Hazardous Waste Section

File Room Document Transmittal Sheet

Your Name:	Heather Sorensen
EPA ID:	N C D 9 8 2 1 3 0 8 3 3
Facility Name:	Carolinas Medical Center
Document Group:	General (G)
Document Type:	Compliance Assistance Visit (CAV)
Description:	
Date of Doc:	6/12/2013
Author of Doc:	Heather Sorensen

File Room Use Only

NCD982130833

	Month	Day	Year
Date Recieved by File Room:			
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Hazardous Waste Compliance Data Entry Form – Side A

EPA ID Number: NCD 982 130 833

Facility Name: Carolinas Medical Center

Street: 1000 Blythe Boulevard

City: Charlotte **ZIP:** 28232 **County:** Mecklenburg

Contact Name: Barbara Miller **Phone#:** 704-355-9308

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EVALUATION DATA New: X Change: ____ Delete: ____

Date: 6/29/2013 Evaluation Type: CAV

Date: ___/___/_____ Evaluation Type: _____

Inspector ID #: 111

Evaluation Comments:

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SNC DETERMINATION: If this evaluation resulted in a SNC determination, fill in this block. (NOTE: SNC determinations are SNY/SNN evaluations. The SNY/SNN evaluation can also be submitted later on a separate form.)

Facility is (check one):

_____ a SNC (SNY evaluation) Docket # _____

or

_____ no longer a SNC (SNN evaluation)

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YES / NO CSE ONLY

Waste Involved	Volume	Exposure Media (a, gw, sw, s)	Distance to Residences	Number of People involved	Distance to On-site wells	Distance to Off-site wells

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Date Determined: / /

Branch: 01 Person: 111

Return to Compliance: ___ ___/___ ___/___ ___ ___ ___/___ ___/___ ___

Scheduled Actual

Regulation Description: _____

Carolinas Medical Center

NCD 982 130 833

Large Quantity Generator – Compliance Assistance Visit (CAV)

NCDENR- Division of Waste Management- Hazardous Waste Section

July 29, 2013

Facility Information: 1000 Blythe Boulevard, Charlotte, NC 28232

Facility Contact: Barbara Miller – Corporate Safety, 704-355-9308

Present at Inspection: Bill Collin (CMC POM), Josh Hartmann (Corporate Safety), Barbara Miller (Corporate Safety), Ben Wells (Accreditation), Brian Palm (Corporate Safety), Kate Lowe (Corporate Safety), Dara Porter (Lab/HazMat), Nessan Salmon-Wilson (CMC FPN/Corporate Ops.), Richella Hemendinger (CHS Research Quality Assurance and Control), Dana McCollyer (Pharmacy), Mike Dorton (Corporate Safety), Jennifer Rollins (Nursing), Sherrie McGovern (Nursing), Linda McCurdy (CMC Dentistry), Denine Barksdale (Information Services), Mark Burnette-NCDENR, Heather Sorensen-NCDENR

Inspection Date: June 12, 2013, 9:30 a.m. – 4:50 p.m.

Type of Business: Carolinas Medical Center (CMC) provides healthcare services in Charlotte as a member of the Carolinas HealthCare System. CMC has 893 licensed beds and 90 beds located at the Carolinas Rehab portion of the facility. The hospital is an academic medical center teaching hospital, Level 1 Trauma Center, and conducts solid organ transplants. Carolinas Rehab, located at 1100 Blythe, Levine Cancer Institute, located at 1200 Blythe, and Levine Children's Hospital, located at 1000 Blythe, are all part of the CMC facility that is managed under EPA ID#NCD982130833. CMC is working to standardize all hospitals in the healthcare system on Clinical Operational Benchmarking (COB) for waste determinations. Waste determinations made on laboratory process waste were available for review. The facility has a Container Management Guide with approximately 150 satellite accumulation containers located in patient care areas throughout the facility. Hazardous waste medications are tracked bedside using a barcode scanning system. This system provided information on if the medicine needs to be managed as hazardous waste or through reverse distribution. Heritage Environmental Services maintains two personnel onsite to manage hazardous waste. CMC employees sign hazardous waste manifest, not contractors. The facility includes multiple specialty areas including: Pharmacy, Histology Laboratory, Pathology Laboratory, Chemotherapy, Radiology/Imaging, Cardiology, Surgical Center, Gastroenterology, Dental, Morgue, Orthopedics, Rehabilitation, Neuroscience, Trauma, and Women Services. The facility does not formulate chemotherapy drugs. However, they are mixed into solution onsite.

The facility utilizes reverse distribution services for unused medications through EXP Pharmaceutical Services Corporation. Documentation for returned medicines are maintained electronically. Healthcare group purchasing organizations Premier and Direct take back unused chemicals. The facility is moving towards aerosol can puncturing and metal recycling to manage generated aerosols. The facility's Corporate Safety group oversees hazardous waste generation of construction, demolition, and renovation projects. Mercury bulbs are used in the research areas for microscopes. CMC is working to be mercury free and changes to mercury free equipment as technology becomes available.

Calculations provided by the facility estimates that in 2011 and 2012 the maximum amount of P-listed waste generated each month was 0.00015 and 0.00018 pounds, respectively. The facility was operating as a large quantity generator (LQG) of hazardous waste at the time of inspection based on disposal manifest records and the amount of waste onsite. The facility notified as a Small Quantity Generator (SQG) on September 16, 1996 and a LQG on March 21, 2013. This inspection was conducted as a Compliance Assistance Visit.

Areas of Inspection

Manifests: Manifests were reviewed for May 2011-present. All copies were present, with approved transporters and TSDF's.

Transporters	Heritage Transport LLC	IND 058 484 114
	Veolia Technical Solutions, LLC	NJD 080 631 369
	Freehold Cartage, Inc	NJD 054 126 164
TSDF's	Veolia Technical Solutions, LLC	NCD 986 166 338
	Heritage – WTI, Inc.	OHD 980 613 541

Waste Streams:

Waste Flammable Liquid	Alcohol	D001
Waste Flammable Liquid	Iodine solution	D001
Waste Mercury Compounds	Mercuric bromide/chloride	D009
Waste Flammable Liquid	Methanol, acetic acids	D001, D002, F003, U044
Waste Flammable Liquid	Xylene	D001, F003
Hazardous Waste Solid	Fluorescent lamps	D009
Waste Medications	Phenol	D001, U188
Flammable Liquid	Formic acid, acetonitrile	D002, U223
Hazardous Waste Solid	Lead, cadmium	D006, D008
Waste Organic Liquid	Potassium chromate	D001, D007
Hazardous Waste Solid	Lead	D008
Waste Medication Toxic	Warfarin, nicotine	P075, P001

Inspection Records: **W**eekly inspection records for two 90-day hazardous waste storage areas were reviewed at the time of inspection. Inspection records were reviewed for the Cannon Labs Research Building Level 4 hazardous waste storage area and Rakin Building loading dock hazardous waste storage area. The facility failed to conduct weekly inspections in that the document review revealed multiple instances for both 90-day hazardous waste storage areas where inspections were conducted with greater than seven days between inspections. (See Deficiencies below.) Weekly inspections are to be conducted at least every seven days, as required by the Section.

Contingency Plan: The facility has developed and maintains a LQG Contingency Plan that was updated on March 19, 2013. The plan list the Emergency Coordinator as Barbara Miller. Secondary Emergency Coordinators are Bill Collin, Dara Porter, and Rachelle Memendinger. The plan described the actions personnel must take to respond to an emergency event and arrangements agreed to by local emergency agencies. The plan list emergency equipment and alarms found in the 90-day hazardous waste storage areas. The plan failed to list the home addresses of the emergency coordinators. (See Deficiencies below). The facility failed to list the secondary evacuation route for the

Cannon Labs Research building Level 4 hazardous waste storage area in the contingency plan. (See Deficiencies below). The facility failed to include emergency equipment for the Rakin building loading dock hazardous waste storage area in the contingency plan. (See Deficiencies below.) It is recommended that the a statement be added to the contingency plan that specifies that the plan must be carried out in the event of a fire, explosion, or release of hazardous waste that could threaten health or environment. (See Comments below.)As a reminder, the facility must mail out contingency plans within a reasonable time period after revisions are completed. The facility mailed out emergency arrangement letters on June 10, 2013 to Charlotte-Mecklenburg Police Department, NCDENR, Charlotte Emergency Management, and Charlotte Fire.

The facility maintains an overhead paging system and incorporates a code orang/red program throughout the facility. The facility also maintains fire pull stations, strobe lights, and audible alarm system. Quality Sprinkler checks and maintains the fire sprinkler system and Simplex Grinnell checks and maintains fire extinguishers. Both storage areas contained all necessary emergency equipment and communication devices.

Waste Minimization: The facility has a written waste minimization plan that includes recycling, disposal guide, and a waste management plan.

Training Records: CMC employees receive annual training for various topics, including hazardous waste and universal waste management. They also have a Safety Committee that meets monthly and review waste management procedures. Hazardous waste training was last conducted on June 18, 2013. At the time of inspection the facility failed to provide job title and job descriptions for each position related to hazardous waste management. (See Deficiencies below.)

Satellite Accumulation Area: Approximately eleven hazardous waste storage areas were observed in the following areas during the inspection: Pharmacy, Old Loading Dock, Onocology (4th Floor), Pathology (4th Floor), Toxicology (4th Floor), Hematology/Oncology (11th Floor) Cardiac (7th Floor), Dental Clinic (3rd Floor), Clinical Engineering, 309 Laboratory, and Histology Laboratory. In the Pathology laboratory, waste xylene generate from a tissue processor is accumulated in a small fire rated room. The fire room is located approximately eight feet from the tissue processor and is used as satellite accumulation area due to safety considerations. This satellite accumulation area is not to be used to store greater than 55-gallons of hazardous waste or to be used as a satellite accumulation area for hazardous waste generated in other areas of the Pathology laboratory or facility, unless this area is managed as a 90-day hazardous waste storage area.

Storage Area: The facility maintains two 90-day hazardous waste storage areas. Heritage Environmental Services or training CMC employees move hazardous waste from satellite accumulation areas to 90-day storage areas.

- Cannon Labs Research Building Level 4 hazardous waste storage area – This storage area is located in a small locked room with a secondary containment floor. There is a phone located in the adjacent room and voice contact can be used to summon assistance. A fire extinguisher is located across the hall from the storage area door. The door to the room is labeled as "Hazardous Waste Storage". It is recommended that the evacuation routes be posted in this hazardous waste storage area. (See Comments below.) There was one flammable cabinet with seven (7) 1-gallon containers that were all labeled and dated. Miscellaneous sized containers of expired laboratory chemicals were also stored in this room. These chemicals will be lab packed. It is a reminder that 24-inches of aisle space must be maintained in hazardous waste storage areas. (See Comments below.) It is recommended that the facility update the weekly inspection checklist to the facility's newly developed, comprehensive checklist. (See Comments below.)

- Rakin Building loading dock hazardous waste storage area – This storage area is located in a locked room located away from the main hospital buildings. This storage area has a secondary containment floor. At the time of inspection there were one (1) 55-gallon container of waste alcohol, one (1) 55-gallon container of waste xylene, one (1) 3-gallon and two (2) 17-gallon containers of waste that were all closed, labeled, and dated. The waste xylene was grounded. There were two fire extinguishers, a spill kit, and telephone located in this area. The door to the storage area was labeled as "Hazardous Storage" and "No Smoking".

Other Waste Streams: CMC generates waste alcohol that is transported to DART Acquisitions, LLC in North Carolina, and then transported to Disposal and Recycling Technologies, Inc. (DART) in Detroit, Michigan for re-use as a biodiesel. It is a reminder that the facility is responsible for demonstrating that the waste alcohol that is sent off for reclamation meets regulatory requirements for the claimed exclusion or exemption. (See Comments below). The Dental Clinic manages x-ray lead waste as a recycled metal that is sent to DRNA and is not managed as a hazardous waste.

Universal Waste: CMC currently manages their universal waste lamps and batteries in the maintenance building in the Old Loading Dock. Broken lamps are managed as hazardous waste and are stored in satellite accumulation containers in this area. There were 18 containers of used lamps and nine containers of used batteries stored in this area. 3/29/2013 was the earliest identified date. All containers were closed, labeled, and dated. A spill kit is located in this area. Universal waste batteries are also maintained in the Clinical Engineering area. In this area there were two waste battery containers that were closed and labeled at the time of inspection. Interstate picks up used batteries for recycling. Universal waste training was conducted on March 23, 2012.

Electronics: There was no e-waste on site at the time of inspection.

Used Oil: Heritage Environmental Services collects used oil for recycling.

Site Deficiencies to be addressed through technical assistance:

- **262.34(a)(1)(i) reference 265.16(d)(1)** – Failure to provide job titles for each position related to hazardous waste management.
- **262.34(a)(1)(i) reference 265.16(d)(2)** – Failure to provide job descriptions for each position related to hazardous waste management.
- **262.34(a)(1)(i) reference 265.52(d)** – Failure to list the home addresses of the emergency coordinators in the contingency plan.
- **262.34(a)(1)(i) reference 265.52(e)** – Failure to include emergency equipment for the Rakin Level 1 hazardous waste storage area in the contingency plan.
- **262.34(a)(1)(i) reference 265.52(f)** – Failure to list the secondary evacuation route for the Level 4 hazardous waste storage area in the contingency plan**.**
- **262.34(a)(1)(i) reference 265.174** – Failure to conduct weekly inspections.
- **NC G.S. 130A-294.1(e)** – Failure to pay required LQG fees for the State fiscal years of July 1, 2010 through June 30, 2012. The facility's hazardous waste manifests documented that the facility generated more than 2.2-pounds of P-Listed hazardous waste in a calendar month during May, June, and September 2011. The facility changed generator status, from SQG to LQG, in March 2013.

Based upon the foregoing, Carolinas Medical Center shall come into compliance with all applicable requirements of 40 CFR Parts 262, 265, 268, 273, and 279 by August 29, 2013 (30 days from signing).

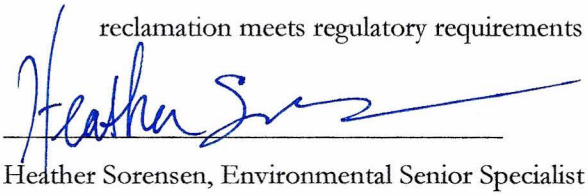
Respondent shall provide a written certification with supporting documentation on company letterhead confirming the noted compliance schedule has been completed. E-Mail or Mail this certification to Ms. Heather Sorensen, Environmental Senior Specialist at P.O. Box 241001, Charlotte, NC 28224-1001 by the noted compliance date.

Compliance with this inspection report will not divest the Section of its authority to issue an administrative penalty for the violations cited herein. Pursuant to N.C. General Statutes 130A-22(a) and 15A NCAC 13A .0701-.0707, an administrative penalty of up to $32,500.00 per day may be assessed for violation of the hazardous waste law or regulations.

If you have any questions concerning this matter, you may contact Ms. Heather Sorensen at (980)219-8537.

Comments/Recommendations:

- It is recommended that the a statement be added to the contingency plan that specifies that the plan must be carried out in the event of a fire, explosion, or release of hazardous waste that could threaten health or environment.
- As a reminder, the facility must mail out contingency plans within a reasonable time period after revisions are completed.
- It is recommended that the evacuation routes be posted in the Cannon Labs Research Building Level 4 hazardous waste storage area.
- It is a reminder that 24-inches of aisle space must be maintained in hazardous waste storage areas.
- It is recommended that the facility update the weekly inspection checklist to the facility's newly developed, comprehensive checklist.
- It is a reminder that the facility is responsible for demonstrating that the waste alcohol that is sent off for reclamation meets regulatory requirements for the claimed exclusion or exemption.



7/29/2013

Heather Sorensen, Environmental Senior Specialist
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980.219.8537
heather.sorensen@ncdenr.gov

Date

cc: Barbara Miller, Carolinas Medical Center
Brent Burch, NC Hazardous Waste Section
Mooresville Regional Office Files
Central Office Files