

**MISSISSIPPI STATE DEPARTMENT OF HEALTH
DIVISION OF HEALTH PLANNING AND RESOURCE DEVELOPMENT
AUGUST 2008**

**CON REVIEW HG-C-0508-015
NORTH MISSISSIPPI MEDICAL CENTER, INC.
RELOCATION/CONSTRUCTION OF AN OFF-SITE
CENTRAL STERILE AND PROCESSING FACILITY
CAPITAL EXPENDITURE: \$7,515,000
LOCATION: TUPELO, LEE COUNTY, MISSISSIPPI**

STAFF ANALYSIS

I. PROJECT SUMMARY

A. Applicant Information

North Mississippi Medical Center, Inc. (NMMC) is a 650-bed general acute care, short-term medical/surgical hospital. NMMC is a non-profit, tax-exempt, Delaware corporation licensed as an acute care hospital in Mississippi. It is licensed to operate 554 medical/surgical beds, 20 adult chemical dependency beds, 33 adult psychiatric beds, 13 adolescent chemical dependency beds, and 30 rehabilitation beds. NMMC offers a broad scope of specialty and sub-specialty services as the major regional medical center of the area, General Hospital Service Area 1 (GHSA 1). North Mississippi Medical Center is governed by a 13-member Board. The hospital is accredited by the Joint Commission on the Accreditation of Healthcare Organizations, the Commission on Accreditation of Rehabilitation Facilities, and licensed by the Mississippi State Department of Health (MSDH).

The occupancy rates, average lengths of stay (ALOS), and the Medicaid utilization rates for NMMC are as follows for the years 2005 through 2007:

**North Mississippi Medical Center
Utilization Data**

Fiscal Year	Occupancy Rate (%)	ALOS (Days)	Medicaid Utilization Rate (%)
2005	62.66	4.91	15.04
2006	60.65	4.23	14.22
2007	62.17	4.57	11.97

Source: Division of Health Facilities Licensure and Certification, MSDH.

B. Project Description

North Mississippi Medical Center requests Certificate of Need (CON) authority for relocation/construction of an off site central sterile processing facility. North Mississippi Medical Center proposes to relocate its existing on-campus central sterile processing facility by constructing an off-site central sterile processing facility. NMMC asserts that the proposed central sterile processing facility will be constructed adjacent to the recently constructed NMMC's warehouse. A portion of the vacated 4,000 square feet central sterile processing (CSP) space in NMMC main unit will be retained for central sterile processing facility support needs. The remaining area will be used for expansion of the pharmacy department to support robotics. According to the applicant, the CSP and case cart assembly (CCA) functions are mission critical items to allow the hospital to do surgery. Essentially, this is where all of the instruments are cleaned, processed, sterilized and matched with disposable items to allow a surgeon to perform sterile surgery on a patient. The applicant indicates that the scope of the proposed project involves 28,000 square feet of new construction. The building will be divided into three distinct zones. The first zone is the **decontamination zone**, the **second zone** is the **prep/pack (clean) zone** and the third zone is the sterile zone. The following will give a complete description of each part of the proposed project's space:

1. **The decontamination zone** is where all instruments are received after a surgical case and the gross decontaminant are cleaned off. The cleaning is done in special stainless steel sinks, ultrasonic cleaners (for cannulated instruments) and then through a washer/decontaminator. Each different type of instrument has different requirements for cleaning. To ensure that each set gets the manufacturers recommended processing, NMMC will be automating as much of the process as possible. The decontamination zone must be kept at negative air pressure to keep from spreading any contaminants to other areas. All access into the decontamination zone is done by passing through interlocked doors which act as air locks to maintain the negative pressure at all times. The floor color will be matched to the color of the scrub suit worn by the technicians. This will always allow instant recognition if someone is in the wrong area and prevent cross contamination. The decontamination zone will have cart washer/decontaminators that will clean the stainless steel carts that the instruments and supplies will be transported within.
2. **The prep/pack zone** is where instruments are inspected individually, assembled into sets and sent through the proper sterilization. Each instrument will have its barcode scanned as it is assembled into a set. The instrument tracking software will track each instrument to make sure it is in the proper set and that it has had a preventive maintenance performed within guidelines; it will have a digital image and any special instructions for handling/packing. As each set is scanned, it will let the technician know

what type of sterilization method is required for the set. If it requires steam sterilization, it will be scanned to the carriage for the steam sterilizers. As it is scanned it will transfer the information from the system to the bar code so the steam sterilizer will know which cycle and temperature is needed for that particular load. The other methods of sterilization will be ethylene oxide and gas plasma sterilization. The latter two methods are low temp methods of sterilization for items sensitive to heat. The prep/pack zone will have different color flooring that matches the employees scrub uniforms to denote the zone where they work and will have airlocks with interlocked doors for the personnel to pass through. The prep/pack area is kept under positive pressure (with the exception of the area for ethylene oxide, which is negative pressure), but is a lower positive pressure than the sterile zone.

3. **The sterile zone** is where the sterilizers are unloaded automatically and the carriage with the goods is sent to an unload platform. The goods are then placed onto a pick-to-light carousel that will track the goods using NMMC warehouse management system. The carousel is essential to the case cart assembly function. When the techs go to assemble a case cart, the system will tell them what size case cart is needed and will then begin the pick process. The case cart assembly will be handled by two people at two stations, each working on different carts. The case cart assembly was formerly done manually by numerous nursing personnel running around to different rooms within the surgery department. The picking process continues for each cart until finished and then moves to the next case to be assembled. The goods are then taken to an assembly area and eventually loaded onto a truck to transport to the receiving location and the goods are then taken from the receiving location to a holding location in surgery, then to the OR suite. The case cart is scanned at every step of the process to know where it is located at all times. The sterile zone like the other two zones will have a unique floor coloring that will match the scrub uniforms to denote the personnel who belong in that area.

North Mississippi Medical Center asserts that the facility will have several other unique features. There will be an on-site instrument repair lab, for doing preventive maintenance and repairs and other instruments. All repairs and preventive maintenance will be tracked in the instrument tracking software. The instrument tracking software will also keep an electronic log of every cycle in each washer decontaminator and each sterilizer. The clean receiving area will be attached to the logistics center where NMMC keeps most of its supplies for the entire hospital system. Another feature of the building is the location of the locker rooms. Each locker room is situated in such a way that all three zones can be accessed from the locker rooms, but only those people with badge access can go into their zone. No shoes that are worn outside the facility will be permitted in any of the zones. Each person will be provided special shoes which will be collected and can be decontaminated and sterilized on a daily basis. There will also be a small room where representatives can bring their loaner instrumentation for special case, and

there will be an employee lounge, office space, a conference room, and IT space.

The applicant believes that using the above described methods will greatly enhance the quality and safety of the goods being processed for everyone involved: the patients, the surgical employees, and the central sterile processing employees.

The total proposed capital expenditure is \$7,515,000, and of that amount, approximately 44.71 percent is for new construction, 46.24 percent for non-fixed equipment, 3.72 percent for fees (architectural, consultant, etc.), and 5.32 percent for contingency reserve. The applicant indicates the proposed capital expenditure will be funded from the hospital's accumulated cash reserves.

The MSDH Division of Health Facilities Licensure and Certification has approved the site for the relocation/construction of an off site central sterile processing facility, as proposed.

II. TYPE OF REVIEW REQUIRED

This project is reviewed in accordance with Section 41-7-191, subparagraphs (1) (e), and (j) of the Mississippi Code of 1972, Annotated, as amended, and duly adopted rules, procedures, plans, criteria, and standards of the Mississippi State Department of Health.

In accordance with Section 41-7-197(2) of the Mississippi Code 1972, Annotated, as amended, any affected person may request a public hearing on this project within 20 days of publication of the staff analysis. The opportunity to request a hearing expires on September 4, 2008.

In addition, this project is reviewed under the *FY 2007 State Health Plan*, in effect on June 1, 2008, when the application was received. The *FY 2009 State Health Plan* became effective on August 11, 2008.

III. CONFORMANCE WITH THE STATE HEALTH PLAN AND OTHER ADOPTED CRITERIA AND STANDARDS

A. State Health Plan (SHP)

The *FY 2007 State Health Plan* does not contain criteria and standards for construction of a central sterile processing facility. However, the application is in substantial compliance with the overall objectives of the *Plan*.

B. General Review (GR) Criteria

Chapter 8 of the *Mississippi Certificate of Need Review Manual, Revised February 23, 2008*; addresses general criteria by which all CON applications are reviewed. This application is in substantial compliance with general review criteria.

GR Criterion 3 – Availability of Alternatives

According to the applicant, five alternatives to the relocation/construction of an off site central sterile processing facility were considered as follows:

1. **Expand Central Sterile Processing (CSP)** into space made available by relocation of several adjacent services to include, the employee health department (2,300 square feet), surgery classroom (500 square feet), bed/mattress storage (500 square feet) and enclosures of a 240 square feet hallway. The applicant asserts that at best, this option offers a short term (3-5 year) solution. This option would most certainly be followed by construction of a suitable CSP facility to meet system-wide instrument processing requirements, not just NMMC.
2. **Relocate CSP services** to one of the expanded west bedtower floors upon completion of the west bedtower expansion and renovation project. Approximately 18,000 square feet will be added to each floor of the west bedtower. In lieu of using the 5th floor expansion as a 28 bed patient floor, build it to be a full service CSP to include cart assembly. This option may offer a CSP solution; however, the west bedtower expansion provides a superior opportunity to develop appropriate in-patient beds.
3. **Relocate CSP services to** one or more east wing nursing units to be vacated upon construction of the west bedtower expansion. Each east wing unit (3 east, 4 east, and 5 east) contains approximately 4,500 square feet. The applicant asserts that as in the case of option #1, selection of option #3 would be followed by off-site construction of a suitable CSP facility as a long term solution.
4. **Construct a building** (adjacent to the recently constructed NMMC warehouse) to house the current CSP processes and enhance same to provide care now performed in the surgery suite.
5. **Developer would construct a building for central sterile processing and lease to NMMC;** the applicant asserts that by using a developer to construct a CSP building and lease same to NMMC, would probably result in a \$12-14 per square foot annual rent cost of \$336,000 per year.

Conclusions: North Mississippi Medical Center submits that the current CSP facility space is inadequate to support the NMMC instrument and equipment decontamination, sterilization, sorting, packing, storage, and logistical needs. The current CSP space is approximately 30 percent of the space needed for the critical service. Processing space is compressed and compounded by inefficient configuration. Inadequate space causes last minute processing and restricts instrument inventory. The solution is adequate facility space. Of the five options

identified, the applicant believes the best solution is option #4, which calls for NMMC to construct a 28,000 square foot building for CSP at the approximate cost of \$3,640,000.

GR Criterion 4 - Economic Viability

Financial projections indicate losses of \$2,639,652 for the first year, \$2,672,879 for the second year, and \$2,712,897 for the third year after completion of the project. However, total operating revenues for the facility are projected at \$598,217,156 the first year, \$622,173,878 the second year, and \$1,314,933,117 the third year.

North Mississippi Medical Center asserts that as a support function the central sterile processing facility will not generate inpatient or outpatient revenue for the hospital.

The application contained a letter from the hospital's financial analyst attesting to the financial feasibility of the project.

GR Criterion 5 - Need for the Project

- a. **Access by Population Served:** The applicant indicates that the service involves support for surgical services. According to the applicant, NMMC's patient population will gain indirect benefit from properly processed instruments through access to surgical services at NMMC.
- b. **Relocation of Services:** This application does not propose the relocation of services. North Mississippi Medical Center proposes to relocate its existing on-campus central sterile processing facility by constructing an off site central sterile processing facility.
- c. **Current and Projected Utilization of Like Facilities in the Area:** No additional services are being proposed.
- d. **Probable Effect on Existing Facilities in the Area:** The project proposes relocation/construction of an off site central sterile processing facility located in a warehouse/manufacturing district in Tupelo. No new services are being proposed by the applicant. Therefore, no significant effect is anticipated on existing facilities in the area.
- e. **Community Reaction:** The applicant states that due to the nature of the project no endorsements were requested. The proposed central sterile processing facility will be built in a warehouse/manufacturing district in Tupelo; therefore, the applicant does not anticipate any opposition.

According to the applicant, the current CSP at NMMC was initially designed over 30 years ago, when it had a much smaller operation (8 surgical suites instead of

today's 28 suites, including cath lab and special procedures). At the time, it was common practice for a sterilizer to be a single door design and for there to be minimal separation between decontamination, rep/pack, and sterile areas.

No adverse comments were received from the community.

GR Criterion 6 - Access to the Facility or Service

- a. **Medically Underserved Population:** North Mississippi Medical Center asserts that it serves all of the population, including low income, racial and ethnic minorities, women, and handicapped persons. The hospital provides health care services to any individual who comes to it in need of such services regardless of age, creed, sex, race, or ability to pay.
- b. **Performance in Meeting Federal Obligations:** The applicant submits that the Hill-Burton obligation was completed in 1988; however, NMMC continues to provide community service and access to minority/handicapped persons, and continues to provide health care services to anyone who presents for treatment regardless of their ability to pay.
- c. **Unmet Needs to be Served by Applicant:** The applicant submits that the percentage of gross patient revenue (GPR) and actual dollar amount of health care provided to medically indigent patients for the last three years are as follows for this project:

	GPR %	GPR Dollar Amount
Historical Year 2006	5.0	\$ 46,610,788
Historical Year 2007	5.5	\$ 55,567,492
Projected Year 1	5.0	\$ 66,492,215
Projected Year 2	5.0	\$ 61,412,965

GR Criterion 7 - Information Requirement

The applicant affirms that it will record and maintain the information required by this criterion and make it available to the Mississippi State Department of Health within 15 business days of request.

GR Criterion 8 - Relationship to Existing Health Care System

North Mississippi Medical Center is located in General Hospital Service Area 1 (GHSA 1), which contained 2,497 licensed acute care beds in 2007. This application does not propose new services in General Hospital Service Area 1.

Because no new services will be offered as a result of this project, staff concludes that this project would have no adverse affect on other providers in the referenced service area.

The Department received no letters of opposition concerning the proposed project.

GR Criterion 9 - Availability of Resources

The applicant projects four (4) additional full-time equivalent personnel at an estimated annual cost of \$75,000 the first year of operation for this proposed project.

GR Criterion 14 - Construction Projects

- a. **Cost Estimate:** The application contains a cost estimate prepared by The McCarty Company Design Group, PA.
- b. **Schematic Drawing:** The application contains a schematic drawing of the proposed project.
- c. **Space Allocations:** The applicant submits that space will conform to applicable local and state licensing standards.
- c. **New Construction Projects:** This project involves new construction of 28,000 square feet of space.
- d. **Cost per Square Foot:** The project will cost \$144.28 per square foot for new construction (see Attachment 2). The cost of the project is below the low cost of \$172 when compared to hospital construction projects listed in the *Means Construction Cost Data, 2008*.

GR Criterion 16 - Quality of Care

North Mississippi Medical Center is in compliance with the *Minimum Standards for the Operation of Mississippi Hospitals*, according to the Division of Health Facilities Licensure and Certification, MSDH. The facility is accredited by the Joint Commission on Accreditation of Health Care Organizations.

IV. FINANCIAL FEASIBILITY

A. Capital Expenditure Summary

The total estimated capital expenditure is allocated as follows:

	Item	Cost	Percent of Total
a.	Construction Cost -- New	\$3,360,000	44.71
b.	Construction Cost -- Renovation	0	0
c.	Capital Improvements	0	0
d.	Total Fixed Equipment Cost	0	0
e.	Total Non-Fixed Equipment Cost	3,475,000	46.25
f.	Land Cost	0	0
g.	Site Preparation Cost	0	0
h.	Fees (Architectural, Consultant, etc.)	280,000	3.72
i.	Contingency Reserve	400,000	5.32
j.	Capitalized Interest	0	0
k.	Other	0	0
	Total Proposed Capital Expenditure	\$7,515,000	100.00

The above capital expenditure is proposed for relocation/construction of an off-site central sterile processing facility. The proposed project involves approximately 28,000 square feet of new space at an estimated cost of \$144.29 per square foot (see Attachment 2). The *Means Construction Cost Data, 2008*, lists the costs for hospital construction to range from \$172 to \$310 per square foot.

B. Method of Financing

The applicant proposes to finance the proposed capital expenditure from accumulated cash reserves.

The applicant provided financial statements documenting the ability to fund the project.

C. Effect on Operating Cost

North Mississippi Medical Center's three-year projected operating statement is presented at Attachment 1.

D. Cost to Medicaid/Medicare

North Mississippi Medical Center asserts that as a support function the proposed project will not generate inpatient and outpatient revenue. Therefore, costs to

Medicaid, Medicare and third party payors will be negligible.

V. RECOMMENDATIONS OF OTHER AFFECTED AGENCIES

The Division of Medicaid states that effective October 1, 2005, it changed the methodology by which the Division reimburses inpatient hospital services so that cost incurred subsequent to that date no longer affects per diem rates, and that any portion of the cost which may relate to outpatient service will be paid as outlined in the *Medicaid State Plan*. The Division takes no position on the proposed project.

VI. CONCLUSION AND RECOMMENDATION

This project is in substantial compliance with the overall objectives as contained in the *FY 2007 State Health Plan*; the *Mississippi Certificate of Need Review Manual, Revised February 23, 2008*; and duly adopted rules, procedures, and plans of the Mississippi State Department of Health.

The Division of Health Planning and Resource Development recommends approval of the application submitted by North Mississippi Medical Center for relocation/construction of an off site central sterile processing facility.

Attachment 1

North Mississippi Medical Center Three-Year Operating Statement (Project Only)			
	Year 1	Year 2	Year 3
Revenue			
Patient Revenue:			
Inpatient	0	0	0
Outpatient	0	0	0
Gross Patient Revenue	0	0	0
Charity Care	0	0	0
Deductions from Revenue		0	0
Net Patient Revenue	0	0	0
Expenses			
Operating Expenses:			
Salaries	\$ 765,440	\$788,403	\$ 812,055
Benefits	273,686	275,941	284,219
Supplies	800,860	808,869	816,957
Services	425,000	425,000	425,000
Lease	0	0	0
Depreciation	374,666	374,666	374,666
Interest	0	0	0
Other	0	0	0
Total Expenses	\$ 2,639,652	\$ 2,672,879	\$ 2,712,897
Net Income (Loss)	\$(2,639,652)	\$(2,672,879)	\$ (2,712,897)
Assumptions			
Inpatient days	0	0	0
Outpatient days	0	0	0
Procedures	0	0	0
Charge per outpatient day	0	0	0
Charge per inpatient day	0	0	0
Charge per procedure	0	0	0
Cost per inpatient day	0	0	0
Cost per outpatient day	0	0	0
Cost per procedure	0	0	0

North Mississippi Medical Center projects total operating revenues of \$598,217,156 the first year, \$622,173,878 the second year, and \$1,314,933,117 the third year, which are sufficient to cover the losses projected by this project.

**North Mississippi Medical Center
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 Attachment 2
 Computation of New Construction Cost***

<u>Cost Component</u>	<u>Total</u>	<u>New Construction</u>
New Construction Cost	\$3,360,000	\$3,360,000
Renovation Cost	0	0
Total Fixed Equipment Cost	0	0
Total Non-Fixed Equipment Cost	\$3,475,000	0
Land Cost	0	0
Site Preparation Cost	0	0
Fees (Architectural, Consultant, etc.)	\$280,000	\$280,000
Contingency Reserve	\$400,000	\$400,000
Capitalized Interest	0	0
Other (Furnishings, minor equipment)	0	0
Total Proposed Capital Expenditure	\$7,515,000	\$4,040,000

Square Footage	28,000	28,000
<i>Allocation Percent</i>		100%

Costs Less Land, Non-Fixed Eqt. & Other	\$4,040,000	\$4,040,000
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Cost Per Square Foot	\$144.29	\$144.29
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*Source: FY 2007 State Health Plan