



March 1, 2012

Mr. Gregg Zoll
Senior Project Manager
Facilities Design and Construction
Hoag Memorial Hospital Presbyterian
500 Superior Ave., Suite 300
Newport Beach, CA, 92663

Re: **City Mitigation Measure – Cogen Plume Review**
October 1, 2011 – February 28, 2012 Period
Hoag Memorial Hospital Presbyterian, Newport Beach, CA

Dear Gregg:

We have completed our review of the Cooling Tower Curtailment Reports for the period of October 1, 2011 through February 28, 2012. Reference attachments, period summary, path forward and conclusions follow:

A. REFERENCE ATTACHMENTS

1. Cooling Tower Plume Mitigation Operations Protocol
2. Energy Management Control System, Cogen Plume Mitigation Flow Diagram
3. Cooling Tower Curtailment Reports October 1, 2011 – February 28, 2012

B. PERIOD SUMMARY (October 1, 2011 through February 28, 2012)

1. Ongoing monitoring, trending and documentation (electronic and hard copy) of local weather conditions including temperature, humidity, precipitation, wind speed and direction via a solar powered weather station (installed summer 2008).
2. Based on monitored weather conditions – ongoing 24/7 advance notification of operators of pending weather conditions that may cause a plume to form.
3. Ongoing Cogeneration Plant and cooling tower load curtailment and shifting in accordance with Section 8.5 of the amended DA.
4. Scheduling of Cogeneration Plant equipment maintenance periods to coincide with November 2011 through February 2012 curtailment period.
5. For the period of October 1, 2011 through February 28, 2012, the Cogeneration Plant's effective heat rejection was reduced by 33 percent minimum to curtail plume formation.

C. PATH FORWARD

1. Continue monitoring and documentation for the March-April 2012 period.
2. November 2012 - April 2013 period monitoring, trending and documentation.

D. CONCLUSIONS

1. In conclusion, for the October 1, 2012 – February 29, 2012 period, the Cogeneration Plant operation is in compliance with Section 8.5 of the amended DA.

Sincerely,

Exp. U.S. Services

A handwritten signature in black ink, appearing to read "M. Trzepacz".

Michael Trzepacz, PE
Principal

REFERENCE#1 – COOLING TOWER PLUME MITIGATION OPERATIONS PROTOCOL

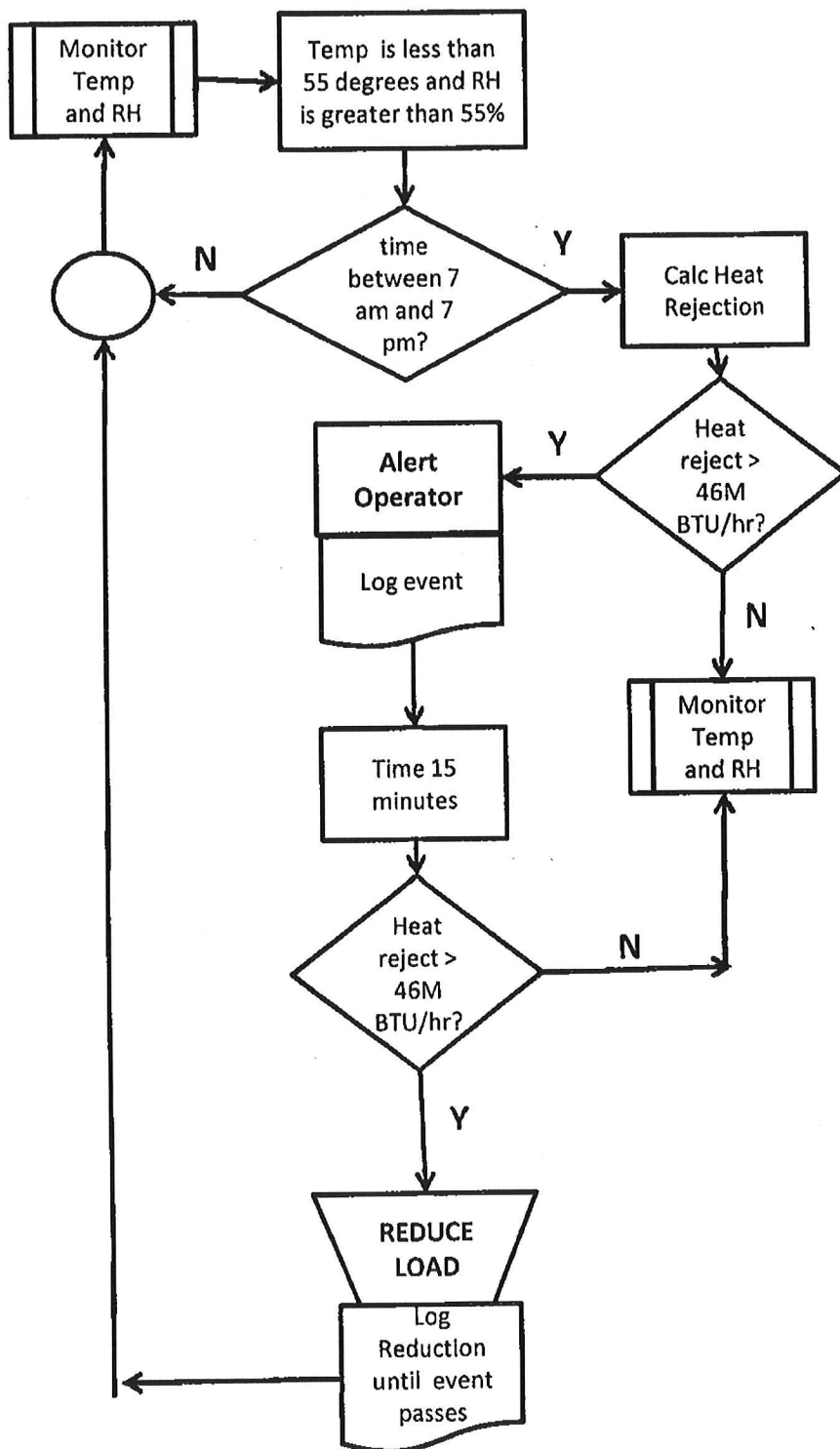
Date: 3/1/2012

Subject: Draft Procedure Hoag Hospital Co-Gen Mitigation
Cooling Tower Plume Mitigation Operations Protocol

The draft procedure to react to weather conditions that could result in a cooling tower plume will include the following steps by the programmed Energy Management Control System (EMS):

1. When the EMS records and reports conditions at the Co-Gen weather station where the Temperature (T) is less than 55 °F and the relative Humidity (RH) is greater than 55%, the EMS determines if the time is between 7 a.m. (07:00) and 7 p.m. (19:00).
2. If the time is outside 7 a.m. and 7 p.m., then continue monitoring T and RH.
3. If the time is inside 7 a.m. and 7 p.m., then the EMS automatically calculates heat rejection load.
4. The EMS determines if the calculated heat rejection is greater than 46.2 M BTU/hr.
5. If heat rejection is less than 46.2 M BTU/hr then the EMS continues monitoring T and RH.
6. If the calculated heat rejection is greater than 46.2 M BTU/hr, then the EMS automatically alerts the operator with audible and visual alarms for heat reduction operations.
7. The EMS automatically logs the event for auditing and reporting.
8. The EMS starts a delay time for 15 minutes to confirm the T and RH conditions.
9. If the conditions continue then the EMS automatically alerts the operator to commence heat rejection reduction procedures.
10. The EMS automatically calculates the reduction requirement and recommends one or a combination of the followings:
 - Secure steam chiller / absorber equipment.
 - Redirect Chilled Water (CHW) to other equipment and or locations.
 - Secure generation equipment.
11. The EMS automatically logs or trends the event and all Co-Gen equipment operations.
12. The EMS will automatically alert the operator when Co-Gen operation can return to normal.
13. At all times the EMS continues to monitor T and RH.

Hoag Memorial Hospital Lower Campus Central Utility Plant



Energy Management Control System
Co-Gen Plume Mitigation Flow Diagram