Memorandum

To: Members of the Board of Trustees  
From: Glenn G. Gooden, Superintendent-President

Date: February 22, 1973

Subject: STATUS OF BOILER IN ADMINISTRATION BUILDING

Attached are materials related to the corrective work being done on the boiler in the Administration Building and to conditions and actions which led to the boiler shut-down on February 2, 1973. At this point, the following facts appear to be evident:

1. The work required by the Division of Industrial Safety to make the boiler operational is being completed.

2. Since the boiler is completely dismantled for the survey and for maintenance, and, since the new Health Occupations Building will be tied in with this boiler, a total overhaul of the boiler has been ordered and this extra work is in progress.

3. A review of work orders indicates that considerable work has been done on the boiler within the past two years. Since October 21, 1970 over $2,100 has been spent on nine work orders related to maintaining the boiler in the Administration Building.

4. The boiler inspector has stated that no maintenance has ever been done on the boiler. It is more accurate to say that maintenance has been on an as-needed corrective basis rather than on a continuing preventative basis. Lack of adequate funds has contributed to the need to follow this approach.

5. There was a misunderstanding between the College staff and those responsible for the construction project regarding corrective work in the boiler room. Three kinds of conditions were discussed: electrical, plumbing, and housekeeping. The situation was compounded by the fact that work related to the construction project was going on in the boiler room.

6. The College is proceeding according to the following priorities:
   First, all safety conditions are being met and the boiler will be totally renovated so that when the additional load of the new building is added, it will be in optimum condition;
   second, housekeeping problems related to work in the boiler room are being corrected and misunderstandings are being resolved; and
   third, investigations are underway to select the best alternative for a continuous preventative maintenance program. A recommendation will be made to the Board of Trustees, when the best alternative has been identified.

GGG:emb

Atth.
MEMORANDUM

TO: Dr. Glenn G. Gooder
FROM: D. K. Sorsabal, Administrative Dean, Business Services
DATE: February 15, 1973
SUBJECT: Boiler Shut-Down

The work required by the Division of Industrial Safety and Accident to make the boiler operational is now being completed. A final report will be made by the inspectors involved after completion of the maintenance of the boiler. This memo, therefore, is a compilation of the known facts and conditions which led to the shutting down of the low pressure boiler in the Administration Building on February 2, 1973. Although the hot water heating boiler in the Physical Education Building was originally declared unsafe, it was immediately made operable by the addition of water to the tank. Therefore, this report will deal primarily with the Administration Building low pressure steam boiler.

Background

At various times for several weeks, prior to the inspection by representatives of the Industrial Safety, Mr. Eyre, Director of Facilities and Operations, reported to me what he considered unusual circumstances involving changes in valve settings in controls in the Administration Building boiler. Mr. Eyre was directed by me to keep a close watch on this situation and to note any other indications of tampering. No such reports had been reported immediately prior to the Division of Industrial Safety inspection. On January 26, 1973, Mr. Harvey Bagley, Building Inspector, assigned to the new construction project, reported to me that water was leaking from the header pipe above the water make-up tank creating a hazardous condition for the electricians assigned to the new construction and working in the area.

This condition was reported in writing by me to Mr. Eyre (Exhibit A) on January 26, 1973. Apparently Mr. Eyre did not receive the memo until January 29, 1973 when he investigated the situation and reported "No unsafe condition existing." During his investigation, he apparently was looking for electrical code violations because he requested that "This complaint must state the exact electrical code violations ...."

During the routine daily inspection of the boiler room on January 29, 1973, Mr. Ross McCoy, Maintenance Man, reported to Mr. Eyre that he had found the operating and limit controls set at their extreme limits. He also reported that one set of control points had arced and required cleaning.
Because of this situation, Mr. Eyre promptly order two new controls which arrived on February 2, 1973. On Tuesday, January 30, 1973, Mr. Eugene Wieczorek, Architect's Representative for the new construction called me at home to report the water problem still existed and suggested that the leak be repaired by the plumbing sub-contractor on the job. He reported to me at that time that the leak was in the pump, not the header pipe. I authorized Mr. Wieczorek to take immediate steps to correct the situation, which he did.

On January 31, 1973, Mr. Bagley decided because the housekeeping in the boiler room had not been corrected satisfactorily and "because of what appeared to be more obvious conditions of an unsafe boiler" he notified Industrial Safety. On February 1, 1973, Mr. McDonald, Construction Section Inspector conducted an inspection and he in turn notified Mr. Harry Steirs, Electrical Inspector, Mr. Paul Cicileo, Pressure Vessel Engineer, of unsafe conditions. Copies of these reports are in Exhibits B, C, & D. Mr. Bagley has as yet to note what unsafe conditions existed which prompted his call to the Division of Industrial Safety.

**Inspection**

After Mr. McDonald's inspection, a copy was left of what corrections had to be made (Exhibit B). Because this area is still under construction, the general housekeeping is difficult at best to keep up. However, the material in front of the vault door were moved immediately as were scraps and other materials in and around the boiler area. The responsibility for the maintenance of this area must reside with the contractor for the new construction. On February 1, 1973, after Mr. Steir, Mr. McDonald, and Mr. Bagley had finished their inspections, Mr. Eyre was checking the low water cut-off and make-up pump and found that they would not operate. Mr. Eyre ran after Mr. Steir to ask what had been done to the control panel. Mr. Steir noted that he had apparently left two switches open. He closed them and the boiler make-up pumps were actuated. On February 2, 1973, Mr. Paul Cicileo came on campus to inspect the boiler. Mr. Eyre had not been informed that additional inspectors would be on campus. Mr. Eyre reported that approximately 1:00 pm a man came in to the Facilities and Operations office and stated he was the boiler inspector and he was going to shut down the boiler. Other than saying that he was the boiler inspector, no identification was given. Both Mr. Torres and Mr. McCoy accompanied the inspector to the boiler room. Here he pulled a switch and said "I am going to the Superintendent. This boiler has to be shut down."
When asked what was wrong with the boiler, the inspector said he would only talk with the Superintendent. It was not until February 8, 1973, that a written statement was given to the college detailing what caused the shut-down.

Because R. P. Richards, plumbing contractor, were already on the job, Mr. Cicileo ordered them to tear down the boiler for a complete inspection. He has been personally directing the plumbers to change, replace, clean and completely refurbish the boiler without contacting the college officials. Because of the wear and deteriorating of the heating tubes, I have requested a specialist of theirs to make these corrections. Mr. Harry Steir made an electrical inspection of the boiler and the boiler room. This area is the main electrical supply source for the entire campus, and has continual remodeling over the last several years. Upon receipt of Mr. Steir's report, corrective actions were immediately undertaken under my direction by the electrical sub-contractor for the new construction.

**Boiler Maintenance**

Many accusations have been made regarding boiler maintenance. Attached are copies of work orders and purchase orders which reveal what work has actually been done on the boiler since 1970. As can be seen by the various purchase orders and work orders, a total of $2,187.75 has been expended since October 21, 1970 through November 30, 1972 on 9 separate work orders entailing 117\(\frac{1}{2}\) hours at a labor cost of $1,729.93 and parts and tax of $457.82.

Mr. Cicileo recommends that there is a "need for feed water chemicals or other treatment to remove hardness from the water used in the steam boiler". There has been and still is such an installation automatically feeding the system. The system has been installed by the manufacturer and has been under maintenance by the distributor of the device.

The installation was done by R. P. Richards, plumbing contractor, under the direction of the manufacturer. Now Mr. Cicileo has indicated that no maintenance has been done on the boiler. He draws this conclusion on the visible conditions that he sees. It must be reiterated that maintenance has been done, but on an as needed basis. There has not been a continuing preventative maintenance program. To solve this particular problem, 3 viable alternatives appear to be available to solve the preventative maintenance problem. The first would be to employ a qualified boiler man on a part-time or full-time basis to do nothing but service the boilers. Secondly, attempt to up-grade one of our own existing employees to become a boiler maintenance man, or three, enter into a contract for boiler maintenance service from either a private contractor or a public agency already involved.
in such a program.

**Actions Taken**

As indicated in the body of the report, at receipt of the various inspection reports, the electrical contractors have been engaged to make the corrections of the electrical problems noted. The plumbing contractor has been engaged to undertake the rehabilitation and restoration of the boiler. Investigations are under way to select the best alternative for a continuous preventative maintenance program. Further actions will be reported as they occur. The Superintendent and the Board will be fully informed as to the date and time the boilers are in condition to be activated.
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**Total**

117½

1,729.93 Labor

475.82 Parts

2,187.75 Grand Total

457.82
SANTA BARBARA CITY COLLEGE

TO: Bob Eyn

FROM: Kimba

DATE: 1/26/73

RE: Berlin Room

I have been told that because the header over the water make up tank is leaking, an unsafe working condition has been created in which the electrician must work. Would you immediately take steps to correct this situation.

Sincerely,

You have been badly misinformed. There is no unsafe condition existing. Please have the electrician make his complaint in writing and signed. This complaint should state the exact electrical code violation that makes for an unsafe working condition.

[Signature]

Robert Eyn
STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF INDUSTRIAL SAFETY

NOTICE TO EMPLOYER TO REMEDY UNSAFE CONDITIONS OF PLACE OF EMPLOYMENT

Division 5 of the Labor Code of California requires that all places of employment be safe, and charges the Division of Industrial Safety with enforcing this. Violation of this provision is a misdemeanor.

Legal Name: SB Co
Address for mail: 721 Cliff Dr
Person in charge: Title
Send copy to: Maintenance Dept SB Co
Type of business: SB Co
Located at: 721 Cliff Drive SB

SAFETY REQUIREMENTS
To be complied with on or before:

Kewanee Boiler No 965 (Located in Boiler Room - 1)

Correct poor housekeeping: (a) Problem of water on floors (b) Electric Volt door way blocked (c) Scrap and other materials in and around the boiler area.

Make all repairs and correct unsafe condition as directed by D.I.S. and Pressure Vessel Engineers. Requests have been made for safety survey by these two Engineers for 3/1/73 3/2/73.

The numbers following the requirements listed refer to sections of the California Administrative Code Title 8, Title 24 (T24) or the Labor Code (LC) of the State of California.

Survey by: H.W. McDonald
Engineer's Signature
February 7, 1973

4. Unauthorized and incorrectly identified circuit breakers in panelboard.
   
   Permanently identify all switches and circuit breakers clearly indicates all of the load they control. 726 610-2A, 619-15.

Santa Barbara Community College District
Santa Barbara City College
721 Cliff Drive
Santa Barbara, California. 93109

Attention Mr. (Robert A.) Ayre, Building and Electrical Engineer and Panelboards. 726 610-17, 610-10(b)

Made by Safety Engineer: (Name)

Explained to (Name) (Call Center) Inspector.

Compliance Date: 2-2-73

Requirements for the elimination of unsafe conditions are listed below. These unsafe conditions are in violation of the California Administrative Code Title 8, Chapter 3 of the California Industrial Safety Code.

The number(s) following the requirements listed refer to section(s) of the California Administrative Code Title 8, Chapter 3 of the California Industrial Safety Code.

1. DOOR NOCH.

BOILER CONTROL ENCLOSURE

1. Interconnnect Switch for boiler controller enclosure does not disconnect all ungrounded control conductors in the enclosure. Instead a clean identification that all three control switches must be opened to interrupt all ungrounded conductors in this enclosure. 726 610-17.

2. Bara Aza Terminal Insides of enclosure door even when two interlocking switches and three control switches are in the open position. Install an insulating barrier over the bara terminals on devices mounted on enclosure door. 726 610-17.


4. General that junction box installed below manifold produces flash which discharges steam generator on same. Relocate this enclosure or cover it with a flameproof cover. 726 610-10, 610-20.

Irv

Safety Orders of the Division of Industrial Safety may be purchased from Office of Procurement, Documents Section
P.O. Box 20191, Sacramento, California 95820

Received
FEB. 7-73
DIVISION OF BUSINESS SERVICES

UNIT SHUT-OFF OF BOILER ROOM

6. Bar live high voltage and low voltage parts in same room with switchboards and panelboards. Install a suitable barrier between the bare live parts and the low voltage distribution switchboards and panelboards. T24 E110-17, E710-10(b), E710-24(b).

7. Warning sign to not installed on door of enclosure containing high voltage exposed parts. Install sign on door reading “WARNING - HIGH-VOLTAGE - KEEP OUT.” T24 E710-24(c).

8. Pressure relief vents for interline-insulated transformers are installed in a properly ventilated location with switchboard equipment in same room. Provide forced ventilation to the outside air or connect the vents to a flu which will carry the gases outside of the building. T24 E450-23.


GENERAL

10. Abandoned conduits and conductors with conductors dangling from enclosures. Remove conductors or install new in closed enclosures. T24 E320-1, E320-2.

NOTE: More work in progress so this does not constitute a complete electrical survey. On reinspection, a more complete survey will be made.

Wayne Koel
Senior Safety Engineer
Electrical Dept.

cc Mr. Harvey Dogley, Resident Inspector
Santa Barbara Community College District
Santa Barbara City College
720 Cliff Drive
Santa Barbara, California 93109

RECEIVED
FEB 6-8 1973
DIVISION OF BUSINESS SERVICES
February 7, 1973

Santa Barbara City College
721 Cliff Drive
Santa Barbara, California 93103

Attention Mr. Glenn G. Gooder
Superintendent-President

Accident Prevention Report

AN ACCIDENT PREVENTION SURVEY OF YOUR

school

Type of operation

LOCATED at 721 Cliff Drive, Santa Barbara

MADE BY SAFETY ENGINEER Paul Cicileo

DATE 2/ 2/73

EXPLAINED TO Glenn G. Gooder, Supt.-President COMPLIANCE DATE IMMEDIATELY

Requirements for the elimination of unsafe conditions are listed below. These unsafe conditions are in violation of lawful orders enforced by the Division of Industrial Safety.

The numbers following the requirements listed refer to sections of the California Administrative Code, Title 8, Title 24 (T24) or Labor Code (L.C.)

LOCATION: GYM BUILDING

NB22060--Hot Water Heating Boiler

1. Boiler is being operated with a water level below the visible level of the gage glass. The water level of the system must be such that it will be visible in the gage glass of the expansion tank. 763 (g), Labor Code 6401.

2. The high-limit temperature control is set beyond the limits permitted for this type of boiler. The design and construction of this boiler does not permit the maximum setting to exceed 250°F. Reset the high-limit temperature safety control so that it will shut the boiler down at not over 250°F, and which will require manual resetting after a shutdown occurs. The setting of the control shall be sealed or otherwise secured so that it cannot be tampered with by unauthorized personnel. 763 (d)(3)(4), Labor Code 6401.

3. Present method of providing makeup feed water is by use of garden hose, bucket and funnel. Provide a permanent feed water pipe not less than one-inch (1") pipe size with a check valve near the boiler and a stop valve or cock between the check valve and the boiler. 763 (a), A.S.M.E. Code Section IV - 1971 Edition.

4. The safety pilot and low water fuel cutoff did not function properly. These should be dismantled and checked by a competent person and put into good operating condition. 781 (a)(2), 763 (d)(1)(5), 763 (k).

/1h

Safety Orders of the Division of Industrial Safety may be purchased from Office of Procurement, Documents Section
P.O. Box 20191, Sacramento, California 95820

FORM B-264-LA (REV. 3-69)
LOCATION: GYM BUILDING
NB22061 - Hot Water Heating Boiler

5. Disconnect the time clock from the hot water circulating pump system. Labor Code 6401.

LOCATION: ADMINISTRATION BUILDING
N 965 - Low Pressure Steam Heating Boiler

NOTE: This boiler was red-tagged and ordered out of service.

6. The low water fuel cutoffs and the safety pilot are inoperative. Replace or repair the safety pilot and low water fuel cutoffs and have them checked for proper operation by a competent person before putting boiler into operation. 781 (a)(2), 763 (d), Labor Code 6401.

7. The high-limit pressure control is set beyond the maximum permissible limit for this type of boiler. Reset the high-limit pressure switch not to exceed 15 psig and secure it in position by a seal or other means so that it cannot be reset by unauthorized persons. 763 (d)(4), 781 (a)(2), Labor Code 6401.

8. The manual reset for the boiler controls was disconnected in the control panel. This is a vital control circuit since it shuts down the fire when anything goes wrong with the boiler operation, and by virtue of requiring manual resetting, alerts the operator that something is going wrong and the system is not functioning normally. Reconnect and check the manual reset control for proper operation. 781 (a)(1)(2), 763 (d)(4), Labor Code 6401.

9. This boiler shall be opened for internal and external inspection by a qualified Safety Engineer of this Division before it is placed in operation. 770 (a), 771 (c), 772 (a)(b)(c).

ALL BOILERS

10. ALL BOILERS, REGARDLESS OF LOCATION, shall be under the direct supervision of a responsible person. Such person shall be responsible for:

(a) Safe operation of the boiler by a competent attendant
(b) Proper maintenance of the boiler and its appurtenances
The "competent attendant" shall be one who can qualify under requirements of 781 (c).

RECOMMENDATION

Scaling of several heat-transfer surfaces indicates a need for feed-water chemical or other treatment to remove hardness from the water used in the steam boiler.

NOTE: This report does not include other violations noted which are Electrical and Industrial violations to be covered by Electrical and Industrial Safety Engineers.

C. Weisman
Senior Safety Engineer
Pressure Vessel Section

cc See attached
cc Mr. R. Neilson, Fire Marshal  
Santa Barbara Fire Department  
121 West Carrillo Street  
Santa Barbara, California 93101

Mr. G. Firestone, Mayor  
Santa Barbara City Mayor's Office  
City Hall  
Santa Barbara, California 93101