

April 18, 2013

EA-13-066

Philip K. Asherman, President  
and Chief Executive Officer  
Chicago Bridge and Iron  
One CB&I Plaza  
2103 Research Forest Drive  
The Woodlands, TX 77380

SUBJECT: CHILLED WORK ENVIRONMENT FOR RAISING AND ADDRESSING SAFETY CONCERNS AT CHICAGO BRIDGE & IRON FABRICATION LAKE CHARLES FACILITY (FORMERLY KNOWN AS SHAW MODULAR SOLUTIONS)

Dear Mr. Asherman:

This letter concerns Chicago Bridge & Iron's (CB&I) facility in Lake Charles, Louisiana, formerly known as Shaw Modular Solutions and hereafter referred to as SMS. The Nuclear Regulatory Commission (NRC) has concluded that portions of the SMS workforce, especially employees with nuclear and quality control backgrounds, have the perception that they are not free to raise safety concerns using all available avenues. SMS employees also believe individuals have been retaliated against for raising safety concerns. Furthermore, management has not been effective in assuring employees that they may raise safety issues without fear of retaliation. These factors have led to the NRC determination that a chilled work environment for raising and addressing safety concerns exists at SMS.

The NRC's Policy Statement entitled, "Freedom of Employees in the Nuclear Industry to Raise Safety Concerns without Fear of Retaliation" (Volume 61 of the *Federal Register*, page 24336; May 14, 1996), and the NRC Regulatory Issue Summary (RIS) 05-018, "Guidance for Establishing and Maintaining a Safety Conscious Work Environment," dated August 25, 2005, describes the NRC expectations in this area.

At the request of SMS management, Synergy Consulting Services conducted a safety conscious work environment (SCWE) assessment for SMS in February 2012. The survey identified that a chilled environment exists at SMS. The results indicated that 27 percent of respondents are not confident they can raise a quality concern without fear of retaliation, 30 percent know of someone who has experienced a negative reaction from management after raising a quality concern, and 37 percent do not believe the SMS discipline policy is appropriate or fair. The results also indicated that individual contributors lack trust in their management, with levels of trust decreasing further up the management chain. The survey results showed 22 percent of respondents believed their supervisor had not earned their trust, 33 percent stated their department management had not earned their trust, and 40 percent stated that senior management had not earned their trust. In all of these areas, the survey results demonstrate higher negative response rates than industry norms.

Although the Synergy assessment was conducted over 1 year ago, SMS had taken only minimal actions to remedy the identified chilled work environment at SMS. Within the one year

following the assessment, SMS had briefed its employees on the content of the Synergy report, but had not drafted or implemented any corrective actions or implementation plans. The NRC staff is concerned SMS does not recognize the extent of the chilled work environment and that corrective actions have not been effective in remedying the problems.

The NRC conducted three inspections and two allegation follow-up SCWE assessments at the SMS facility and on the basis of its observations reached the same conclusion as the Synergy survey. The NRC identified (1) a perceived fear of retaliation for raising safety concerns, (2) that SMS employees mistrust management, (3) that craft employees lack adequate knowledge on proper use of the corrective action program, and (4) that the corrective action program is ineffective at resolving conditions adverse to quality. These NRC observations resulted in the substantiation of four allegations of a chilled work environment.

The NRC received a significant number of allegations from onsite sources at SMS. From January 2010, through January 2013, the NRC received 19 allegations for SMS, which include 13 allegations that raised 19 separate concerns related to the SCWE at SMS. Over the same period, the NRC received a total of 54 vendor-related allegations from all sources. Therefore, approximately 35 percent of all vendor-related allegations received by the NRC from 2010-2013 concerned the SMS facility. The 19 SMS allegation concerns involved 10 concerns alleging a chilling effect and 9 concerns alleging retaliation after safety concerns were raised. The NRC notes an increasing trend in the number of concerns related to SCWE at SMS from 2010-2013. Of the 19 chilling effect concerns for SMS, 4 were substantiated by the NRC and 4 such concerns are currently under review. Two of the four substantiated concerns involved employees from the CB&I subsidiary formerly known as Shaw Fabrication and Manufacturing (F&M) who created a chilled SCWE at SMS. These allegations were received from multiple concerned individuals.

During NRC inspections performed in January 2011, November 2011, and September 2012, and during allegation follow-up, issues in the effectiveness of the corrective action program were identified. Specifically, the NRC substantiated an allegation that SMS site employees do not understand that a corrective action program is a tool to be used in correcting conditions adverse to quality. This lack of understanding is most pronounced among craft employees, who rarely use the corrective action program.

The NRC specifically identified in its follow-up assessment of SCWE allegations: 1) one-half of SMS employees interviewed witnessed what they perceived as intimidation against quality control inspectors by production staff; 2) employees most knowledgeable about what constitutes a nuclear safety issue were the most hesitant to raise such concerns; 3) in addition to the intimidation against employees, some SMS managers with nuclear and quality control backgrounds also fear retaliation for raising safety or quality concerns; 4) some F&M executives created a chilled environment at SMS.

The NRC notes that safety concerns are raised by SMS personnel through the employee concerns program and the NRC Allegations Program. In fact, the NRC did not identify unreported safety issues in its assessments. However, the NRC has determined some employees are reluctant to raise safety issues directly to their immediate supervisor.

The NRC recognizes that virtually all vendors operate with aggressive schedules, including vendors with strong safety performance records. Therefore, the NRC believes that pressures to

meet schedules do not, by themselves, result in safety concerns. Nonetheless, to highlight the need for leaders and individuals to emphasize safety over competing goals, such as schedule, production, and cost, the NRC issued the June 2011, "Final Safety Culture Policy Statement," which defines a healthy SCWE as an essential trait of a strong safety culture. We caution that it is important for SMS and its successor CB&I to recognize that chilling "messages" have been perceived by workers at the SMS facility in recent years. Importantly, management must be committed to eliminate situations that detract from developing and maintaining a strong safety conscious work environment.

The NRC understands SMS has taken steps to reorganize management responsibilities and that reorganization will likely continue under new ownership. The NRC points out some SMS employees' view these steps as bringing positive management change, while others see reorganization as retaliation for raising safety concerns. It is vital to assess the chilled work environment at the site and address unresolved conflicts.

The NRC takes seriously the ability of employees to raise safety concerns without fear of retaliation, and employee protection from discrimination. Concurrent with this letter, the NRC has issued a notice of violation with the imposition of proposed civil penalties related to employee discrimination at CB&I, formerly Shaw Power Group (Agencywide Document Access and Management System Accession No. ML13050A597). You are required to respond to the violations as described in the associated notice of violation; however, we request that you consider these violations as you develop your response to this letter.

Action:

Within 30 days of the date of this letter, the NRC requests that CB&I provide:

(1) Your action plans to address existing SCWE issues in order to improve the environment for raising concerns at CB&I. The plans must layout steps to ensure that individuals who are not satisfied when an issue is resolved are permitted to pursue the resolution of the concern through additional avenues without fear of retaliation. The action plans, at a minimum, should specifically address how to improve the avenues for raising safety and quality concerns. For example, discuss how the corrective action program can be better used by employees; how the employee concerns program can be promoted to facilitate its use by employees; and how employees will be advised that the NRC is available for workers when safety and quality issues arise. If further assessment of the SCWE is undertaken to validate present conditions, that assessment should be conducted by persons both independent of the chilled organization and knowledgeable and experienced in conducting such assessments. If individuals are interviewed as part of your review, your response should include the basis for determining that the number and cross section of individuals interviewed was appropriate to obtain the information necessary to fully evaluate the chilled work environment, and the interview questions used. The plans must also delineate the criteria for measuring the effectiveness of the action plan.

(2) Your plan to notify the workforce of the NRC identification of a chilled work environment, as described in this letter, and the NRC's increased focus in this area and intent to review your actions to address this concern. The plan should describe how CB&I will communicate the expectations and policies needed to maintain a safety conscious work environment to workers at CB&I. The specific CB&I expectations and policies should address, as appropriate, the elements of a SCWE described in the NRC's Policy Statement entitled, "Freedom of Employees

in the Nuclear Industry to Raise Safety Concerns without Fear of Retaliation” and RIS 05-018, “Guidance for Establishing and Maintaining a Safety Conscious Work Environment.” The plan should describe the methods that will be undertaken to verify that all SMS and contract personnel are trained on these expectations and policies. Finally, the plan should include measures to assess the effectiveness of employee training and measures for monitoring the development and maintenance of a SCWE.

(3) A report on whether The Shaw Group Inc.’s corporate Employee Concerns Program was aware the Synergy report concluded that a chilled environment existed at SMS. Describe in detail what actions were taken by Shaw corporate officials to ensure SMS addressed the chilled environment in a timely manner. Describe what changes are being made by CB&I corporate officials to ensure the chilled work environment is remedied and future instances are addressed in a timely manner.

The NRC is also concerned that the chilled work environment has resulted in a number of quality concerns being referred to the NRC and bypassing the SMS established processes. The repetitive nature of the resulting inspection findings and substantiated allegations indicate SMS management has not implemented sufficient programmatic controls to ensure adequate quality in the following areas: 1) control of special processes; 2) inspections; 3) personnel training and qualification; 4) instructions, procedures and drawings; and 5) corrective action. The NRC is concerned about the lack of adequate implementation of the corrective action program at SMS, which is an important cornerstone of a safety conscious work environment. The NRC expects vendors to identify and correct problems affecting safety and quality of nuclear plant components. Therefore, your action plans should layout the steps to be taken to ensure these five areas of your quality assurance program will be addressed to improve product quality for safety-related components.

The NRC will review the CB&I response and determine if further discussion of the plan and schedule is needed. The NRC will also determine the scope of on-going regulatory oversight of CB&I’s SCWE.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, “Public inspections, exemptions, requests for withholding,” of the NRC’s “Rules of Practice,” the NRC will make available electronically for public inspection a copy of this letter and your response through the NRC’s Public Document Room or through the NRC’s Agencywide Documents Access and Management System, which is accessible at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible (and if applicable), your response should not include any personal privacy, proprietary, or Safeguards Information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, please provide a bracketed copy of your response identifying the information that should be protected and a redacted copy of your response that deletes such information. If you request that material be withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim (e.g., explain why the disclosure of information would create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If Safeguards Information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21, “Protection of Safeguards Information: Performance Requirements.”

P. Asherman

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If you have any additional questions regarding these matters, please contact Samantha Crane, at (301) 415-6380.

Sincerely,

*/RA/*

Glenn M. Tracy, Director  
Office of New Reactors

Docket: 99901424

P. Asherman

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Sincerely,

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NRO-002

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<b>OFFICE</b>	NRR/DIRS/IPAB	OE	OGC	NRO
<b>NAME</b>	DWillis*	LJarriel	PJehle*	GTracy
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