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GREGORY POWER PARTNERS

Sherwin Alumina
Gregory, TX

SAVE

Sample ID: GPP-297229
Equip. Desc.: GTG 1B; Gas Turbine
Lubricant Type: Mobil DTE-832
Reservoir Cap.: 6,200.00 Gal(s) 23,467.00 Ltr(s)
Machine Time: 11,319.0
Lube Time: 1,206.0 Hr(s)

Sample Date: 11/11/2001
Received Date: 11/26/2001
Test Date: 12/5/2001
Prev. Sample: 4/25/2001 **C**
First Sample: 4/9/2001
No. Samples: 7

Gas Turbine Generator 1B (297229); is one of three-(3) main turbines for GPP and first rated **CRITICAL** 9/25/2001.

Recommendation: Consider scheduling this equipment for maintenance action in the near future. Specifically abnormal Aluminum bearing wear. Compare past performance data with current information.



Although the equipment particle concentration (EPC) has decreased for this equipment from 1,093 to 717 and is within acceptable limits for this type of equipment, analytical results show the presence of 70 micrometer (um) White Non-Ferrous Severe Sliding wear and Cutting wear particles. Testing also show the presence of 70um Rolling Contact (Bearing) wear particles. The Rolling contact (Bearing) wear show the continued signs of tempering or rainbow coloration from elevated temperatures at the critical contact point. The Aluminum is the Babbitting from the Journal Bearing.

Upon opening of Gas Turbine Generator 1B (297229); the journal bearing was found with significant striations with Varnish & Lacquer accumulation as result of over heating of the oil. The sleeve is composed of white non-ferrous metal that has been wiped.

Secondary Damage, Property Damage was minimized. Service Interruption & Downtime was minimized. Maintenance scheduled and performed during holiday weekend slow period.

Optimized equipment performance and savings for the utility, customers and investors.



CUSTOMER ESTIMATED SAVINGS:

Original Component Savings:	35,000,000
Secondary Damage Savings:	0
Business Interruption:	200,000
Property Damage:	0
Downtime Cost	200,000
Overtime Repair Savings:	0

Total SAVINGS: \$ 35,400,000

To Date of Save (12/31/2001):

REAL Return on Investment 13,834 : 1

On Entire Program to Date (4/14/2004):

REAL Return on Investment: 1,834 : 1