

## EXHIBIT 31.1

### CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Coley L. Bailey, Chief Executive Officer of Mississippi Chemical Corporation (the "Registrant"), hereby certify that:

1. I have reviewed this annual report on Form 10-K/A of the Registrant for the period ended June 30, 2004;
2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this annual report;
4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures as defined in Exchange Act Rules 13a-15(e) and 15d-15(e) for the Registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period this annual report is prepared;
  - b. Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on such evaluation; and
  - c. Disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's fourth fiscal quarter that has materially affected or is reasonably likely to materially affect the Registrant's internal control over financial reporting; and
5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors:
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

October 6, 2004

/s/ Coley L. Bailey

Coley L. Bailey  
Chief Executive Officer