

TEXAS UTILITIES GENERATING COMPANY

2001 BRYAN TOWER · DALLAS, TEXAS 75201

Log # TXX-3649

File # 10115

R. J. GARY
EXECUTIVE VICE PRESIDENT
AND GENERAL MANAGER

March 22, 1983

Mr. Edward L. Jordan, Director
Division of Engineering and
Quality Assurance
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION
DOCKET NOS. 50-445 AND 50-446
IE BULLETIN 81-03
REQUEST FOR ADDITIONAL INFORMATION

Dear Mr. Jordan:

In reference to your letter dated January 21, 1983 requesting additional information concerning item 3 of IE Bulletin 81-03, we provided the attached response which is a clarification of the response transmitted by TXX-3352 dated June 26, 1981.

Should you have any questions concerning this matter, please contact this office.

Sincerely,

R. J. Gary
R. J. Gary

RJG:tls
Attachment

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PDR ADOCK 05000445
A PDR

Revised Response to I.E. Bulletin 81-03
"Flow Blockage of Cooling Water to
Safety System Components by Corbicula
(Asiatic Clam) and Mytilus (Mussel)"
Ref: TCP-81216
TUS-3065

Response to Action Items for holders of Construction Permits.

INSPECTION RESULTS

Squaw Creek Reservoir (SCR) and the Safe Shutdown Impoundment (SSI) are considered freshwater bodies for the purpose of this bulletin; therefore, the inspection conducted as a result of Bulletin 81-03 was for Corbicula or Asian Clam. This inspection was conducted as a supplemental non-routine effort, since it is not required as part of the current environmental monitoring program.

The inspection was conducted by sampling several areas in both SCR and the SSI which were considered to be a likely habitat for the clams. Areas sampled contained shallow bottom sediments. The inspection was performed by an independent consultant under contract to TUGCo during the period May 12, 1981 to May 15, 1981. No clams were found in any of the areas inspected. This would indicate that if Corbicula are present in SCR or SSI, their population is currently too small for detection and does not constitute an immediate problem.

TUGCo does consider Corbicula a potential problem in the future. Based upon previous experience with cooling reservoirs in the North Central Texas area, Corbicula may take as long as ten years after impoundment to establish a significant population. As an example, the Texas Power and Light DeCordova Bend Station on Lake Granbury, which was impounded in 1968, has only recently

(within the past 4 years) experienced any Corbicula infestations. We fully expect this phenomena to occur in SCR and the SSI as well. The projected time lapse prior to an expected infestation will allow ample time for research and development of more effective treatment methods; thus, TUGCo feels it is inappropriate to commit to a specific treatment method now. TUGCo has, however, discussed several alternatives currently available, which would be evaluated for application at CPSES as the Corbicula population develops in the SCR and SSI. This discussion is included in the treatment/prevention section of our response.

As previously stated, Corbicula are not presently a problem. As a result, inspections of systems and components which use SSI/SCR water were not required to be inspected. The Safety-related systems and components using SSI water are listed below:

Affected Systems

1. Service Water System

Individual Components

- a. Component Cooling Water Heat Exchangers
- b. Emergency Diesel Generator Heat Exchanger
- c. Safety Injection Lube Oil Coolers
- d. Centrifugal Charging Pump Lube Oil Coolers
- e. Containment Spray Pump Bearing Coolers

2. Fire Protection System

PLANNED INSPECTION/DETECTION METHODS:

Commitment #1: TUGCo will monitor for growth and spreading of Corbicula population in SCR/SSI.

On a semi-annual basis both the SCR and SSI will be sampled in areas with likely Corbicula habitats. The sample areas and methods are documented in Attachment 1. The SSI sampling areas will be weighted towards habitats within close proximity to Service Water and Fire Protection System intakes. This will indicate both the presence of Corbicula and the potential for infestation of Service Water and Fire Protection Systems. These semi-annual inspections began in May, 1981. Once Corbicula have been identified in potentially problem causing numbers, this sampling may be discontinued.

Commitment #2: Once Corbicula have been detected in significant numbers, TUGCo will begin monitoring individual Service Water component flow rates using base line data from the initial flow balancing. In addition, small strainers on the suction side of the Service Water screen wash pumps can be periodically inspected for clam infestations. This would provide an early warning of clam presence in the system as the strainers filter comparatively small particles. The Fire Protection system will be monitored for clam infestations by inspecting the flushing water for clam shells during the periodic flush required by Technical Specifications. These inspection/detection programs will be implemented by procedure when Corbicula is detected in significant numbers in the SCR/SSI.

Treatment/Prevention Methods

As previously stated, TUGCo feels it inappropriate to commit to a specific treatment now. Corbicula have been observed to require significant time to establish themselves in a new reservoir. TUGCo will use this interim period to research the best method for implementation at CPSES. Our sampling program currently in place will provide ample warning of Corbicula infestation in time for appropriate action. Secondly, chlorination of the Service Water and Fire

Protection bay is currently done as a routine measure against any biofouling. Shock chlorination has a limited effect on adult clams but is effective on clam larvae. This would minimize Corbicula infestation within systems which are periodically idle. Flowing systems will flush out any larvae and adults less than 1/2" in size since Corbicula are not capable of attaching to surfaces.

Some other treatment/prevention methods available include:

1. Elimination of sand and silt deposits, if present, from the intake bay. These sand deposits are necessary for clam development and would prevent a large population of clams from establishing.
2. Extend chlorination of idle trains.
3. Use other proprietary biocides.
4. Heat treatment.

Attachment 1

The Corbicula sp. monitoring program at Comanche Peak Steam Electric Station is part of the Environmental monitoring program. As a part of this program, governed by Procedure ENV-211, grab samples are taken at the following locations:

1. Circulating Water Intake
2. Circulating Water Discharge
3. Service Water Intake
4. Service Water Discharge
5. Inlet from Lake Granbury.

These sample locations are monitored two times per year with three grab samples being taken at each location. Grab sampling is done with a bottom dredge using a boat to tow the dredge.

The grab samples are visually inspected for any evidence of Corbicula sp..

TEXAS UTILITIES GENERATING COMPANY
SKYWAY TOWER • 400 NORTH OLIVE STREET, L.B. 81 • DALLAS, TEXAS 75201

Log # TXX-4643
File # 10010

WILLIAM G. COUNCIL
EXECUTIVE VICE PRESIDENT

December 16, 1985

Mr. Robert D. Martin
Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76012

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION
DOCKET NOS. 50-445 AND 50-446
CORBICULA SP AND MICROBIOLOGICALLY
INDUCED CORROSION

Dear Mr. Martin:

In accordance with your telephone request of October 28, 1985, the following is a summary of the CPSES activities associated with the control of Corbicula sp (Asian clams) and Microbiologically Induced Corrosion (MIC).

I. Asian Clams

In response to IE Bulletin 81-03 dated April 10, 1981 and request for additional information dated January 21, 1983, TUGCo provided letters TXX-3352 dated June 26, 1981 and TXX-3649 dated March 22, 1983 respectively. TXX-3649 (attached) clarified the response submitted by TXX-3352 and provided commitments with regard to monitoring for presence of Asian clams.

In December, 1984 the presence of Asian clams was confirmed in the Squaw Creek Reservoir and the Safe Shutdown Impoundment. In accordance with commitment 2 of TXX-3649, a program was established to monitor for Asian clams in individual components of the service water and fire protection systems. The program includes the routine monitoring of component strainers, inspection of susceptible components during component outages, and the development of an operational test to determine system performance degradation due to Asian clam intrusion.

We are also continuing to investigate methods to retard clam growth. The methods being considered include the use of ozone, chlorine or other biocides.

II. Microbiologically Induced Corrosion (MIC)

During 1984 the industry became aware of problems in systems subjected to improper wet lay-up conditions for extended periods. In 1985, TUGCo expanded its lay-up monitoring program to include provisions for quarterly monitoring of all susceptible Unit 1 and Unit 2 systems for the presence of the microbes associated with MIC. This monitoring was conducted initially by both TUGCo and an independent consultant. Indications of the microbes associated with MIC were detected in samples taken from the Squaw Creek Reservoir, startup flush water recirculation tank, Fire Suppression System, and the Unit 2 Reactor Makeup Water Storage Tank (RMWST). Corrective actions were successfully implemented to eliminate these microbes in the startup flush water recirculation tank and the Unit 2 RMWST. Corrective actions were also successfully implemented to restore these tanks to acceptable conditions. Actions are presently in progress to eliminate the microbes from the Fire Suppression System and to ensure the operability and integrity of the Fire Suppression System.

Should you require additional information in these matters, please contact this office.

Very truly yours,


W. G. Council

BSD/grr
Attachment

c - V. S. Noonan

D. L. Kelley

U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement

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