RCRA Inspection") at University of Puerto Rico Rio Piedras Campus located in 431 Ponce de Leon Avenue, Rio Piedras, Puerto Rico (the "Facility"), pursuant to Section 3007 of RCRA, 42 U.S.C. § 6927, to determine your Facility's compliance with certain federal hazardous waste accumulation, storage, and disposal regulations. Based on a review of the information obtained during and after this RCRA Inspection, the following specific violations of the requirements for large quantity hazardous waste generators were found:

General Requirements (40 C.F.R. § 262 Subpart A)

1. 40 C.F.R. § 262.11 requires that a person who generates a solid waste, as defined in 40 C.F.R. § 261.2, must make an accurate determination as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations.

    a. At the time of the RCRA Inspection, the Facility did not make a hazardous waste determination of the contents of approximately 37 bottles containing expired (since before 1999), orphaned, abandoned, unidentified, or otherwise discarded chemical reagents at the Materials Characterization Research Center laboratory area. Among the chemical reagents identified from a safety distance stored without segregation included Ethyl Alcohol (2008), 1, 4 Dioxane, Tetrahydrofuran (1999), Ethyl Acetate (2008), Reagent alcohol (2003), Hydrochloric acid solution (2016), Ethyl ether (2013), 1-Chlorobutane, Ethylenediamine, Acetic Acid Anhydrous, Potassium Hydroxide, Sodium Sulfate Anhydrous, Potassium Sulfate, Tetrabutylammonium hydroxide solution (2022), Formaldehyde, and various 4-Liter bottles HPLC containing flammable and combustible liquids which were no longer intended to be used.
    b. At the Molecular Cellular Research Laboratory, there was 4-Liter Picric Acid (2-hydroxy-1,3,5-trinitrobenzene, CAS Number 88-89-1) that was old and expired without a proper hazardous waste determination or characterized as, "Hazardous Waste." Although, the Picric Acid can be a useful laboratory reagent; however, dry picric acid is a shock-sensitive explosive capable of releasing energy on a level like dynamite.

    At time of the RCRA Inspection, there were corrosive, flammable, reactive, toxic and poison chemical wastes reagents that some were donated to the University, expired (since before 1999), not in use, and stored for a long period of time and never declared as "solid waste," or notified to the Health, Occupational and Environmental Safety Office (OPASO) for final disposition. There was no hazardous waste determination being performed on abandoned, expired, not in use, discarded hazardous chemical waste inventory before its final disposal nor have been managed under the Facility's Laboratory Management Plan.

The Facility's failure to make the hazardous waste determination of the contents of numerous abandoned, expired, (since before 1999), not in use, discarded chemical reagents located at various research laboratory areas, as indicated in item 1 above, is a violation of 40 C.F.R. § 262.11.

Satellite Accumulation Area Regulations (40 C.F.R. § 262.15)

2. 40 C.F.R. § 262.15(a)(5)(i) requires a generator must mark or label its container with the words "Hazardous Waste."

    a. At the time of the RCRA Inspection, the Facility did not label with words "Hazardous Waste," one (1) 3-gallon white container with a spent mobile phase "HPLC" (ACN/Water/ETOH 90/10) connected to a high-performance liquid chromatography (HPLC) located at the Materials Characterization Research Center laboratory satellite area.

The Facility's failure to mark or label a container with the words "Hazardous Waste," located in a Satellite Accumulation Area, as indicated in item 2 above, is a violation of 40 C.F.R. § 262.15(a)(5)(i).

3. 40 C.F.R. § 262.15(a)(5)(ii) requires a generator must mark or label its container with an indication of the hazards of the contents (examples include, but are not limited to, the applicable hazardous waste characteristic(s) (i.e., ignitable, corrosive, reactive, toxic); hazard communication consistent with the Department of Transportation requirements at 49 C.F.R. Part 172 Subpart E (labeling) or Subpart F (placarding); a hazard statement or pictogram consistent with the Occupational Safety and Health Administration Hazard Communication Standard at 29 C.F.R. § 1910.1200; or a chemical hazard label consistent with the National Fire Protection Association code 704).

    At the time of the RCRA Inspection, the inspector observed that numerous containers located in the Satellite Accumulation Areas (SAAs) were not marked or labeled with their hazard communication statements or pictograms at the following areas:

    a. At the Organic Chemistry Laboratory CN-101, there was one (1) 5-gallon white container with "Inorganic Aqueous Wastes," labeled with the words "Hazardous Waste," and identified with RCRA hazardous waste code "D002" (i.e., corrosive) and but not with its hazard communication pictogram "Flammable Liquids."
    b. At the Organic Chemistry Laboratory CN-101, there was one (1) 5-gallon white container with "Solid Wastes" contaminated with laboratory silica trash and desiccant" labeled with the words "Hazardous Waste," and identified with RCRA hazardous waste code "F003" (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram "Flammable Solids. "
    c. At the Organic Chemistry Laboratory CN-102, there was one (1) 5-gallon white container with "Solid Wastes" contaminated with laboratory silica trash and desiccant" labeled with the words "Hazardous Waste," and identified with RCRA hazardous waste code "F003" (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram "Flammable Solids. "
    d. At the Organic Chemistry Laboratory CN-104, there was one (1) 5-gallon white container with "Solid Wastes" contaminated with laboratory silica trash and desiccant" labeled with the words "Hazardous Waste," and identified with RCRA hazardous waste code "F003" (i.e., solids

contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram “Flammable Solids. “

e. At the General Chemistry Laboratory CN-204-A, there was one (1) 5-gallon white container with “Heavy Metals Aqueous Solution Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D002 (Corrosive), D005 (Barium), D006 (Cadmium), D011 (Silver) and without its hazard communication pictogram “Corrosive Liquids.”
f. At the General Chemistry Laboratory CN-204-A, there was one (1) 5-gallon white container with “Heavy Metals Aqueous Solution Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D002 (Corrosive), D005 (Barium), D006 (Cadmium), D011 (Silver) and without its hazard communication pictogram “Corrosive Liquids.”
g. At the General Chemistry Laboratory CN-204-A, there was one (1) 5-gallon white container with “Solid Wastes” contaminated with laboratory silica trash and desiccant” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste code “F003” (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram “Flammable Solids.“
h. At the General Chemistry Laboratory CN-204-A, there were two (2) 1-liter white containers with “Spent Non-Halogenated Solvent Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001 (ignitable), D035 (Methyl Ethyl Ketone), F003 and F005 (Non-Halogenated Solvents) but without its hazard communication pictograms “Flammable Liquids.”
i. At the General Chemistry Laboratory CN-204-B, there was one (1) 5-gallon white container with “Organic Aqueous Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001” and “D002” (i.e., ignitable, and corrosive) and without its hazard communication pictograms “Flammable and Corrosive Liquids.“
j. At the General Chemistry Laboratory CN-204-B, there was one (1) 5-gallon white container with “Solid Wastes” contaminated with laboratory silica trash and desiccant” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste code “F003” (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram “Flammable Solids.“
k. At the General Chemistry Laboratory CN-204-B, there was one (1) 1-liter white container with “Spent Non-Halogenated Solvent Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001 (ignitable), D035 (Methyl Ethyl Ketone), F003 and F005 (Non-Halogenated Solvents) but without its hazard communication pictograms “Flammable Liquids.“
l. At the General Chemistry Laboratory CN-204-B, there was one (1) 1-liter white container with “Spent Halogenated Solvent Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001 (ignitable) D002 (corrosive), D021 (Chlorobenzene), D022 (Chloroform), F002, F003 and F005 (Halogenated Solvents) and without its hazard communication pictogram “Flammable Liquids.“
m. At the General Chemistry Laboratory CN-204-B, there was one (1) 1-Liter white container with “Heavy Metals Aqueous Solution Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D002 (Corrosive), D005 (Barium), D006 (Cadmium), D011 (Silver) and without its hazard communication pictogram “Corrosive Liquids.“

n. At the General Chemistry Laboratory CN-203-A, there was one (1) 5-gallon white container with “Solid Wastes” contaminated with laboratory silica trash and desiccant” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste code “F003” (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram “Flammable Solids.“
o. At the General Chemistry Laboratory CN-203-A, there was one (1) 1-liter white containers with “Spent Non-Halogenated Solvent Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001 (ignitable), D035 (Methyl Ethyl Ketone), F003 and F005 (Non-Halogenated Solvents) but without its hazard communication pictograms “Flammable Liquids.“
p. At the General Chemistry Laboratory CN-203-A, there was one (1) 1-liter white container with “Spent Halogenated Solvent Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001 (ignitable) D002 (corrosive), D021 (Chlorobenzene), D022 (Chloroform), F002, F003 and F005 (Halogenated Solvents) and without its hazard communication pictogram “Flammable Liquids.“
q. At the General Chemistry Laboratory CN-203-B, there was one (1) 5-gallon white container with “Solid Wastes” contaminated with laboratory silica trash and desiccant” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste code “F003” (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram “Flammable Solids.“
r. At the General Chemistry Laboratory CN-203-B, there was one (1) 1-liter white containers with “Spent Non-Halogenated Solvent Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001 (ignitable), D035 (Methyl Ethyl Ketone), F003 and F005 (Non-Halogenated Solvents) but without its hazard communication pictograms “Flammable Liquids.“
s. At the General Chemistry Laboratory CN-203-B, there was one (1) 1-liter white container with “Spent Halogenated Solvent Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001 (ignitable) D002 (corrosive), D021 (Chlorobenzene), D022 (Chloroform), F002, F003 and F005 (Halogenated Solvents) and without its hazard communication pictogram “Flammable Liquids.“
t. At the General Chemistry Laboratory CN-203-B, there was one (1) 1-Liter white container with “Heavy Metals Aqueous Solution Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D002 (Corrosive), D005 (Barium), D006 (Cadmium), D011 (Silver) and without its hazard communication pictogram “Corrosive Liquids.“
u. At the Instrumental Chemistry Laboratory CN-303, there was one (1) 5-gallon white container with “Solid Wastes” contaminated with laboratory silica trash and desiccant” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste code “F003” (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram “Flammable Solids.“
v. At the Physical Chemistry Laboratory CN-301, there was one (1) 5-gallon white container with “Solid Wastes” contaminated with laboratory silica trash and desiccant” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste code “F003” (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram “Flammable Solids.“

w. At the Physical Chemistry Laboratory CN-301, there was one (1) 1-Liter white container with "Heavy Metals Aqueous Solution Wastes," labeled with the words "Hazardous Waste," and identified with RCRA hazardous waste codes "D002 (Corrosive), D005 (Barium), D006 (Cadmium), D011 (Silver) and without its hazard communication pictogram "Corrosive Liquids."
x. At the General Biology Laboratory CN-234, there was one (1) 5-gallon white container with "Solid Wastes" contaminated with laboratory silica trash and desiccant" labeled with the words "Hazardous Waste," and identified with RCRA hazardous waste code "F003" (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram "Flammable Solids."
y. At the General Biology Laboratory CN-236, there was one (1) 5-gallon white container with "Solid Wastes" contaminated with laboratory silica trash and desiccant" labeled with the words "Hazardous Waste," and identified with RCRA hazardous waste code "F003" (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram "Flammable Solids."
z. At the Nanotechnology Chemistry Laboratory CN-115, there was one (1) 5-gallon white container with "Solid Wastes" contaminated with laboratory silica trash and desiccant" labeled with the words "Hazardous Waste," and identified with RCRA hazardous waste code "F003" (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram "Flammable Solids."
aa. At the Nanotechnology Chemistry Laboratory CN-115, there was one (1) 5-gallon white containers with "Spent Non-Halogenated Solvent Wastes," labeled with the words "Hazardous Waste," and identified with RCRA hazardous waste codes "D001 (ignitable), D035 (Methyl Ethyl Ketone), F003 and F005 (Non-Halogenated Solvents) but without its hazard communication pictograms "Flammable Liquids."
bb. At the Nanotechnology Chemistry Laboratory CN-115, there was one (1) 5-gallon white container with "Spent Halogenated Solvent Wastes," labeled with the words "Hazardous Waste," and identified with RCRA hazardous waste codes "D001 (ignitable) D002 (corrosive), D021 (Chlorobenzene), D022 (Chloroform), F002, F003 and F005 (Halogenated Solvents) and without its hazard communication pictogram "Flammable Liquids."
cc. At the Nanotechnology Chemistry Laboratory CN-115, there was one (1) 5-gallon white container with "Heavy Metals Aqueous Solution Wastes," labeled with the words "Hazardous Waste," and identified with RCRA hazardous waste codes "D002 (Corrosive), D005 (Barium), D006 (Cadmium), D011 (Silver) and without its hazard communication pictogram "Corrosive Liquids."
dd. At the Physical Science Laboratory DMN-411, there were two (2) 5-gallon white containers with "Heavy Metals Aqueous Solution Wastes," labeled with the words "Hazardous Waste," and identified with RCRA hazardous waste codes "D002 (Corrosive), D005 (Barium), D006 (Cadmium), D011 (Silver) and with its hazard communication pictogram "Corrosive Liquids."
ee. At the Physical Science Laboratory DMN-411, there was one (1) 5-gallon white container with "Solid Wastes" contaminated with laboratory silica trash and desiccant" labeled with the words "Hazardous Waste," and identified with RCRA hazardous waste code "F003" (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram "Flammable Solids."
ff. At the Physical Science Laboratory DMN-416, there was one (1) 5-gallon white container with "Solid Wastes" contaminated with laboratory silica trash and desiccant" labeled with the

words “Hazardous Waste,” and identified with RCRA hazardous waste code “F003” (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram “Flammable Solids.“

gg. At the Physical Science Laboratory DMN-416, there was one (1) 1-Liter white container with “Heavy Metals Aqueous Solution Wastes,” labeled with the words “Hazardous Waste,” and identified as Cupper Sulfate hazardous waste solution. The container was not properly identified with its hazard communication pictogram “Corrosive Liquids.“

hh. At the Physical Science Laboratory DMN-416, there was one (1) 1-Liter white container with “Heavy Metals Aqueous Solution Wastes,” labeled with the words “Hazardous Waste,” and identified as Cupper Sulfate, Iron and Acetic Acid hazardous waste solution. The container was not properly identified with its hazard communication pictogram “Corrosive Liquids.”

ii. At the Physical Science Laboratory DMN-416, there was one (1) 1-Liter white container with “Heavy Metals Aqueous Solution Wastes,” labeled with the words “Hazardous Waste,” and identified as Cupper Oxide hazardous waste solution. The container was not properly identified with its hazard communication pictogram “Corrosive Liquids.“

jj. At the Physical Science Laboratory DMN-412, there was one (1) 5-gallon white container with “Heavy Metals Aqueous Solution Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D002 (Corrosive), D005 (Barium), D006 (Cadmium), D011 (Silver) and with its hazard communication pictogram “Corrosive Liquids.”

kk. At the Physical Science Laboratory DMN-412, there was one (1) 5-gallon white container with “Solid Wastes” contaminated with laboratory silica trash and desiccant” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste code “F003” (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram “Flammable Solids.“

ll. At the Physical Science Laboratory DMN-414, there was one (1) 5-gallon white container with “Solid Wastes” contaminated with laboratory silica trash and desiccant” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste code “F003” (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram “Flammable Solids.“

mm. At the Physical Science Laboratory DMN-413, there was one (1) 5-gallon white container with “Solid Wastes” contaminated with laboratory silica trash and desiccant” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste code “F003” (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram “Flammable Solids.“

nn. At the Physical Science Laboratory DMN-423-B, there was one (1) 5-gallon white container with “Ethidium Bromide Gel Wastes,” labeled with the words “Hazardous Waste,” and not identified with its RCRA hazardous waste code nor its hazard communication pictogram as required by RCRA regulations.

oo. At the Physical Science Laboratory DMN-423-B, there was one (1) 5-gallon white container with “Ethidium Bromide Aqueous Solution Wastes,” labeled with the words “Hazardous Waste,” and not identified with its RCRA hazardous waste code nor its hazard communication pictogram as required by RCRA regulations.

pp. At the Molecular Cellular Research Laboratory JGD-220, there was one (1) 5-gallon white container with “Dimethyl Sulfide, Ethanol, Dimethyl Sulfoxide, and Picric Acid,” labeled with the words “Hazardous Waste,” and not identified with its RCRA hazardous waste code nor its hazard communication pictogram as required by RCRA regulations.

qq. At the Molecular Cellular Research Laboratory JGD-220, there was one (1) 5-gallon white container with "Formamide and Paraformaldehyde Aqueous Wastes," labeled with the words "Hazardous Waste," and identified with its RCRA hazardous waste code "F003" (Non-Halogenated Solvents), but not its hazard communication pictogram as required by RCRA regulations.

rr. At the Molecular Cellular Research Laboratory JGD-220, there was one (1) 5-gallon white container with "Silver Nitrate," labeled with the words "Hazardous Waste," and not identified with its RCRA hazardous waste code nor its hazard communication pictogram as required by RCRA regulations.

ss. At the Molecular Cellular Research Laboratory JGD-220, there was one (1) 5-gallon white container with "Solid Wastes" contaminated with laboratory silica trash and desiccant" labeled with the words "Hazardous Waste," and identified with RCRA hazardous waste code "F003" (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram "Flammable Solids."

tt. At the Molecular Cellular Research Laboratory JGD-220, there was one (1) 5-gallon white container with "Solid Wastes - Trizol" contaminated with laboratory silica trash and desiccant" labeled with the words "Hazardous Waste," and identified with RCRA hazardous waste code "F003" (i.e., solids contaminated with non-halogenated solvents). The container was not properly identified with its hazard communication pictogram "Flammable Solids."

uu. At the Molecular Cellular Research Laboratory JGD-220, there was one (1) 5-gallon white container with "Laminillas - Microscope Slides," labeled with the words "Hazardous Waste," and not identified with its RCRA hazardous waste code nor its hazard communication pictogram as required by RCRA regulations.

vv. At the Biosensor Research for Health Applications Laboratory FB-140 (SAA No.1), there were six (6) 5-gallon white containers containing radioactive waste of "Uranyl Acetate," being stored inside a blue cabinet labeled with the words "Hazardous Waste," and not identified with RCRA hazardous waste codes nor its hazard communication pictograms as required by RCRA regulations. There was one (1) container with its RCRA hazardous waste codes "F003" (i.e., solids contaminated with non-halogenated solvents and Uranyl).

ww. At the Biosensor Research for Health Applications Laboratory FB-140 (SAA No. 1), there four (4) 1-Liter white bottles containing radioactive waste of "Uranyl Acetate," being stored inside a blue cabinet labeled with the words "Hazardous Waste," and not identified with RCRA hazardous waste codes nor its hazard communication pictograms as required by RCRA regulations.

xx. At the Biosensor Research for Health Applications Laboratory FB-140 (SAA No. 2), the was one (1) 1-Liter white bottles containing sharp "Syringes," contaminated with spent alcohol being stored on top of a bone white cabinet labeled with the words "Hazardous Waste," and not identified with its RCRA hazardous waste code nor its hazard communication pictogram as required by RCRA regulations.

yy. At the Electrochemistry Research Laboratory FB-101-A (Lithium Batteries) (SAA No. 1), there were four (4) 1-Liter white bottles containing "Lithium Wastes," inside a pressurized chamber on top of a bench working station labeled with the words "Hazardous Waste," and not identified with RCRA hazardous waste codes nor its hazard communication pictograms as required by RCRA regulations.

zz. At the Materials Science Research Laboratory FB-204 & FB-205 (SAA No. 1 FB-205), there was one (1) 1-Liter white container with "Heavy Metals Aqueous Solution Wastes," labeled with

the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D002 (Corrosive), D005 (Barium), D006 (Cadmium), D011 (Silver). The container did not have its hazard communication pictogram “Corrosive Liquids.“

aaa. At the Materials Science Research Laboratory FB-204 & FB-205 (SAA No. 3 FB-204), there was one (1) gallon white container containing “Carbon Black Graphite Wastes,” nearby a blue cabinet labeled with the words “Hazardous Waste,” and not identified with RCRA hazardous waste codes nor its hazard communication pictograms as required by RCRA regulations.

bbb. At the Materials Characterization Research Center FB-267-A (SAA No. 1), there was one (1) 5-gallon white container with a spent mobile phase “HPLC” (ACN/Water/ETOH 90/10) connected to a high-performance liquid chromatography (HPLC) labeled with the words “Hazardous Waste,” not identified with RCRA hazardous waste code “D001” (ignitable) nor with its hazard communication pictogram “Flammable Liquids.”

ccc. At the Materials Characterization Research Center FB-267-A (SAA No. 1), there was one (1) 3-gallon white container with a spent mobile phase “HPLC” (ACN/Water/ETOH 90/10) connected to a high-performance liquid chromatography (HPLC) not labeled with the words “Hazardous Waste,” not identified with RCRA hazardous waste code “D001” (ignitable) nor with its hazard communication pictogram “Flammable Liquids.”

The Facility’s failure to mark or label the containers with their hazard communication statements or pictograms located in a Satellite Accumulation Areas, as indicated in item 3 above, is a violation of 40 C.F.R. § 262.15(a)(5)(ii).

4. 40 C.F.R. § 262.15(a)(3)(i) requires that incompatible wastes, or incompatible wastes and materials, must not be placed in the same container.

At the time of the RCRA Inspection, the Facility had maintained numerous containers with “Organic Aqueous Wastes,” labeled with the words “Hazardous Waste,” and containing organic solvents, inorganic acids, organic acids, and bases characterized as corrosive “D002” and ignitable “D001” RCRA hazardous wastes. All containers were storing together incompatible hazardous wastes. The containers were also identified with their hazard communication pictograms as “Flammable and Corrosive Liquids, “which are incompatible wastes and identified in approximately 15 Satellite Accumulation Areas at following laboratories:

a. At the Organic Chemistry Laboratory CN-101, there was one (1) 5-gallon white container with “Organic Aqueous Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001” and “D002” (i.e., ignitable, and corrosive) and with its hazard communication pictograms “Flammable and Corrosive Liquids,” both incompatible.
b. At the Organic Chemistry Laboratory CN-102, there was one (1) 5-gallon white container with “Organic Aqueous Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001” and “D002” (i.e., ignitable, and corrosive) and with its hazard communication pictograms “Flammable and Corrosive Liquids, “both incompatible.
c. At the Organic Chemistry Laboratory CN-104, there was one (1) 5-gallon white container with “Organic Aqueous Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001” and “D002” (i.e., ignitable, and corrosive) and with its hazard communication pictograms “Flammable and Corrosive Liquids, “both incompatible.
d. At the General Chemistry Laboratory CN-204-A, there was one (1) 5-gallon white container

with “Organic Aqueous Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001” and “D002” (i.e., ignitable, and corrosive) and with its hazard communication pictograms “Flammable and Corrosive Liquids, “both incompatible.

e. At the General Chemistry Laboratory CN-204-B, there was one (1) 5-gallon white container with “Organic Aqueous Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001” and “D002” (i.e., ignitable, and corrosive) and with its hazard communication pictograms “Flammable and Corrosive Liquids, “both incompatible.
f. At the General Chemistry Laboratory CN-203-A, there was one (1) 5-gallon white container with “Organic Aqueous Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001” and “D002” (i.e., ignitable, and corrosive) and with its hazard communication pictograms “Flammable and Corrosive Liquids, “both incompatible.
g. At the General Chemistry Laboratory CN-203-B, there was one (1) 5-gallon white container with “Organic Aqueous Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001” and “D002” (i.e., ignitable, and corrosive) and with its hazard communication pictograms “Flammable and Corrosive Liquids, “both incompatible.
h. At the Instrumental Chemistry Laboratory CN-303, there was one (1) 5-gallon white container with “Organic Aqueous Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001” and “D002” (i.e., ignitable, and corrosive) and with its hazard communication pictograms “Flammable and Corrosive Liquids, “both incompatible.
i. At the Physical Chemistry Laboratory CN-301, there was one (1) 5-gallon white container with “Organic Aqueous Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001” and “D002” (i.e., ignitable, and corrosive) and with its hazard communication pictograms “Flammable and Corrosive Liquids, “both incompatible.
j. At the Environmental Analytical Chemistry Laboratory CN-119, there were Two (2) 5-gallon white container with “Organic Aqueous Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001” and “D002” (i.e., ignitable, and corrosive) and with its hazard communication pictograms “Flammable and Corrosive Liquids, both incompatible.
k. At the Nanotechnology Chemistry Laboratory CN-115, there was one (1) 5-gallon white container with “Organic Aqueous Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001” and “D002” (i.e., ignitable, and corrosive) and with its hazard communication pictograms “Flammable and Corrosive Liquids, “both incompatible.
l. At the Biosensor Research for Health Applications Laboratory FB-140, there was one (1) 5-gallon white container with “Organic Aqueous Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001” and “D002” (i.e., ignitable, and corrosive) and with its hazard communication pictograms “Flammable and Corrosive Liquids, “both incompatible.
m. At the Materials Science Research Laboratory FB-204 & FB-205, there was one (1) 5-gallon white container with “Organic Aqueous Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001” and “D002” (i.e., ignitable, and corrosive) and with its hazard communication pictograms “Flammable and Corrosive Liquids, “both incompatible.
n. At the Materials Characterization Research Center FB-267-A, there was one (1) 5-gallon white container with “Organic Aqueous Wastes,” labeled with the words “Hazardous Waste,” and identified with RCRA hazardous waste codes “D001” and “D002” (i.e., ignitable, and

corrosive) and with its hazard communication pictograms "Flammable and Corrosive Liquids, "both incompatible.

o. At the Ecological Research Laboratory FB-253 ("ECOLAB"), there was one (1) 5-gallon white container with "Organic Aqueous Wastes," labeled with the words "Hazardous Waste," and identified with RCRA hazardous waste codes "D001" and "D002" (i.e., ignitable, and corrosive) and with its hazard communication pictograms "Flammable and Corrosive Liquids, "both incompatible.

The Facility's failure to properly manage and place in the same container incompatible wastes located in the Satellite Accumulation Areas, as indicated in item 4 above, is a violation of 40 C.F.R. § 262.15(a)(3)(i).

5. 40 C.F.R. § 262.15(a)(3)(iii) requires that a container holding a hazardous waste that is incompatible with any waste or other materials accumulated nearby in other containers must be separated from the other materials or protected from them by any practical means.

At the time of the RCRA Inspection, the Facility has stored and maintained several containers with hazardous wastes at the Satellite Accumulation Areas (SAAs) that were incompatible and not separated from each other included "Spent Non-Halogenated Solvent Wastes," containing RCRA hazardous waste codes "D001 (ignitable), D035 (Methyl Ethyl Ketone), F003 and F005 (Non-Halogenated Solvents) stored next to "Neutralization Solution Wastes containing RCRA hazardous waste code "D002" (i.e., corrosive), along with "Heavy Metals Aqueous Solution Wastes," containing RCRA hazardous waste codes "D002 (Corrosive), D005 (Barium), D006 (Cadmium), D011 (Silver), and "Organic Aqueous Wastes," labeled with the words "Hazardous Waste," and identified with RCRA hazardous waste codes "D001" and "D002" (i.e., ignitable, and corrosive) identified in the SAAs at following laboratories:

a. Organic Chemistry Laboratory CN-101
b. Organic Chemistry Laboratory CN-102
c. Organic Chemistry Laboratory CN-104
d. General Chemistry Laboratory CN-204-A
e. General Chemistry Laboratory CN-204-B
f. General Chemistry Laboratory CN-203-A
g. General Chemistry Laboratory CN-203-B
h. Instrumental Chemistry Laboratory CN-303
i. Physical Chemistry Laboratory CN-301
j. Microbiology Laboratory CN-342
k. General Biology Laboratory CN-234
l. General Biology Laboratory CN-236
m. Environmental Analytical Chemistry Laboratory CN-119
n. Nanotechnology Chemistry Laboratory CN-115
o. Physical Science Laboratory DMN-411
p. Physical Science Laboratory DMN-416
q. Physical Science Laboratory DMN-412 (Chemical Storage Cabinet Area)
r. Physical Science Laboratory DMN-414
s. Physical Science Laboratory DMN-413

t. Molecular Cellular Research Laboratory JGD-220
u. Biosensor Research for Health Applications Laboratory FB-140
v. Cellular Culture Virology Research Laboratory FB-136
w. Electrochemistry Research Laboratory FB-101-A (Lithium Batteries)
x. Materials Science Research Laboratory FB-204 & FB-205
y. Materials Characterization Research Center FB-267-A
z. Ecological Research Laboratory FB-253 ("ECOLAB")

The Facility's failure to properly manage and maintain separated hazardous wastes that are incompatible and accumulated nearby in other containers and not separated from each other or protected from them by any practical physical means in the Satellite Accumulation Areas, as indicated in item 5 above, is a violation of 40 C.F.R. § 262.15(a)(3)(iii).

Preparedness, Prevention, and Emergency Procedures for Large Quantity Generators (40 C.F.R. Part 262 Subpart M)

6. 40 C.F.R § 262.251, requires a large quantity generator must maintain and operate its facility to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health, or the environment identified in following laboratories:

   a. Materials Characterization Research Center FB-267-A - At the time of the RCRA Inspection, there were numerous expired chemicals (since before 1999), discarded, abandoned, contaminated, various unused chemical reagents, deteriorated and stored for a very long time (i.e., over a year or more) in shelves without any physical means to protect each other from incompatibility of waste characteristics. As observed, there were corrosive, flammable, reactive, toxic and poison chemical wastes reagents. There was no hazardous waste determination being performed on abandoned, expired, not in use, discarded hazardous chemical waste inventory before its final disposal nor have been managed under any Laboratory Management Plan. Among the chemical reagents identified from a safety distance stored without segregation included Ethyl Alcohol (2008), 1, 4 Dioxane, Tetrahydrofuran (1999), Ethyl Acetate (2008), Reagent alcohol (2003), Hydrochloric acid solution (2016), Ethyl ether (2013), 1-Chlorobutane, Ethylenediamine, Acetic Acid Anhydrous, Potassium Hydroxide, Sodium Sulfate Anhydrous, Potassium Sulfate, Tetrabutylammonium hydroxide solution (2022), Formaldehyde, and various 4-Liter bottles HPLC containing flammable and combustible liquids which were no longer intended to be used. It was determined by EPA that this constitutes an actual or potential of fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

   b. Biosensor Research for Health Applications Laboratory FB-140EPA - At the time of the RCRA Inspection, there were various containers containing radioactive waste of "Uranyl Acetate," generated by this Biosensor Research laboratory and being stored inside a blue cabinet labeled with the words "Hazardous Waste," and not identified with RCRA hazardous waste codes nor its hazard communication pictograms as required by RCRA regulations EPA

Inspector stated that a certified Radiation Safety Officer is needed at the Campus for the proper management of these radioactive wastes, and they should also contact the Department of Energy (DOE) for regulatory requirements. EPA Inspector also advised to contact the Nuclear Regulatory Commission (NRC) to request how all these radioactive wastes should be removed from UPR Rio Piedras Campus for the proper management and final disposition as "Hazardous Wates" mixed with "Radioactive Wastes." It was determined by EPA that this constitutes an actual or potential of fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

c. Molecular Cellular Research Laboratory JGD-220 - At the time of the RCRA Inspection, the following chemical reagents were stored together inside a hood cabinet including various bottles of hydrochloric acid "Corrosive," acetic acid anhydrous and glacial, and an expired picric acid "Danger" bottle. EPA Inspector stated that Acetic Anhydride (Glacial) was not compatible with Hydrochloric Acid and should not be stored together where they can be inadvertently mixed or where a spill or leak can cause danger. As indicated by EPA, picric acid (2-hydroxy-1,3,5-trinitrobenzene, CAS Number 88-89-1) can be a useful laboratory reagent; however, dry picric acid is a shock-sensitive explosive capable of releasing energy on a level like dynamite. As observed by EPA Inspector, the expired picric acid was surrounded by various corrosive such as acetic acid anhydrous and/or glacial acid, hydrochloric acid among other reactive reagents. Although, the picric acid was not solidified, but expired, it was stored without following any safety protocols or compatibility characteristics of the reagents failing to minimize the possibility of a fire, explosion, or any chemical violent reaction.

The Facility failure to maintain and operate its laboratories to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil or surface water which could threaten human health or the environment, as indicated in item 6 above, constitutes a violation of 40 C.F.R. § 262.251.

Manifest Requirements (40 C.F.R. § 262 Subpart B)

7. 40 C.F.R § 262.27 requires that a large quantity generator who initiates a shipment of hazardous waste must certify that it has a program in place to reduce the volume and toxicity of waste generated to the degree it has determined to be economically practicable and it has selected the practicable method of treatment, storage, or disposal currently available which minimizes the present and future threat to human health and the environment.

   At the time of the RCRA Inspection, the Facility did not have a Waste Minimization Plan in place to reduce the volume and toxicity of waste generated at the Facility nor selected the practicable method of treatment, storage, or disposal available which minimizes the present and future threat to human health and the environment. The Facility's failure to have in place a Waste Minimization Plan, as indicated in item 7 above, is a violation of 40 C.F.R. § 262.27.

Arrangements with local authorities (40 C.F.R. § 262.256)

8. 40 C.F.R. §§ 262.256(a) and (b) requires that a large quantity generator must attempt to make arrangements with the local police department, fire department, other emergency response teams, emergency response contractors, equipment suppliers, and local hospitals, taking into account the types and quantities of hazardous wastes handled at the facility. Arrangements may be made with the Local Emergency Planning Committee if it is determined to be the appropriate organization with which to make arrangements.

   In addition, it requires that a large quantity generator shall maintain records documenting the arrangements with the local fire department as well as any other organization necessary to respond to an emergency. This documentation must include documentation in the operating record that either confirms such arrangements actively exist or, in cases where no arrangements exist, confirms that attempts to make such arrangements were made.

At the time of the RCRA Inspection, the Facility did not attempt to make arrangements with the local police department, fire department, other emergency response teams, emergency response contractors, equipment suppliers, or local hospitals, nor provided records documenting the arrangements with any emergency organization necessary to respond to an emergency, as indicated in item 8 above, is a violation of 40 C.F.R. §§ 262.256(a) and (b).

Standards for Universal Waste Management (40 C.F.R. § 273)

As of January 2000, under federal regulations, hazardous waste fluorescent light bulbs (lamps) may be managed and disposed as universal waste. Although the Commonwealth of Puerto Rico is not authorized for the Universal Waste Rule (UWR), federal standards in 40 C.F.R. Part 273 will operate in lieu of current Commonwealth of Puerto Rico Government hazardous waste management requirements. Thus, fluorescent light bulbs may be managed as either a hazardous waste or a universal waste.

9. 40 C.F.R. § 273.13(d)(1) requires a small quantity handler of universal waste must contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages must remain closed and must lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

   At the time of the RCRA Inspection, the inspector observed various cardboard boxes containing spent fluorescent lamps and/or bulbs that were not closed as follows:

   a. Two (2) 2'- Dia cylindrical cardboard "open" packing over twenty (20) 4-foot spent fluorescent lamps, both open and labeled with the words, "Universal Waste."
   b. One (1) square cardboard box (1'x1'x 2') "open" packing over forty (40) 2-foot spent fluorescent lamps labeled with the words, "Universal Waste."
   c. Two (2) square cardboard boxes (1'x1'x 2') "open" packing over twenty (20) spent spiral led light bulbs and curved led bulbs labeled with the words, "Universal Waste." v.
   d. Three (3) square cardboard box (1'x1'x 2') "open" packing over ten (10) spent high-density halogen bulbs labeled with the words, "Universal Waste."

At the time of the RCRA Inspection, the Facility failure to contain any lamp in containers or packages that are structurally sound showing potential evidence of breakage, leakage, and damage that caused releases of mercury or other hazardous constituents to the area at the Universal Waste Storage Area in violation of 40 C.F.R. § 273.13(d)(1).

10. 40 C.F.R § 273.15(c) requires a small quantity handler of universal waste who accumulates universal waste must be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

    At the time of the RCRA Inspection, the inspector observed various cardboard boxes containing spent fluorescent lamps and/or bulbs that were not closed as follows:

    a. Two (2) square cardboard boxes (1'x1'x 2') "open" packing over twenty (20) spent spiral led light bulbs and curved led bulbs labeled with the words, "Universal Waste," nor dated with their accumulation start dates.
    b. Three (3) square cardboard box (1'x1'x 2') "open" packing over ten (10) spent high-density halogen bulbs labeled with the words, "Universal Waste," nor dated with their accumulation start dates.
    c. Two (2) 55-gallon black steel drums without lids (open) containing "Ballast" which were removed from aluminum frames. None of the drums were dated with their accumulation dates.

    At the time of the RCRA Inspection, the Facility failure to date cardboard boxes with their accumulation dates could not demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received in violation of 40 C.F.R. § 273.15(c).

11. 40 C.F.R. § 273.14(d)(1) requires mercury-containing equipment (i.e., each device), or a container in which the equipment is contained, must be labeled, or marked clearly with any of the following phrases: "Universal Waste—Mercury Containing Equipment," "Waste Mercury-Containing Equipment," or "Used Mercury-Containing Equipment."

    At the time of the RCRA Inspection, there were two (2) 55-gallon black steel drums without lids (open) containing "Ballast" which were removed from aluminum frames. None of the drums were clearly labeled with the words, "Universal Waste-Mercury Containing Equipment," nor dated with their accumulation dates.

    Failure to clearly labeled the drums with the words, "Universal Waste-Mercury Containing Equipment," is a violation of 40 C.F.R. § 273.14(d)(1).

Standards for Used Oil Management (40 C.F.R. Part 279)

Based on the conditions observed during the RCRA Inspection, the Facility was in violation of the following used oil requirements:

12. 40 C.F.R. § 279.22(c) requires that containers and above-ground tanks used to store used oil must be labeled or marked clearly with the words "Used Oil."

The Facility must have all containers used to store used oil labeled or clearly marked with the words, "Used Oil." EPA inspector observed that the following containers and drums containing used oil were not labeled on marked clearly with the words, "Used Oil" at the Used Oil Storage Area as follows:

a. Two (2) 55-gallon black drum closed with used oil, not marked with the words, "Used Oil."
b. One (1) 55-gallon blue drum open on top with spent used oil filters impregnated with used oil not marked with the words, "Used Oil."
c. One (1) yellow drum funnel with used oil residues not marked with the words, "Used Oil."

The Facility's failure to label or mark the drums and containers with the words "Used Oil," located at the Used Oil Storage Area, as indicated in item 12 above, is a violation of 40 C.F.R. § 279.22(c).

13. 40 C.F.R. § 279.81 specifies that used oil that is not recycled, but will be disposed of, is subject to the hazardous waste regulations, if applicable. Therefore, any material soaked with used oil that is disposed of is a solid waste and may be a hazardous waste.

Since the rags used to clean-up minor used oil spills and other impacted material (i.e., oil spills and leaks) are discarded, they meet the definition of a solid waste. Pursuant to the hazardous waste regulations, specifically 40 C.F.R. § 262.11, a person who generates a solid waste must determine if that waste is a hazardous waste by either applying knowledge of the waste or through an analysis of a representative sample of the waste. The generator must be able to support the determination by documenting the generator's knowledge of the waste or by documenting the analytical results. This hazardous waste determination must be repeated whenever the waste stream has changed.

If the impacted material is a hazardous waste, it must be disposed of by an authorized hazardous waste treatment, storage and /or disposal Facility and transported by a transporter with an EPA Identification Number. If it is not a hazardous waste, it must be disposed of in accordance with 40 C.F.R. Part 258 and the Commonwealth of Puerto Rico requirements which covers disposal in municipal solid waste landfills.

Based on the conditions observed by the EPA Inspector during the RCRA Inspection, the Facility was in violation of the above regulation at the Used Oil Storage Area as observed various containers (i.e., trash cans) with impacted rags and other absorbent materials contaminated with used oil. The containers containing impacted materials was not properly identified nor determination had been made as to whether it was hazardous waste or non-hazardous waste, as required by the applicable regulation of 40 C.F.R. § 279.81.

14. 40 C.F.R. §§ 261.2(a) and (b) and 261.4(b)(13) state that the used oil filter which have been disposed of and any used oil container, both constitute solid wastes.

As stated above, a person who generates a solid waste must determine if that waste is a hazardous waste. However, non-terne (non-lead) plated used oil filters which are punctured or crushed and allowed to "hot gravity drain" for at least 12 hours before they are disposed of will not be regulated as hazardous waste but still must be disposed of in accordance with municipal solid waste landfill requirements. Also, hot-drained terne-plated (lead-plated) filters are not regulated as a hazardous

waste if they are recycled as scrap metal. Please refer to the Filter Manufacturers Council Hotline number at 800-99-FILTER and they will help you to properly manage and dispose of your used oil filters.

Prior to disposing used oil filters, the Facility must determine if the filter is a hazardous waste. If the filter is a non-terne plated used oil filter, it must be punctured and allowed to "hot gravity drain" for at least 12 hours before disposal or recycling as discussed above.

Based on the conditions observed by EPA during the Inspection, the Facility was in violation of the above regulation in the Used Oil Storage Area. In this area, EPA Inspector observed one (1) 55-gallon blue drum with spent used oil filters that was not properly identified, nor a hazardous waste or non-hazardous waste determination had been made for the spent oil filters, as required by the applicable regulations.

Based on the conditions observed during the RCRA Inspection, the Facility was in violation of the above regulations.

ATTACHMENT II
RCRA § 3007 Information Request

University of Puerto Rico Rio Piedras Campus
Ref. No. CEPD-RCRA-24-0442
EPA ID No. PRR000012088

On or about June 27 thru 28, 2024, a duly authorized representative of EPA conducted a RCRA compliance evaluation inspection (the "RCRA Inspection") at the University of Puerto Rico Rio Piedras Campus located in 431 Ponce de Leon Avenue, Rio Piedras, Puerto Rico (the "Facility"), pursuant to Section 3007 of RCRA, 42 U.S.C. § 6927, in order to determine your Facility's compliance with certain federal hazardous waste accumulation, storage and disposal regulations.

Based on a review of the information obtained during and after the RCRA Inspection, we have determined that certain information is required to fully evaluate the compliance of this Facility. You are hereby required to answer the following questions and provide the following information:

1. With regard to the violations cited in the above Notice of Violation (Enclosure I), please provide the following:

    a. a description of the actions taken, or that will be taken, to correct the specific violations cited in items 1 through 14 (inclusive) of the NOV. Be specific (e.g., when actions were started and finished, how much was disposed of, etc.);

    b. documentation verifying that the violations have been corrected, including photographs, where applicable; and

    c. an account of changes in Facility management practices sufficient to prevent a recurrence of the violations. Include a Facility "Corrective Measures Plan" addressing operational changes, as detailed in Attachment VI, if the University of Puerto Rico Rio Piedras Campus will continue managing such wastes (i.e., organic wastes, picric acid, uranyl acetate, etc.).

2. Please provide the full legal name, address, and legal status (*e.g.*, corporation, not-for-profit corporation, individual owner, partnership) of the current and past owner and/or owners, since the year 2000 of the Facility located at 431 Ponce de Leon Avenue, Rio Piedras, Puerto Rico. Also, provide:

    a. the name(s) and official title(s) of each of the officer(s) (or the proprietor(s), if not a corporation) of all current and past owners; and

    b. the month/day/year all current and past owners began ownership of the Facility.

3. Please describe the remedial actions undertaken by University of Puerto Rico Rio Piedras Campus to look for and avoid future numerous expired chemicals (since before 1999), discarded, abandoned, contaminated, various unused chemical reagents, deteriorated and stored for a very long time (i.e., over a year or more) in shelves without any physical means to protect each other from

incompatibility of waste characteristics. In addition, please explain in details what corrective measures have been undertaken by Facility to maintain and operate its campus to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health, or the environment as identified in following laboratories:

a. Materials Characterization Research Center FB-267-A - At the time of the RCRA Inspection, there were numerous expired chemicals (since before 1999), discarded, abandoned, contaminated, various unused chemical reagents, deteriorated and stored for a very long time (i.e., over a year or more) in shelves without any physical means to protect each other from incompatibility of waste characteristics. As observed, there were corrosive, flammable, reactive, toxic and poison chemical wastes reagents. There was no hazardous waste determination being performed on abandoned, expired, not in use, discarded hazardous chemical waste inventory before its final disposal nor have been managed under any Laboratory Management Plan. Among the chemical reagents identified from a safety distance stored without segregation included Ethyl Alcohol (2008), 1, 4 Dioxane, Tetrahydrofuran (1999), Ethyl Acetate (2008), Reagent alcohol (2003), Hydrochloric acid solution (2016), Ethyl ether (2013), 1-Chlorobutane, Ethylenediamine, Acetic Acid Anhydrous, Potassium Hydroxide, Sodium Sulfate Anhydrous, Potassium Sulfate, Tetrabutylammonium hydroxide solution (2022), Formaldehyde, and various 4-Liter bottles HPLC containing flammable and combustible liquids which were no longer intended to be used. It was determined by EPA that this constitutes an actual or potential of fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

b. Biosensor Research for Health Applications Laboratory FB-140EPA - At the time of the RCRA Inspection, there were various containers containing radioactive waste of “Uranyl Acetate,” generated by this Biosensor Research laboratory and being stored inside a blue cabinet labeled with the words “Hazardous Waste,” and not identified with RCRA hazardous waste codes nor its hazard communication pictograms as required by RCRA regulations EPA Inspector stated that a certified Radiation Safety Officer is needed at the Campus for the proper management of these radioactive wastes, and they should also contact the Department of Energy (DOE) for regulatory requirements. EPA Inspector also advised to contact the Nuclear Regulatory Commission (NRC) to request how all these radioactive wastes should be removed from UPR Rio Piedras Campus for the proper management and final disposition as “Hazardous Wates” mixed with “Radioactive Wastes.” It was determined by EPA that this constitutes an actual or potential of fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

c. Molecular Cellular Research Laboratory JGD-220 - At the time of the RCRA Inspection, the following chemical reagents were stored together inside a hood cabinet including various bottles of hydrochloric acid “Corrosive,” acetic acid anhydrous and glacial, and an expired picric acid “Danger” bottle. EPA Inspector stated that Acetic Anhydride (Glacial) was not compatible with Hydrochloric Acid and should not be stored together where they can be inadvertently mixed or where a spill or leak can cause danger. As indicated by EPA, picric acid (2-hydroxy-

1,3,5-trinitrobenzene, CAS Number 88-89-1) can be a useful laboratory reagent; however, dry picric acid is a shock-sensitive explosive capable of releasing energy on a level like dynamite. As observed by EPA Inspector, the expired picric acid was surrounded by various corrosive such as acetic acid anhydrous and/or glacial acid, hydrochloric acid among other reactive reagents. Although, the picric acid was not solidified, but expired, it was stored without following any safety protocols or compatibility characteristics of the reagents failing to minimize the possibility of a fire, explosion, or any chemical violent reaction.

4. Please describe how the University of Puerto Rico Rio Piedras Campus is planning to develop and submit a Waste Minimization Plan (WMP) and Recycling Program at the Facility. The WMP must be developed to comply with current regulatory requirements, help protect the environment, and reduce costs associated with waste generation disposal. The WMP must provide statistical data outlining Facility efforts to prevent environmental pollution. It also summarizes the management of recycling materials, waste minimization programs and other environmental efforts.

5. Please describe how the University of Puerto Rico Rio Piedras Campus will document and comply with the documentation of the arrangements agreed to with the local police department, fire department, other emergency response teams, emergency response contractors, equipment suppliers, local hospitals or, if applicable, the Local Emergency Planning Committee regarding the Contingency Plan for Hazardous Waste as required by RCRA regulations including:

    a. Attempting to make arrangements with its local fire department to determine the potential need for the services of the local police department, other emergency response teams, emergency response contractors, equipment suppliers and local hospitals.
    b. Coordinating, as necessary, with emergency organizations to familiarize the emergency responders with the layout of the facility, the properties of the hazardous waste handled at the facility and associated hazards, places where personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes as well as the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.
    c. Maintaining records documenting the arrangements with the local fire department as well as any other organization necessary to respond to an emergency. This documentation must include documentation in the operating record that either confirms such arrangements actively exist or, in cases where no arrangements exist, confirms that attempts to make such arrangements were made.

6. When submitting your response, please attach to the Certification of Answers to Request for Information (Attachment IV, below) a list of persons by name, position or title, department, and company who prepared or assisted in the preparation of the responses to this information request. Please also provide a brief description of the nature of their work. If any person is not an employee, please also provide a short account of the basis for their association with you and/or the Facility in question.

ATTACHMENT III
Instructions & Definitions

In responding to this Request for Information, apply the following instructions and definitions:

1. The signatory should be an officer or agent who is authorized to respond on behalf of the company/corporation to whom this is addressed.

2. A complete response must be made to each individual question in this request for information. Identify each answer with the number of the question to which it is addressed.

3. In preparing your response to each question, consult, as necessary, with all present and former employees and agents of the company/corporation who you have reason to believe may be familiar with the matter to which the question pertains.

4. In answering each question, identify all contributing sources of information.

5. If you are unable to answer a question in a detailed and complete manner or if you are unable to provide any of the information or documents requested, state the reason for your inability to do so. If you have reason to believe that there is an individual who may be able to provide more detail or documentation in response to any question, state that person's name and last known address and phone number and the reasons for your belief.

6. If you cannot provide a precise answer to any question, please approximate, and state the reason for your inability to be specific.

7. For each document produced in response to this Request for Information, indicate on the document or in some other reasonable manner, the number of the question to which it applies.

8. If anything is deleted from a document produced in response to this Request for Information, state the reason for and the subject matter of the deletion.

9. If a document is requested but is not available, state the reason for its unavailability. In addition, identify any such document by author, date, subject matter, number of pages, and all recipients and their addresses.

10. For the purposes of this Request for Information, companies, corporation and/or institution are all the operations conducted by you or your company at the Facility located in located in in 431 Ponce de Leon Avenue, Rio Piedras, Puerto Rico 00931.

11. Hazardous waste shall be defined for the purposes of this Request for Information as that term is defined in Section 1004(5) of RCRA, as amended, 42 U.S.C. § 6903(5) and in 40 C.F.R. § 261.3.

12. Hazardous constituents shall be defined as those substances listed in 40 C.F.R. Part 261, Appendix VIII.

13. Other definitions, for the purposes of this Request for Information, are as defined in 40 C.F.R. Part 260, Subpart B.

ATTACHMENT IV
Certification of Answers

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document (response to EPA Information Request) and all documents submitted herewith, and that I believe that the submitted information is true, accurate, and complete, and that all documents submitted herewith are complete and authentic unless otherwise indicated. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I am also aware that I am under a continuing obligation to supplement my response to EPA's Information Request if any additional information relevant to the matters addressed in EPA's Information Request or my response thereto should become known or available to me.

_____
NAME (print or type)

_____
TITLE (print or type)

_____
SIGNATURE

ATTACHEMENT V
Substantiation of Confidential Business Information Claim

1. For what period of time do you request that the information be maintained as confidential, *e.g.,* until a certain date, until the occurrence of a specified event, or permanently? If the occurrence of a specific event will eliminate the need for confidentiality, please specify that event.

2. Information submitted to EPA becomes stale over time. Why should the information you claim as confidential be protected for the time period specified in your answer to Question 1, immediately above?

3. What measures have you taken to protect the information claimed as confidential and to guard against undesired disclosure? Have you disclosed the information to anyone other than a governmental body or someone who is bound by an agreement not to disclose the information further? If so, why should the information still be considered confidential?

4. Is the information contained in any publicly available material such as the Internet, publicly available databases, promotional publications, annual reports, or articles? Is there any means by which a member of the public could obtain access to the information? Is the information of a kind that you would customarily not release to the public?

5. Has EPA or any other governmental body made a determination as to the confidentiality of the information? If so, please attach a copy of the determination.

6. For each category of information claimed as confidential, explain with specificity why release of the information is likely to result in substantial harmful effects on the business or to its competitive position. Explain the specific nature of those harmful effects; why they should be viewed as substantial, and the causal relationship between disclosure and such harmful effects. How could your competitors make use of this information to your detriment?

7. Do you assert that the information is submitted on a voluntary or a mandatory basis? Please explain the reason for your assertion. If the business asserts that the information is voluntarily submitted information, whether and why disclosure of the information would tend to lessen the availability to EPA of similar information in the future.

8. Any other issue you deem relevant.

ATTACHMENT VI
Copies of Compliance Assistance Publications

Managing Your Hazardous Waste: A Guide for Small Businesses and *Hazardous Waste Requirements for Large Quantity Generators*. These publications may be used to improve your understanding of the EPA's Hazardous Waste Program as it applies to all hazardous waste generators. These publications are available through:

- https://www.epa.gov/sites/default/files/2019-10/documents/10008_managingyourhazwaste_508pdf_october_16_2019.pdf

- Fact Sheet on Requirements for Large Quantity Generators of Hazardous Waste at: https://www.epa.gov/hwgenerators/fact-sheet-requirements-large-quantity-generators-hazardous-waste

- Information on Spent Fluorescent Light Bulb Management, please see the EPA's *Overview of the Universal Waste Program* Internet site at: https://www.epa.gov/hw/universal-waste#regs

- Categories of Hazardous Waste Generators at: https://www.epa.gov/hwgenerators/categories-hazardous-waste-generators#large

- 40 CFR § 262.17 - Conditions for exemption for a large quantity generator that accumulates hazardous waste at: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-I/part-262/subpart-A/section-262.17#p-262.17(a)(1)(ii)

- Resource Conservation and Recovery Act (RCRA) Orientation Manual at: https://www.epa.gov/sites/default/files/2015-07/documents/rom.pdf

- On-line resource for environmental stewardship and compliance assistance information: www.epa.gov/compliance/compliance-assistance-centers