

Hazardous Waste Section
File Room Document Transmittal Sheet

17

Your Name: William Hunneke
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Facility Name: LENOIR MEMORIAL HOSPITAL
Document Group: General (G)
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Hazardous Waste Compliance Data Entry Form

EPA ID Number: NCD986186823
Facility Name: LENOIR MEMORIAL HOSPITAL

Street: 100 AIRPORT ROAD
City: KINSTON
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County: LENOIR

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EVALUATION DATA New: Change: Delete:

Date: **01/10/2013** Evaluation Type: **CAV**
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Inspector ID #: **NC060** W. Hunneke

Evaluation Comments: COMPLIANCE ASSISTANCE VISIT

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COMPLIANCE ASSISTANCE VISIT (CAV) REPORT

FACILITY INFORMATION:

Facility Name: **LENOIR MEMORIAL HOSPITAL**
EPA ID Number: **NCD 986 186 823**
Type of Facility: **SMALL QUANTITY GENERATOR**
Facility Location: 100 Airport Road, Kinston NC 28501
Mailing Address: 100 Airport Road, Kinston NC 28501
Telephone Number: 252-522-7000
Property Owner: Lenoir Memorial Hospital Incorporated
Property Owner Address: 100 Airport Road, Kinston NC 28501
Legal Owner of Business: Lenoir Memorial Hospital Incorporated

FACILITY CONTACT:

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PARTICIPANTS:

Representing Lenoir Memorial Hospital: Sandy Taylor, Accreditation/Quality Manager
Jim Cullen, Engineering Services Director
Dale Hardy, Pharmacy Director
Linda Brabant, Environmental Services Director
Steve Johnson, Clean Harbors Environmental Services

Representing NCDENR: William Hunneke & Jenny Patterson

DATE OF SITE VISIT: January 10, 2013 onsite: 0930 hrs. offsite: 1315 hrs.

PURPOSE OF SITE VISIT:

Evaluation to assist in maintaining compliance with regulations described at 40 CFR 261, 262, 265, 268, 273 and 279; and to provide guidance as needed with the hazardous waste management requirements. The facility is currently re-evaluating its generator status and plans to notify as a small quantity generator of hazardous waste. According to the files, this facility has never undergone a comprehensive hazardous waste inspection for compliance with the aforementioned rules.

FACILITY DESCRIPTION:

Lenoir Memorial Hospital (LMH) is a privately owned not-for-profit hospital with licensed in-patient accommodations for 261 beds with an average census of hospital patients around 150 patients. The hospital has 100 physicians who use the facility and employs approximately 1,000 individuals. The

facility has occupied the 55 acre site since 1973. Water and sewer service is provided by the Neuse Regional Water and Sewer Authority, there are no known wells on the subject site. Distance to the nearest off site well is unknown. Distance to the nearest residence is approximately one quarter mile. The hospital building is approximately 430,000 square feet.

Other buildings and structures populating the LMH campus include the Down East Medical Supply building which is a 7,500 square foot building used for servicing home medical patients on a walk-in (i.e. retail) basis. Per hospital personnel, no hazardous waste is generated, stored or disposed of at this building. There are a number of emergency generators onsite which are serviced by an offsite contractor. Any used oil generated during servicing of the generators is disposed of by the contractors. There is a small wood shop on the LMH campus used for minor construction and repair projects. Per hospital personnel, no solvents or waste paints are stored in the wood shop. In the same city block the hospital occupies, there is a County Mental Health Building and an Ambulance Garage/Emergency Medical Technician building. According to hospital personnel, neither structure is owned by or on hospital property. A 1,000 square foot metal landscaping building is located on the property adjacent to the laboratory waste hazardous waste storage area. A 1.5 acre pond is located near the southern terminus of the site, down gradient from the rest of the property. The hospital also owns a 1.16 acre property and an approximately 4,500 square foot facility directly across N. Heritage Street to the west-northwest of the subject property which houses the Lenoir Memorial Cancer Treatment Center. Biohazard waste is generated at this outpatient facility and combined with the hospital's biohazard waste stream on the main campus. According to hospital personnel, no medications are disposed of at the Cancer Treatment Center and no other hazardous waste is generated. The Treatment Center uses digital imaging and no chemicals are required.

WASTE STREAMS:

Hazardous Waste Streams and Waste Codes generated by the facility include:

- Waste Medical Waste: (D001, D005, D006, D007, D009, D010)
- Waste Aerosols: (D001)
- Waste Medicine, Liquid, Flammable, Toxic: (D001, D005, D006, D007)

Used oil is generated from maintenance of equipment.

The facility has the potential to generate universal waste.

AREAS OF REVIEW AND EVALUATION: Regular type indicates facility requirements. Comments written in *italics* are site specific. Please note that the requirements listed below are specific to small quantity generators of hazardous waste.

➤ **General Requirements:**

- 1) **Hazardous Waste Determination** (40 CFR 262.11): Hazardous waste determinations must be properly performed. Any testing results must remain on-site for 3 years. Any waste material in which the facility is uncertain of its identity must either be tested or identified by generator knowledge. The facility must ensure that waste determinations are performed in a timely manner and that the material is managed properly during the waste determination process.

On the day of the evaluation, there was one approximately 3-gallon poly container located in the Lab immediately underneath the bench where the QuickSlide™ slide staining machine sits. Lab personnel indicated that the purple liquid in the container was methyl blue dye. It

is recommended that a waste determination be done on this liquid waste stream to ensure that the waste is not characteristic for ignitability, (e.g. has a flash point below 60° Centigrade / 140° Fahrenheit).

- 2) **EPA Identification Number** (40 CFR 262.12): A hazardous waste generator must not treat, store, dispose of, transport, or offer for transportation, hazardous waste without having received an EPA identification number. This EPA ID number will remain with the property and the hazardous waste generator status of the facility can be changed by submitting and EPA 8700-12 form to the Hazardous Waste Section.

The facility has an EPA ID number that became inactive in the 1990's when the facility believed itself to be a conditionally exempt small quantity generator of hazardous waste (CESQG). The facility has been operating as though it were a CESQG since that time. A review by the facility's pharmacy indicates that the facility is more likely a small quantity generator (SQG). The facility is planning to update its generator status by filing an EPA 8700-12 form with the Division of Waste Management's Hazardous Waste Section. It is further recommended that any hazardous waste generated at the Lenoir Memorial Cancer Center, if any exists, be included in the volume calculations for determining the facilities' generator status. The Lenoir Memorial Cancer Center is located directly across the (N. Heritage) street from the hospitals' main property. Per 40 CFR 262.20(f) the facility may move hazardous waste across the road without a manifest as long as they own the property across the road and follow DOT requirements.

- 3) **Annual Fees** (GS 130A-294.1(f)): A SQG shall pay an annual fee of \$175.00
- 4) **Maximum On-Site Storage Amount** (40 CFR 262.34(d)(1)): As a SQG, the quantity of waste accumulated on-site must never exceed 6000 kilograms or 13,200 pounds at any one time.
- 5) **Maximum On-Site Storage Time** (40 CFR 262.34(d)): As a SQG, the facility cannot store hazardous waste on-site for more than 180 days. The facility can store hazardous waste on-site for no more than 270 days if the hazardous waste is transported 200 miles or more for off-site treatment, storage or disposal (40 CFR 262.34(e)).

On the day of the inspection, several 55-gallon drums and numerous 1-gallon plastic jugs of laboratory waste were observed in the laboratory waste storage area. Some of the containers were labeled hazardous, some were not. No accumulation start dates were observed on the containers. A review of laboratory waste manifests indicated that hazardous waste shipments had been made once per year over the last three years, shipping between 1,500 pounds and 2,000 pounds of waste at each interval. The facility must ensure that all hazardous waste containers stored in a hazardous waste storage area be labeled and marked with an accumulation start date and, that storage time does not exceed 180 days (unless the hazardous waste is transported 200 miles or more for off-site treatment, storage or disposal).

- **Emergency Preparedness and Prevention:** SQGs must comply with the following requirements for emergency preparedness and prevention.
 - 1) Maintenance and Operation of Facility – 265.31
Facility must be operated to minimize the possibility of a fire or any unplanned sudden or non-sudden release of hazardous waste that threatens health or environment.

2) Required Equipment – 265.32

Facilities must have the following equipment unless not needed.

- a) Internal communications or alarm system that provides emergency instruction to personnel.
- b) A telephone or two-way radio must be available at the scene of operation to summon emergency assistance.
- c) Fire extinguishers and fire control equipment spill control, and decontamination equipment.
- d) Adequate water volume and pressure to supply fire hoses, automatic sprinklers, or water spray systems.

3) Testing and Maintenance of Equipment – 265.33

All equipment listed in this section should be tested and maintained to assure operation in case of an emergency.

4) Access to Communications or Alarm – 265.34

- a) Whenever hazardous waste is being handled, all personnel involved must have access to an alarm or communication device. Visual or voice contact is allowed.
- b) If there is just one person at the facility, while in operation, they must have immediate access to a telephone or two-way radio capable of summoning emergency assistance.

It is recommended that the facility develop a standard operating procedural (SOP) document around the emergency preparedness and prevention requirements stipulated above (40 CFR 265.31 through 265.34) The facility must ensure that a fire extinguisher and spill control equipment are available at the less than 180 day hazardous waste storage areas.

5) Required Aisle Space – 265.35 and 15A NCAC 13A .0110(c)

Twenty four inches of aisle space must be maintained to allow unobstructed movement of personnel or safety equipment.

There are two areas that the facility uses for storage of hazardous waste. The storage area attached to the hospital building near the maintenance shop is used for the storage of pharmacy derived wastes including chemotherapy waste; and the stand alone storage area located down the hill near the landscaping shop is used for the storage of laboratory generated waste. Each area is currently serviced by different hazardous waste vendors (transporters and TSDs). On the day of the evaluation the pharmacy waste storage area was observed to be compliant with aisle space requirements. The Laboratory waste storage area, was observed to have the potential for aisle space rules violations. It is recommended that better housekeeping practices are employed at the laboratory hazardous waste storage area.

6) Arrangements with Local Authorities – 265.37

- a) Arrangements to familiarize police, fire department, and emergency response teams with the facility layout and properties of hazardous waste handled and entrance and evacuation roads.
- b) Where more than one police and fire department might respond to an emergency, agreements must be made designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority.
- c) Arrangements with state emergency response teams, contractors, and equipment suppliers.

- d) Arrangements to familiarize local hospitals with the properties of hazardous waste handled and the types injuries and illnesses that could result from fire, explosion or releases at the facility.
- e) Documentation from any local authorities that decline any of the emergency arrangements.

Example arrangement letters with emergency authorities will be supplied as addenda to this report. It is recommended that the hospital develop letters of understanding with local emergency authorities including one or more neighbor hospitals for the delivery of emergency medical services in the event that an emergency at this facility precludes it from delivery of emergency medical services.

- **Emergency Coordinator** – 262.34(d)(5)(i): A SQG must have an emergency coordinator on the premises or on call at all times. The emergency coordinator must be able to respond in a short period of time to emergencies.
- **Emergency Response** – 262.34(d)(5)(iv): The emergency responder or his designee must respond to any emergency that may arise as follows:
 - A) Call fire department if there is a fire.
 - B) Contain the flow of a spill and clean up hazardous waste and contaminated soils or materials.
 - C) If fire or explosion may threaten human health outside the facility, or a spill has reached surface water the generator must immediately notify the National Emergency Response Center.
- **Emergency Information** – 262.34(d)(5)(ii): A SQG must post the following information by a phone at the facility:
 - A) Name and phone number of emergency coordinator.
 - B) Location of fire extinguishers, spill control equipment, and fire alarms.
 - C) Number to the fire department, unless there is a direct alarm.

A sample emergency information sheet is supplied along with other addenda to this report. It is recommended that copies be placed by phones nearest to each storage area and, at the storage area itself if communications requirements at that particular storage area will be satisfied by the use of cellular phones or other mobile devices.

- **Training** – 262.34(d)(5)(iii): As a SQG, the facility must ensure that all employees that are involved with the handling of hazardous waste are thoroughly familiar with proper waste handling and emergency procedures.

Clean Harbors, one of the facility's hazardous waste vendors currently provides some training to some laboratory personnel. The facility must ensure that training be given to any individuals (including contractors) handling or having anything to do with the management of hazardous waste in every area of the facility where hazardous wastes are or may be generated.

- **Waste Minimization Plan or On-site Efforts:** As a SQG, the facility must have waste minimization practices in place. By signing a hazardous waste manifest the facility is certifying that they implement waste minimization techniques.

The facility has a recycling program and encourages all of its employees, doctors and visitors to use the blue receptacles located throughout the hospital and off campus sites for disposal of empty cans and plastic bottles. The facility recycles used batteries and electronic or e-waste.

- **Inspection Records:** As a SQG, the facility must comply with the following:

Inspections – 265.174 and 15A NCAC .0107(d)

Facility must complete weekly inspections of containers in storage looking for leaks and corrosion. The facility shall keep records and results of required inspections for at least three years from the date of the inspection.

The facility must ensure that inspections of each hazardous waste storage area are conducted at least every 7 days. A sample inspection checklist is provided as an addendum to this report.

- **Manifests/LDRs:** As a SQG the facility must comply with the following:

1) General Manifest Requirements - 262.20(a)

A generator who offers for transportation, hazardous waste for offsite treatment, storage, or disposal must prepare a hazardous waste manifest in accordance to the regulations.

2) Number of Manifest Copies – 262.22

The manifest must consist of at least the number of copies which will provide the generator, each transporter, and the designated disposal facility with one copy each for their records and another copy to be returned to the generator.

3) Use of the Manifest – 262.23

The generator must:

- a) Sign the manifest certification by hand; and
- b) Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest; and
- c) Retain one copy, in accordance with 262.40(a)

The generator must give the transporter the remaining copies of the manifest

4) Recordkeeping – 262.40

Manifests must be kept on-site for three years.

5) Exception Reporting – 262.42

A SQG who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 60 days of the date the waste was accepted by the initial transporter must submit a legible copy of the manifest, with some indication the generator has not received confirmation of delivery the Hazardous Waste Section.

6) Approved TSDs and Transporters - 262.12(c)

Generators must use approved TSDs and Transporters with valid EPA ID numbers.

7) LDR Certification – 262.11(d) and 268.7(a)(5)

Land Disposal Restrictions must accompany all waste streams sent to TSDF.

Hazardous waste must be manifested properly (complete with Land Disposal Restrictions (LDRs)) and signed, returned copy from designated disposal facility must remain on-site for 3 years.

Hazardous waste manifests were reviewed during the evaluation. The facility uses Clean Harbors, Robbie D. Wood, Inc. and Chemical Analytics, Inc. as hazardous waste transporters and Clean Harbors Deer Park, LLC, Spring Grove Resource Recovery, Inc. and Chemical

*Analytics, Inc. as hazardous waste disposal companies (TSDs). Manifests reviewed on the day of the evaluation were observed to be correct and complete along with land disposal restrictions documents. Laboratory waste manifests were located in the lab and pharmacy waste manifests were located in the pharmacy (and available online through Clean Harbors' website). Manifests from the laboratory hazardous waste stream were reviewed from July, 2010 through the present. Manifests for the pharmaceutical hazardous waste stream were reviewed from August, 2012 through the present. **It is recommended (though not required) that all manifests or copies of all manifests be stored in a central location for ease of review during a subsequent inspection.***

➤ **TRANSPORTERS:**

*Clean Harbors Environmental Services, Inc.
Robbie D. Wood, Inc.
Chemical Analytics, Inc.*

*MAD 003 932 250
ALD 067 138 891
MID 985 568 021*

➤ **TSDs:**

*Clean Harbors Deer Park, LLC
Spring Grove Resource Recovery, Inc.
Chemical Analytics, Inc.*

*TXD 055 141 378
OHD 000 816 629
MID 985 568 021*

➤ **Container Management:** The following are hazardous waste container management requirements that must be met for all hazardous waste containers at a facility:

- 1) Hazardous waste must be *inside* the hazardous waste container. All spills/releases of hazardous waste must be responded to immediately and appropriately.
- 2) Hazardous waste containers must be closed unless waste is being added or removed.
- 3) All containers must be in good condition and if it is not in good condition, the hazardous waste must be transferred to another container that is in good condition.
- 4) Containers used to store hazardous waste must be compatible with the material stored in the container.
- 5) Incompatible wastes must not be placed in the same container.

➤ **Satellite Accumulation Areas:** The facility may have satellite accumulation areas for hazardous waste as long as the following criteria are met in addition to the container management criteria:

- 1) Hazardous waste must be *inside* the hazardous waste container. All spills/releases of hazardous waste must be responded to immediately and appropriately.
- 2) The satellite accumulation container must be located at or near the point of generation and under the control of the operator.
- 3) The facility cannot accumulate more than a total of 55-gallons of hazardous waste at each satellite accumulation area.
- 4) Hazardous waste containers must be closed (and funnels must be securely latched) unless waste is being added or removed.
- 5) Hazardous waste containers located at a satellite accumulation area must be marked with the words "hazardous waste" or other words identifying the contents of the container.

*The facility utilizes 8-gallon black hazardous waste containers as satellite accumulation sites throughout the pharmacy and at nursing stations on the patient floors. The laboratory uses a mixture of used containers, presumably old product containers from which the wastes are primarily derived. **The facility must ensure that all satellite containers are clearly labeled "Hazardous Waste" and that all are kept closed unless hazardous waste is being added or removed from the container.***

In patient care areas, comingling of P-listed pharmaceuticals is permitted and considered as “incidental waste” not subject to determining generator status or to the one-quart quantity limit.

- **Hazardous Waste Storage Areas:** A small quantity generator of hazardous waste can store hazardous waste on-site in storage areas for not more than 180 days (or for 270 days if the disposal company is more than 200 miles away from the facility) provided the following requirements are met in addition to the container management requirements:

- 1) Hazardous waste must be *inside* the hazardous waste container. All spills/releases of hazardous waste must be responded to immediately and appropriately.
- 2) Hazardous waste containers must be closed unless waste is being added or removed.
- 3) All hazardous waste containers in the 180-day storage area must be labeled with the words “hazardous waste” and marked with an accumulation start date.
- 4) Weekly inspections (looking for leaks and for corrosion) of hazardous waste containers in less than 180 day storage area must be performed and documented.

As previously discussed, a sample inspection checklist will be provided as an addendum to this report. It is recommended that the same individual or small team of individuals conduct these weekly inspections for all hazardous waste storage areas at the facility and it is required that the frequency of inspections never exceed 7 days.

- 5) Containers holding reactive or ignitable waste must be located at least 15 meters (50 feet) from the facility’s property line.
- 6) Facility must have at least 24 inches of aisle space to provide unobstructed movement in the less than 180-day storage area in order to respond to an emergency.

As previously discussed, particular attention to aisle space requirements should be paid at the laboratory hazardous waste storage area.

- 7) Comply with 40 CFR 265.201 in Subpart J if the facility stores hazardous waste in tanks.

The facility does not use tanks to store hazardous waste.

- **Used Oil Storage Areas:** As long as used oil is destined for recycling, it can be managed under the less stringent 40 CFR 279 Used Oil Management requirements. The basic requirements for used oil generators include:

- 1) Used oil must be stored in container and/tanks that are in good condition (no severe rusting, apparent structural defects or deterioration) and not leaking.
- 2) The container or tank (or fill pipes used to transfer used oil into underground storage tanks) must be labeled with the words “Used Oil”. Please note that waste oil is not the same as used oil. Used oil is destined for recycling. Waste oil is destined for disposal or does not meet the definition of used oil.
- 3) Upon detection of a release of used oil to the environment, the following steps must be taken:
 - a) Stop the release;
 - b) Contain the released used oil;
 - c) Clean up and manage properly the released used oil and other materials; and
 - d) If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

*On the day of the evaluation, containers were observed in a flame cabinet directly across the courtyard from the pharmacy hazardous waste storage area. The cabinet was presumed to be under the control of the landscaping section. One 55-gallon drum was observed along with several small (1-quart to 2-gallon) plastic gasoline containers. The gasoline containers were presumed to be usable product, likely gasoline/oil mixtures for landscaping equipment. It was unknown whether the 55-gallon drum was usable product or a waste of some sort. The bottom of the flame cabinet had approximately 1 to 2 inches of used oil in the bottom of it. The facility must clean up spills observed in the bottom of the flame cabinet. **It is highly recommended to clean this area, label all containers and employ better housekeeping practices.***

➤ **Universal Waste:** Universal waste regulations, found at 40 CFR 273, apply to used lamps, batteries, mercury containing equipment and pesticides. The facility must ensure compliance with the universal waste regulations if the facility manages these items. The following is a summary (not all inclusive) for the management of universal waste.

- 1) Universal waste must be stored in a way that prevents releases of any universal waste or component of universal waste to the environment.
- 2) The universal waste must be stored in containers that are kept closed, structurally sound, adequate to prevent breakage and compatible with the contents of the container.
- 3) The containers must be labeled with the words “Universal Waste _____”, “Waste _____” or “Used _____”.
- 4) Universal waste may not be kept on site for more than one year. It is recommended that the containers be marked with an “accumulation start date” so the facility can track the amount of time the universal waste is on site.
- 5) The facility must inform all employees who handle or have the responsibility for managing universal waste about the proper handling and emergency procedure appropriate to the type(s) of universal waste handled at the facility.

*On the day of the inspection, a number of used lamps were observed in the landscaping building sitting inside of a wood chipper manifold. The facility must ensure that used lamps are properly disposed of or recycled and may not be placed in the solid waste stream (Dumpster) without appropriate testing data and approval from the receiving landfill. **It is recommended that the facility either obtain Toxicity Characteristic Leaching Procedure (TCLP) data for its used lamps or treat them as universal waste. The facility must ensure that all universal waste (used lamps, batteries, mercury containing equipment and pesticides) be handled in the manner prescribed at 40 CFR 273 (above).***

- 6) The facility must respond to releases of universal waste immediately.

Broken lamps should be treated as hazardous waste, containerized, labeled “Hazardous Waste”, dated, stored in a hazardous waste storage area and removed in less than 180 days.

AREAS OF REVIEW AND EVALUATION:

The following areas were visited during the evaluation:

❖ **Progressive care Unit (PCU)**

The PCU services 32 rooms and is a mirror image of an identical 32 room servicing unit on the same floor. There are 8 similar units in the hospital. Behind the nursing station in a closed room where the

patient medicine mobile supply carts are located. One 8-gallon black hazardous waste satellite container was observed. The container was properly closed and labeled.

❖ Pharmacy

The pharmacy had five different 8-gallon black poly pails in different locations for different hazardous waste streams including one in the chemotherapy drug formulation room which is a separate restricted access room within the pharmacy. One pail was located by the pharmacy counter and contained waste pharmaceuticals (P-listed wastes may occasionally be included). One container was located inside of the chemotherapy formulation room and contained bulk chemo waste and two containers were located across the room one contained pharmacy waste and the other small aerosol inhaler cans. The use of arsenic trioxide as a chemotherapy drug in the hospital's patient population is very rare but does occur. The pharmacy Director appears to have a thorough awareness of the importance of tracking P-listed compounds and their associated waste streams as they make their way through the hospital. ***On the day of the evaluation, the consensus of the group was that turning the pharmacy into a hazardous waste storage area (rather than present practice of managing several satellite containers) would give pharmacy personnel greater flexibility in the day-to-day management of hazardous waste. The pharmacy could then accept waste from all areas of the facility and stay within the regulations. There will be the additional burden of weekly inspections (see storage area rule) but the tradeoff should be well worth the added flexibility. Regardless of the status of the containers, the facility must ensure that all hazardous waste containers are completely closed unless adding or removing waste.***

❖ Pharmacy Waste Hazardous Storage Area

Located in a courtyard/loading dock area adjacent to the maintenance shop, the storage area used for pharmacy waste is located behind a locked fence. On the day of the evaluation, four flame cabinets were observed each with two (2) 20-gallon cardboard boxes containing bagged pharmaceutical hazardous waste. The boxes are also lined with a plastic bag ensuring that the original bag from the satellite containers is contained within a second bag and a box. All boxes were observed to be properly closed labeled and dated. ***The facility must ensure that all hazardous waste storage areas have a fire extinguisher and spill kit in the vicinity, as well as an alarm, a telephone or two-way radio must be available at the scene of operation to summon emergency assistance.***

❖ Landscaping Flame Cabinet

In the courtyard/loading dock area across from the pharmacy waste storage area is a flame cabinet used by the landscaping department. See comments regarding this area on page 8 under "Used Oil Storage Areas". ***It is highly recommended to clean this area, label all containers and employ better housekeeping practices. Any spills must be cleaned up immediately.***

❖ Maintenance Shop

No hazardous waste is generated at the maintenance shop per interviews with hospital maintenance personnel. Used oil is not generated as most equipment is either sent off premise for servicing or serviced onsite by outside contractors who remove and dispose of used oil. Lead acid batteries are recycled and out of date or broken electronics are recycled as e-waste. ***The facility must ensure that all universal waste (used lamps, batteries, mercury containing equipment and pesticides) be handled in the manner prescribed at 40 CFR 273.***

❖ Laboratory

The lab generates modest amounts of hazardous waste primarily that is characteristic for ignitability. On the day of the evaluation, two flame cabinets were observed in the lab containing product and waste bottles of a xylene substitute called Sub-X[®] (an aliphatic hydrocarbon, flashpoint 106° F (41° C)), alcohol (IPA) and expired special stains. Both the IPA and Sub-X[®] wastes are regularly recovered through an

onsite distillation unit. Also located in the lab is the previously discussed QuickSlide™ hematology slide stainer. Lab personnel indicated that the purple liquid in the container underneath the QuickSlide™ machine was methyl blue dye. ***It was previously recommended in this report that a waste determination be done on this liquid waste stream to ensure that the waste is not characteristic for ignitability, (e.g. has a flash point below 60° Centigrade / 140° Fahrenheit).***

❖ **Cytology Lab**

The cytology lab is located within the Laboratory and contains an AutoCyte slide processing unit. The slide processing unit generates waste IPA which is put down the drain after removal from the machine's waste collecting bottle. ***It is recommended that a list of compounds disposed of by sending down the sink should be discussed with the facility's waste water treatment facility to ensure compatibility with the Publically Owned Treatment Works' (POTW) treatment program and compliance with the Clean Water Act.***

❖ **Laboratory Waste Storage Area**

The area where laboratory generated wastes are stored is a concrete pad, bermed and covered and surrounded by a locked chain link fence. ***The facility must ensure that all hazardous waste containers stored awaiting disposal are properly labeled and dated and that the holding times do not exceed 180 days (unless the hazardous waste is transported 200 miles or more for off-site treatment, storage or disposal). The facility must also ensure that all hazardous waste storage areas have adequate fire suppression devices, spill control equipment, and emergency communications devices.***

❖ **Landscaping Maintenance Shop**

There was no hazardous waste observed in the landscaping shop on the day of the evaluation. ***The facility must ensure that universal waste regulations, found at 40 CFR 273, (applying to used lamps, batteries, mercury containing equipment and pesticides) be followed. It is recommended to develop a SOP document around universal waste practices and procedures to assist in training all maintenance personnel in the proper handling of universal waste.***

EXTERNAL CONDITION OF FACILITY:

The overall condition of the facility both internally and outside was very good. It is evident that good housekeeping is a priority among most departments. Patient/visitor and other public areas observed were exceptional, further evidence that a culture of cleanliness and best housekeeping practice pervades all levels of the institution.

ACTION ITEMS / RECOMENDATIONS:

The following action items and recommendation have been distilled from the report language above in an effort to provide a comprehensive punch list of the compliance issue items observed and discussed during the evaluation of January 10, 2012.

- A waste determination must be done on the methyl blue dye waste stream from the Lab to ensure that the waste is not characteristic for ignitability, (e.g. has a flash point below 60° Centigrade / 140° Fahrenheit).
- The facility is planning to update its generator status by filing an EPA 8700-12 form with the Division of Waste Management's Hazardous Waste Section. It is further recommended that a comprehensive assessment of the total amount of hazardous waste generated by the facility and adjacent satellites if applicable be conducted. It is evident that to this point hazardous waste has been managed at a departmental level. Drug List-Waste Codes Schedule 2012 is provided with the addenda to this report.

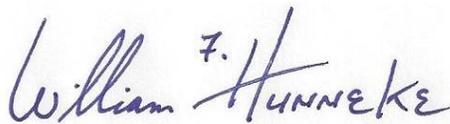
- The facility must ensure that all hazardous waste containers stored in a hazardous waste storage area be labeled and dated and, that storage time does not exceed 180 days (unless the hazardous waste is transported 200 miles or more for off-site treatment, storage or disposal).
- It is recommended that the facility develop a SOP document around the emergency preparedness and prevention requirements stipulated at 40 CFR 265.31 through 265.34 (see pages 3 & 4 of this report).
- The facility must ensure that twenty four inches of aisle space be maintained in hazardous waste storage areas to allow unobstructed movement of personnel or safety equipment. Better housekeeping at the laboratory hazardous waste storage area is encouraged.
- It is recommended that the hospital develop letters of understanding with local emergency authorities including one or more neighbor hospitals for the delivery of emergency medical services in the event that an emergency at this facility precludes it from delivery of emergency medical services. Sample emergency arrangement letters are provided among the addenda to this report.
- It is recommended that an emergency authority contact information sheet be developed and copies be placed by phones nearest to each storage area and, at the storage area itself if communications requirements at that particular storage area will be satisfied by the use of cellular phones or other mobile devices. A sample emergency authority contact information sheet is supplied along with other addenda to this report.
- It is recommended that training be given to any individuals handling or having anything to do with the management of hazardous waste in every area of the facility where hazardous wastes are or may be generated. The facility must ensure that outside contractors are included in the individuals trained. Training for outside contractors may be done by the contracting organization itself. Documentation of the training is not required but recommended.
- The facility must ensure that inspections of each hazardous waste storage area are conducted at least every 7 days. It is recommended that the same individual or small team of individuals institute and conduct a program of weekly inspections for all hazardous waste storage areas. A sample storage area inspection checklist is provided as an addendum to this report.
- It is recommended (though not required) that all manifests or copies of all manifests be stored in a central location for ease of review during a subsequent inspection.
- The facility must ensure that all satellite containers are clearly labeled "Hazardous Waste" and that all are kept closed unless hazardous waste is being added or removed from the container.
- It is recommended to clean the landscaping flame cabinet (especially the oil spilled on its floor) located across from the pharmacy hazardous waste storage area, label all containers and employ better housekeeping practices going forward. Any spills must be cleaned up immediately.
- It is recommended that the facility either obtain Toxicity Characteristic Leaching Procedure (TCLP) data for its used lamps or treat them as universal waste. The facility must ensure that all universal waste (used lamps, batteries, mercury containing equipment and pesticides) be handled

in the manner prescribed at 40 CFR 273. Universal Waste Guidelines are provided along with the other addenda to this report.

- Turning the pharmacy into a hazardous waste storage area (rather than the present practice of managing several satellite containers) would give pharmacy personnel greater flexibility in the day-to-day management of hazardous waste.
- It is recommended that a list of compounds disposed of by sending down the sink be discussed with the facility's waste water treatment facility to ensure compatibility with the Publicly Owned Treatment Works' (POTW) treatment program and compliance with the Clean Water Act.

CONCLUSIONS:

This evaluation was a Compliance Assistance Visit. The facility must ensure compliance with all applicable regulations for the facility's status of hazardous waste generator. Please note that as a hazardous waste generator, Lenoir Memorial Hospital could be subject to unannounced inspections by the Hazardous Waste Section at any time. If there are any discrepancies in this report or if you have questions about compliance issues, please do not hesitate to contact the Hazardous Waste Section.



William Hunneke
Environmental Senior Specialist, NCDENR

Date: January 18, 2013

Guidance Documents provided as addenda:

- ✓ Drug List-Waste Codes Schedule 2012
- ✓ Sample Emergency Arrangement letters
- ✓ Sample Emergency Authority Contact information sheet
- ✓ Sample Storage Area Inspection Checklist
- ✓ Universal Waste Guidelines