U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 1
RCRA INSPECTION REPORT

DATE: February 12, 2001

TO: Ken Doll, Unit Chief

FROM: James Fenimore Cooper, Chemical Engineer

SUBJ: 2001 RCRA Inspection of the University of Ruritania,
Tiny Town Campus.

I. GENERAL INFORMATION

A. Facility Name:
University of Ruritania
Tiny Town, Ruritania 12345-6789

B. Responsible Official:
Director
Environmental Health & Safety

C. Date of Inspection:

D. Purpose of Inspection:
Multi-Media Inspection
Public Agency Team.

II. RCRA Reporting/Information Requirements

- Facility Identification Number:
- Type of Operation: Generator *(Large Quantity Generator)*
- Date of Original Notification: August 18, 1980
- Type of Notification: Generator *(Large Quantity Generator)*

III. General Facility Description

The University of Ruritania is a unit of the University of Ruritania System. The University's campus is made up of approximately 259 buildings on 3,300 acres in Tiny Town. Approximately 2,850 faculty and a student body that averages around 10,000 persons utilize this campus. The University offers academic opportunities in its numerous colleges and is the primary research institution for the State of Ruritania.

Waste is generated from numerous sources throughout the University. Hazardous waste is

generated from a variety of research, teaching and maintenance activities. The majority of the University's hazardous wastes are generated from laboratory operations. Two individuals are responsible for picking up hazardous waste for the entire University. One central less-than-ninety-day container storage area (CSA), identified as the CSA, is used for storage of waste prior to shipping off-site. The University's waste handlers use a panel truck to transport waste to the CSA. The CSA is located in an isolated area that is accessed via locked back roads located on-campus.

IV. Physical Inspection - General Observations

The inspection included a tour and review of the central CSA and numerous hazardous waste generation areas.

The inspection began at the CSA located on a Road. The CSA was a fenced-in area with a locked entrance. The area was identified by several warning signs. The active portion of this area is comprised of two small single-level buildings equipped with a series of small rooms. The rooms are equipped with a halon fire suppression system. The floor of each room is poured concrete. The individual rooms are marked to identify segregated waste types typically in-storage. A sign equipped with a warning system at the entrance to the CSA also includes a legend that identifies the types of waste located in each room.

The first building includes a lab room/office area which is used to test "unknown" wastes, store small quantities of mixed waste (hazardous and radioactive) and perform general administrative waste management functions such as sorting and tagging waste containers and manifest preparation. According to a school representative, mixed waste would be stored in a small flammable locker located in this room. No mixed waste was observed in storage in this room. The inspectors toured each room at the CSA. The following summarizes this tour and includes all potential problems noted.

1. All containers appeared to be labeled and dated in accordance with state regulations.
2. The Room identified as the room used to store oxidizers, was also being used to store numerous containers and boxes of containers of waste formaldehyde solution. Waste formaldehyde is incompatible with the oxidizers located in this room, including nitric acid, potassium nitrate and sodium nitrite. Other non-oxidizer waste items located in this room included: chloroflorocarbon canisters, methylene chloride, propylene oxide and HPLC cocktails. There were no means of segregating incompatible wastes in this room.
3. Room identified as the room used to store compressed gases contained two 3-foot tall "unknown" cylinders and three 1-gallon containers marked "Ecolab detergent for manual warewashing."

The inspection continued at the paint shop within the facilities building. The paint shop included a central container storage area used to pool paint waste generated throughout the

campus. The area, located inside the building with a concrete base, was being managed as a satellite accumulation area. The area included two 55-gallon drums labeled as "oil base paint waste" and "latex paint waste". Both drums were open (and undated) with large poly funnels attached in the large bung hole. The drum of oil based paint waste was full and undated. The school representative stated that both waste streams were manifested off-site as hazardous waste. The area also included a box containing fourteen small (pint size and smaller) containers of waste paint that allegedly was dropped off on the loading dock of the building last Friday. The product labels attached to these containers identified mineral spirits as an ingredient. The shop manager stated that he intended to pour the contents of these containers into the 55-gallon drum labeled waste oil based paint. The drum, however, was full. He stated that the drum was full as of yesterday. The university representative also stated that daily inspections of this area were not being conducted. When informed that this area was a less than 90 day storage area, the representative stated that the activity would be moved to the central CSA.

The next area inspected was the garage. Waste activities observed at the garage included the generation of waste oil (which is placed into a 600-gallon UST via a funnel station), waste antifreeze (unlabeled 55-gallon with funnel attached), part cleaner solutions from Safety Kleen units (both solvent and aqueous based) and auto and motorcycle batteries. The garage also included a vehicle size paint booth. The filters associated with this booth appeared highly soiled. The garage maintenance supervisor and university representative stated that the soiled paint booth filters are disposed of as ordinary trash. The filters are changed out approximately twice annually. The university representative stated that he had never done a waste determination on these filters.

The next noteworthy area was the University print shop. The shop generates a small volume of "press waste" as well as dirty rags. Numerous rag containers were located within the shop. Solvent contaminated rags are picked up by a laundry company approximately once a week. The shop included a segregated area containing a full 5-gallon container used to pool "press waste" for the entire shop. The pail was labeled with a hazardous waste label and the shop maintained an inspection log for the area. The shop uses "VARN press clean" to clean the presses.

The remainder of the physical inspection was spent touring labs. The University contains labs dedicated for use by researchers, as well as labs used by graduate students and undergraduate teaching labs. Table 1 includes a summary of the observations associated with the University's container management at these labs.

V. Records

Training

The University's training plan was reviewed. The plan does not include provisions that include a review of the facility's Contingency Plan. Instead, the plan addresses the

regulatory requirements associated with contingency plans in general.

Training records for the seven individuals identified as needing formal RCRA training were on-file. The EHS director attended a "hazardous materials awareness (first level responder) trainer recertification class" last year. The other six University employees were provided in-house training two years ago. In addition, garage personnel, whom handle the manifesting of their spent parts' cleaner solvents, were provided training identified as "DOT Shipping Training" two years ago, as documented on a sign-up sheet. A review of the University's training documents does reveal that this training included a review of the use of hazardous waste manifests.

Based upon management practices observed during the inspection, at least one additional University person required RCRA training. The paint shop manager was identified as being responsible for managing the containers of paint-related waste at the facilities building storage area. The area was being used to consolidate waste paint-related material generated from numerous sources throughout the campus.

Inspections

The University was conducting inspections, as prescribed in their inspection plan, at the central CSA. Approximately one year's worth of logs were reviewed. The logs revealed that the University is documenting daily (container management items), weekly (communication and containment items) and monthly (emergency equipment) inspections. Weekly inspections for four weeks were not documented as being conducted.

Inspections of satellite accumulation areas are required by State regulation. The University mandates that these inspections be conducted in accordance with their written procedure. Performance of these inspections was documented in Section IV and Table 1 of this report. Inspections were not being conducted at the Facility's paint storage area.

Contingency Plan

The facility's plan was part of a document entitled "Hazardous Waste Storage Site Operations Guide." Although the emergency coordinators were not specifically listed in this document, they were identified in the "Hazardous Waste Management Plan." Their home addresses, however, were not listed in the plan.

Biennial Report

The most recent biennial report was reviewed. The report was filed by the EHS director. The report did not include a Form GM for oil-based paint related waste which is continuously generated at the University. In addition, it is concluded that all University

generated waste acids, bases and oxidizers as well as waste toxics are represented on the two Form GMs with the waste description "Acutely Toxic Labpack Wastes" and "Mixed Waste Labpacks - Not Acutely Toxic."

Waste Determinations

The majority of the University's waste determinations were made by using knowledge of the process generating the waste as well as knowledge of the materials used in laboratory operations. A significant amount of "unknown" wastes are also generated, primarily from laboratory operations, that are sampled and analyzed by a hazardous waste contractor prior to shipping off-site. The University has not been maintaining copies of these test results.

While performing a review of the University's waste profile forms, EPA inspector (James Fenimore Cooper) asked The EHS director if the University used lead-based paint. The EHS director stated that the University did use lead paint in some applications. Reviews of the profile form for (oil based) waste paint related material revealed that no check has been made for the presence of lead (or any other toxic metals). The waste is identified by EPA waste code D001. There is a potential for toxic metals such as lead and chromium to be present in this waste stream since the waste stream is generated from the pooling of waste paint as well as old, unwanted paints collected from the entire campus. The profile also includes a question "is the wastestream subject to RCRA subpart CC controls?" The answer was checked off No. This is erroneous since the package-type is identified as a 55-gallon drum and this waste stream clearly contains > 500 ppmw VOCs. The profile was signed by the University representative on January 14, 1998.

Other problems with waste determinations include the disposal of soiled paint booth filters as ordinary trash without performing a proper waste determination, and the disposal of a mixed acid waste stream as well as expired reagents down the drain in Lab #X without performing a proper waste determination.

Manifests and LDR Forms

The following summarizes problems with the University's manifest/LDR program:

- Manifest N dated 1998 was used to ship a significant amount of lab-pack waste to AETS in Flanders NJ. The State of New Jersey manifest was accompanied by numerous packing slips. Although the "generic" Department of Transportation (DOT) hazard class designations appeared accurate, in several instances, the waste code listed for a particular item was identified as X910, which was incorrect. For example, the packing slip for page lines 5A and 5B included acrylamide. Acrylamide is a list (U007) hazardous waste. Other listed hazardous wastes identified by code

X910 included (U188) phenol - spent and phenol and water, as well as (U012) Aniline - spent. New Jersey regulation requires the identification of EPA hazardous waste code(s) on hazardous waste manifests. In addition, the manifest was used to ship chemicals identified as DOT non-regulated. This packing slip for page line 10D included sodium sulfide, ferrous chloride and sodium bisulfite. These items, depending upon their physical state, are listed in the DOT's Hazardous Materials Table of 49 CFR 172.101 and may be hazardous wastes. {Sodium sulfide is either a Class 4.2 spontaneously combustible or Class 8 corrosive. Ferrous chloride is a Class 8 corrosive. Sodium bisulfite, if an aqueous solution, is a Class 8 corrosive.[1]}

Closing Conference

The problems identified during the physical inspection of University, documented in this inspection report, were discussed during a closing conference with the EHS director and university representative.

[1] Information provided by the University in response to questions associated with the above waste determination/classification issues demonstrates that the University (and its contractor AETS) erroneously classified "spent" commercial chemical products and commercial chemical products mixed with water as nonhazardous waste (X910). Based upon the definition of "spent" provided by the University, these waste are listed hazardous wastes. Additionally, the problems associated with the line item 10D were as follows: sodium sulfide should have been sodium sulfite (an inputting error) and ferrous chloride and sodium bisulfite should have been identified as Class 8 corrosive waste. These items, however, are DOT corrosive, not EPA corrosive hazardous waste.