

2007 SAMPLE REPORT

Predictive Maintenance Services

Infrared/Thermal Analysis

Vibration Analysis

Ultrasound Analysis

Substation Maintenance & Construction



INVIZIONS *INC.*

PREDICTIVE MAINTENANCE SERVICES

2519 State Route 61 South

Norwalk, OH 44857

WWW.INVIZIONSINC.COM

Phone: 419-663-8621 Fax: 419-668-0338



Level III

Company Name

City, State

INSPECTION DATE:

01-01-2007

COMPANY CONTACT:

Mr. Rod Scott

Senior Engineer/Utilities

ADDRESS:

2519 State Route 61

Norwalk, OH 44857

STANDARDS USED:

N.E.T.A. National Electrical Testing Association

INFRARED/THERMAL ANALYSIS

Section I

FOREWORD

This report provides complete documentation of the exceptions (abnormally warm or cool equipment) found during the infrared inspection of your equipment. It uses a variety of data and ratings to help prioritize your repairs and give you the greatest return from your maintenance efforts.

This inspection and report have been performed and prepared by **Rodney J. Scott, a Level III Certified Infrared Thermographer**. To earn this certification, the candidate must complete coursework and pass an examinations administered by the Infrasppection Institute.

This report fully meets the requirements of the Infrasppection Institute's "Guidelines for Infrared Inspection of Electrical and Mechanical Systems." It also references, incorporates and exceeds all other published guidelines and standards pertaining to the infrared inspection of electrical and mechanical systems.

REPAIR PRIORITY RATINGS

Temperature Severity Ratings are objective and based on temperatures measured by the thermographer. The exception and other reference temperatures are compared to industry standards and guidelines to produce an objective Temperature Severity Rating. We have used the following temperature criteria to assign Temperature Severity Ratings to the exceptions:

NETA Priority Criteria for ELECTRICAL & MECHANICAL Exceptions

#1 (0 to 18F deg)

Possible deficiency and warrants investigation.

#2 (18 to 36F deg)

Indicates probable deficiency; repair as time permits.

#3 (36 to 72F deg)

Monitor continuously until corrective measures can be accomplished.

#4 (72to above F deg)

Indicates major discrepancy; repair immediately.

Abbreviations for status are as follows:

OK No problem found

OF Off line.

EX Exception/potential problem.

BL Baseline

Only.

NA No access possible/permitted.

TO Tagged

out.

INSPECTION LIST

2006 10-31-06	2007 Date	<i>Rescan</i> Date	ITEM No.	EQUIPMENT DESCRIPTION	LOCATION
OK			001	Overhead switches & buss connections	Outside Main Substation
OK			002	Primary & Secondary Transformer	Outside Main Substation
OK			003	Bushings Transformer Oil Level & Cooling Fin Circulation	Outside Main Substation
EX			004	North West Capacitor Bank	Outside Main Substation
OK			005	South West Capacitor Bank	Outside Main Substation
OK			006	Bushings, Connections, Oil Level, Fin Circulation	Pad Mount Transformer #1
OF			007	Bushings, Connections, Oil Level, Fin Circulation	Pad Mount Transformer #2
OK			008	Bushings, Connections, Oil Level, Fin Circulation	Pad Mount Transformer #3
OK			009	Bushings, Connections, Oil Level, Fin Circulation	Pad Mount Transformer #4
OK			010	Bushings, Connections, Oil Level, Fin Circulation	Pad Mount Transformer #5
OK			011	Bushings, Connections, Oil Level, Fin Circulation	Pad Mount Transformer #6
OK			012	Bushings, Connections, Oil Level, Fin Circulation	Pad Mount Transformer #7
OK			014	West Wall Lighting Panel	South Dry Storage Area
OK			015	240v-3phase Transformer Disconnect	South Dry Storage Area
OK			016	Desserts/Lunch Room Lighting Panel	South Dry Storage Area
OK			017	Storage Closet Lighting Panel	South Dry Storage Area
OK			018	South Wall Wall Lighting Panels (2)	South Dry Storage Area
OK			019	110/220 Lighting Panel (2)	Prep/Dry Storage
OK			020	480v Breaker Panel	Prep/Dry Storage
OK			021	208/120v Breaker Panel	Prep/Dry Storage
OK			022	Lighting Panel	Sauce Room Hallway
OK			023	Line 2 Main Pump	Pump House No.1
EX			024	Line 1 Main Pump	Pump House No.1
OK			025	North Cafeteria Lighting Panel	MCC 1
OK			026	South Lighting Panel	MCC 1
EX			027	Main Disconnects LP & MA	Main Office Building
EX			028	Front Office Area (Rooftop)	Main Office Building

Company Name

City, State

Priority

2

INVENTORY NO. 004

COMPANY TECHNICIAN: Mr. Randy Davis

ADDRESS: 1301 Oberlin Road SW Massillon, OH

LOCATION: Main Substation

EQUIPMENT: North Cap. Bank Yard Center Phase
Buss-to-Underground Feeder Connection.

FINDINGS: Suspect loose deteriorated Buss-to-Underground Feeder Connection

RECOMMENDATIONS: Inspect, clean, and tighten center phase buss connector and all related components.

EXCEPTION TEMP. (Area.1): 71F

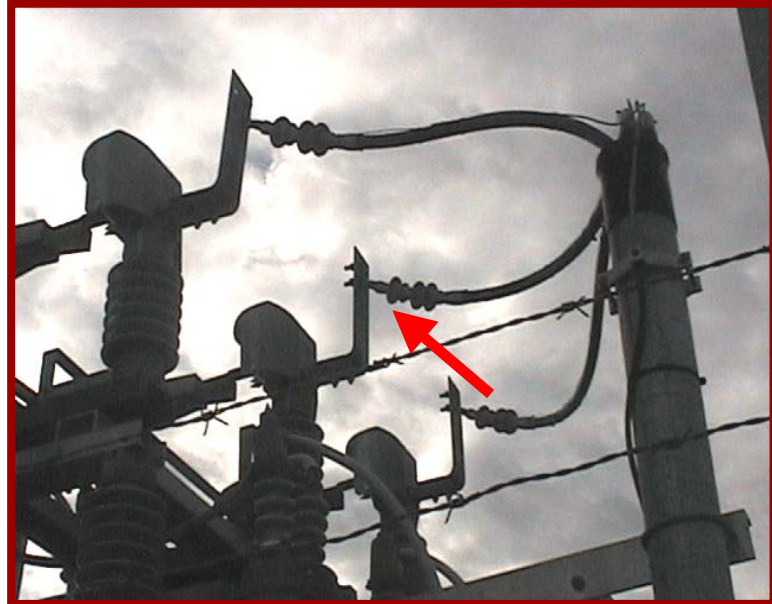
REFERENCE TEMP. (Area 2): 50F

DELTA-T: 21F

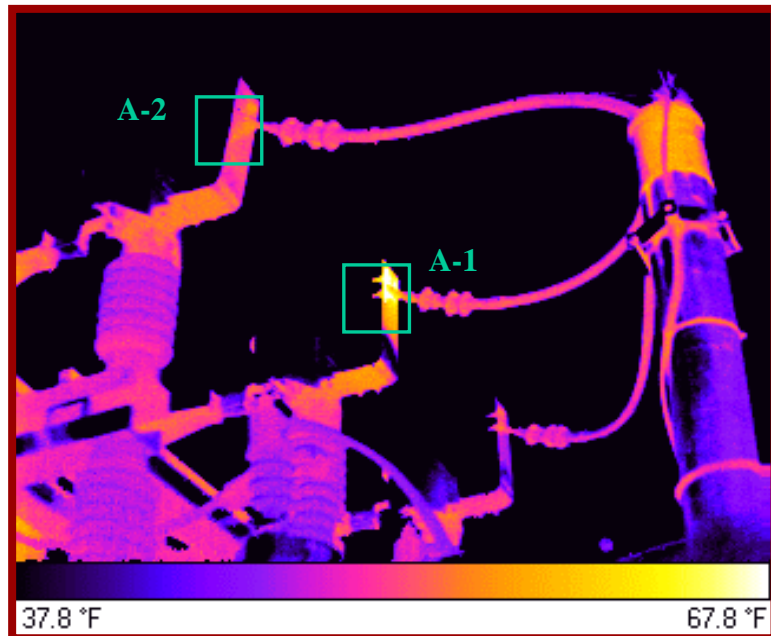
PRIORITY RATING: (NETA STANDARDS)

Indicates probable deficiency; repair as time permits.

PRIORITY 2

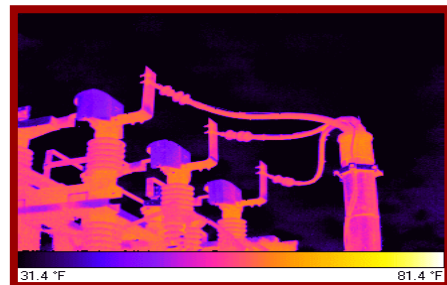
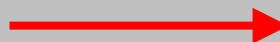


Visual Control Photo



Thermal Infrared Exception Photo

Notes: Normal Thermograph of South Bank



Company Name

City, State

Priority

2

INVENTORY No. 024

COMPANY TECHNICIAN: Mr. Rod Scott

ADDRESS: 2519 State Route 61 Norwalk
Plant

LOCATION: Main Office Building

EQUIPMENT: Panel LRMA Main Disconnect Right
Phase Top Fuse Holder

FINDINGS: Suspect loose deteriorated fuse holder
components and contacts.

RECOMMENDATIONS: Inspect, clean, and tighten
fuse assembly and related components. Replace fuse and
components if required.

EXCEPTION TEMP. (Area.1): 107F

REFERENCE TEMP. (Area 2): 85F

DELTA-T: 22F

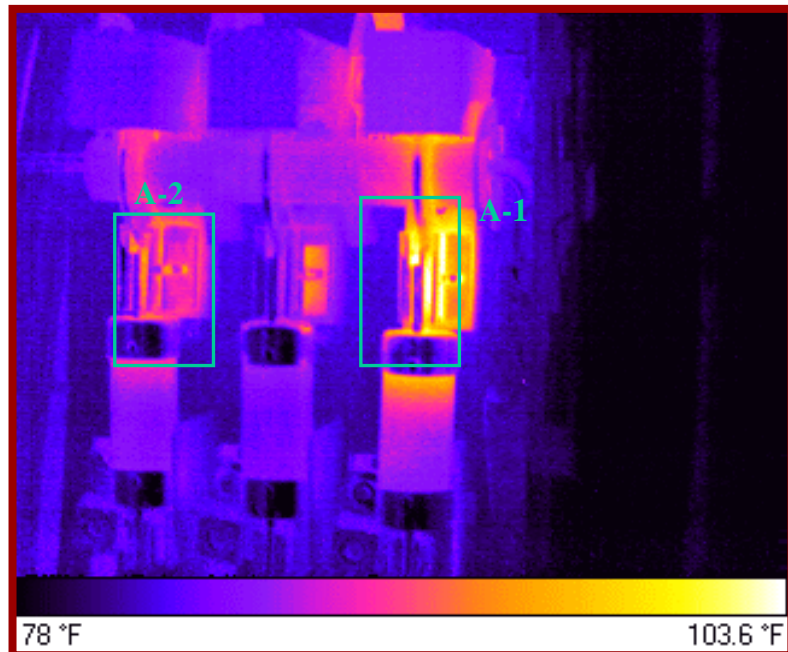
PRIORITY RATING: (NETA STANDARDS)

*Indicates probable deficiency; repair
as time permits.*

PRIORITY 2



Visual Control Photo



Thermal Infrared Exception Photo

Notes:

Company Name

City, State

Priority

1

INVENTORY No. 027

COMPANY TECHNICIAN: Mr. Rod Scott

ADDRESS: 2519 State Route 61 Norwalk
Plant

LOCATION: Pump House No.3

EQUIPMENT: Plant No.1 Main Pump
Line No.1

FINDINGS: Uneven thermal pattern on coupling & End-Bell temperatures exceed maximum rise.

RECOMMENDATIONS: Inspect load, shaft alignment and lubrication and comply with manufacturers specification.

EXCEPTION TEMP. (pt.1): 188F

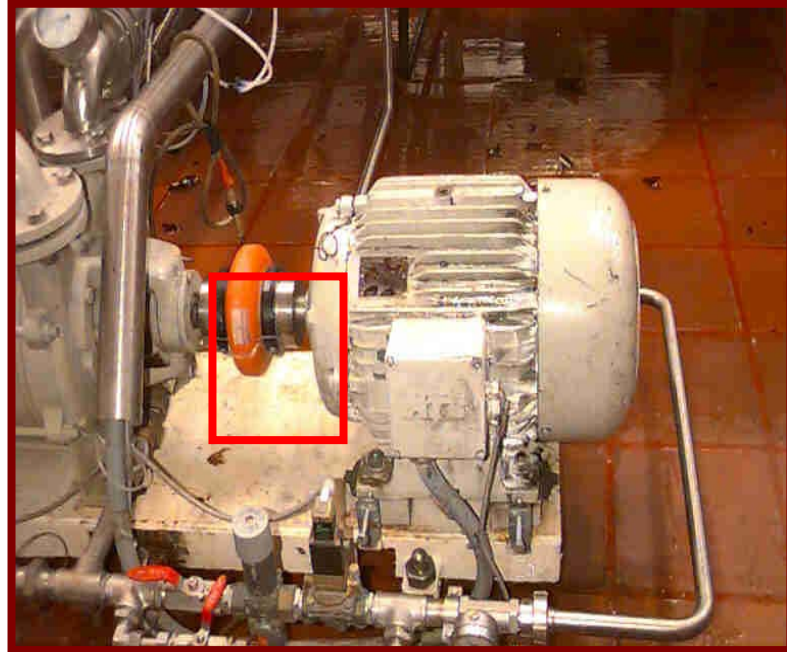
REFERENCE TEMP. (pt.2): 170F

DELTA-T: 18F

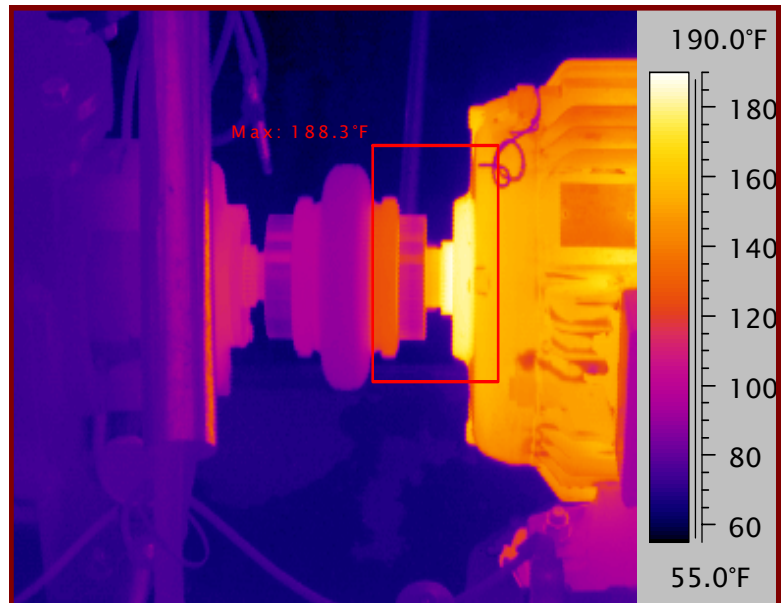
PRIORITY RATING: (NETA STANDARDS)

Possible deficiency and warrants investigation.

PRIORITY 1



Visual Control Photo



Thermal Infrared Image

Notes:

Company Name

City, State

Priority

2

INVENTORY No. 028

COMPANY TECHNICIAN: Mr. Rod Scott

ADDRESS: 2519 State Route 61 Norwalk
Plant

LOCATION: Main Building

EQUIPMENT: Front Office (Area 1)

FINDINGS: Built-Up Construction

A continuous semi-flexible roof coverings of laminates, or piles, of saturated or coated felts alternated with layers of bitumen. Surfaced with asphalted materials.

RECOMMENDATIONS: Consult with an experienced roofing contractor to confirm results. (Core samples are suggested to confirm thermal analysis).

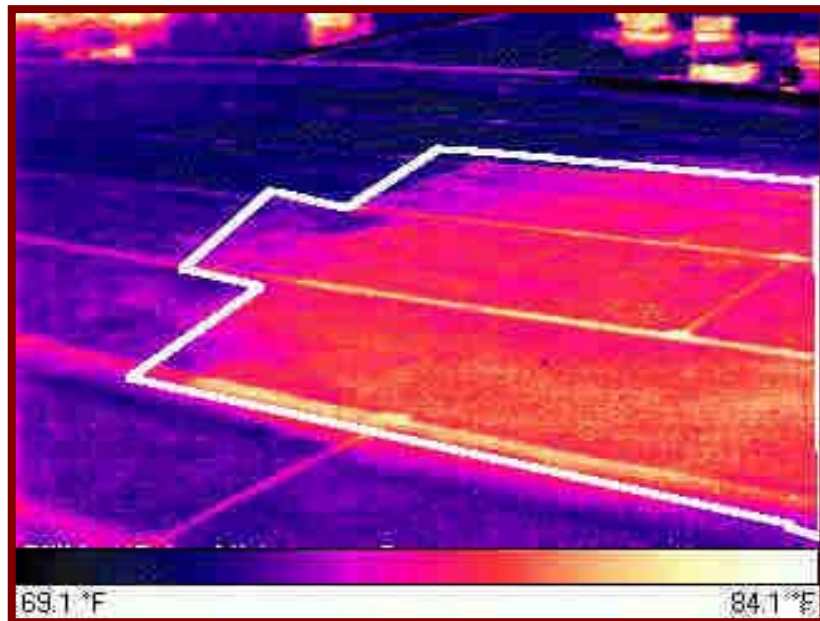
Roofing Contractor:

Address:

Type Of Repair:



Visual Control Photo



Thermal Infrared Image

Notes:

The Scott Estate

Milan, OH

OWNER: Mr. Rod Scott

LOCATION: North End East Side (above porch)

EQUIPMENT: Vinyl Siding

FINDINGS: Suspect Thermal Loss due to lack of insulation and/or excessive air flow.

RECOMMENDATION: Further inspect the area of loss and repair as required.

EXCEPTION TEMP. (Area.1): 37F

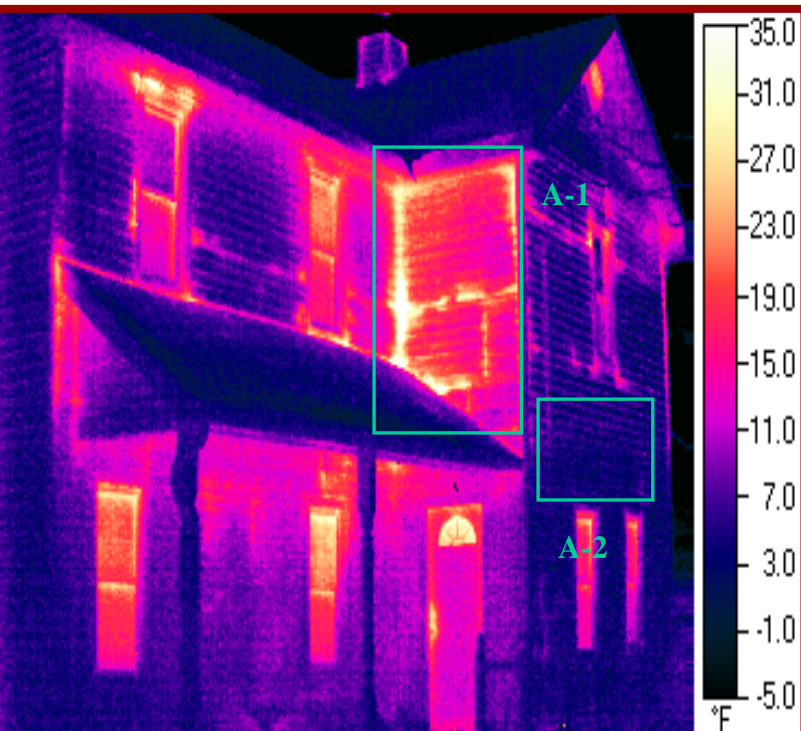
REFERENCE (Normal) (Area 2): 12F

DELTA-T: 25F

PRIORITY RATING: (NETA STANDARDS)

Indicates major discrepancy; repair immediately.
PRIORITY 3

Further inspections should be completed by a professional builder or at the home owners own risk!



Thermal Infrared Exception Image



Visual Control Photo

Notes of repairs following the inspection:

2007 Thermographic/Infrared Analysis

DATA LOG AND EQUIPMENT

INFORMATION

Certified Thermographer: Rodney J. Scott

Certification Level: I, II, & III

Certification Number: 4974

Equipment Manufacturer: Mikron/Flir Systems

Model Number: 710/595

Software: MIKRO View 1.4, IRWIN & IRWIN Report Pro 2000 (Power Point Compatible)

Accuracy: +/- 2%

Calibration: Annual (01-10-07)

Wave Band: Long Wave (8-14)

Lens: 25mm Normal Factory Equip.

Temperature Measurement Units: Fahrenheit

Distance Units: 10 Feet

Ambient Air Temp. 42F

Wind Speed: Variable

Wind Direction: Variable

Sky Conditions: Cloudy

Inspection Size: 3 day

Type Of Inspection: Industrial Electrical/Mechanical

Company Name

City, State

INSPECTION DATE:

01-01-2007

COMPANY CONTACT:

Mr. Rod Scott

Senior Engineer/Utilities

ADDRESS:

2519 State Route 61

Norwalk, OH 44857

STANDARDS USED:

N.E.T.A. National Electrical Testing Association

VIBRATION ANALYSIS

Section II

SAMPLE REPORT

PREDICTIVE MAINTENANCE SUMMARY

Exception #	Inspection Type	Priority Rating	ITEM No.	PROBLEM DESCRIPTION	LOCATION
EX-1	IR	3	095	POOR LEAD/LUG CONNECTION IN C.P.	WAREHOUSE 4
EX-2	IR	4	094	POOR CONTACTS IN BREAKER	WAREHOUSE 4
EX-3	IR	4	094	POOR CONTACTS IN BREAKER	WAREHOUSE 4
EX-4	IR	2	189	POOR FUSE CLIP CONNECTION IN C.P.	WAREHOUSE 4
EX-5	IR	3	128	POOR PIVOT CONTACT IN DISCONNECT	BAG PASTE AREA
EX-6	IR	4	127	MOTOR OPERATING @ HIGH TEMP.	BAG PASTE AREA
EX-7	IR	4	127	POOR FUSE CLIP CONN.S/ PIVOT CONTACTS	BAG PASTE AREA
EX-8	IR	4	125	POOR PIVOT CONTACT IN DISCONNECT	BAG PASTE AREA
EX-9	IR	3	126	POOR PIVOT CONTACT/ LEADCONN. IN DISC.	BAG PASTE AREA
EX-10	IR	2	170	POOR PIVOT CONTACT IN DISCONNECT	WASTE DISPOSAL OFFICE
EX-11	IR	2	111	HOT BEARING ON PUMP MOTOR	VINEGAR BUILDING
EX-12	IR	2	111	HOT BEARING ON PUMP MOTOR	VINEGAR BUILDING
EX-13	IR	2	113	POOR LEAD/LUG CONNECTION	VINEGAR BUILDING
EX-14	IR	4	106	POOR FUSE/ SWITCH CONN'S IN SWITCHGEAR	VINEGAR BUILDING
EX-15	IR	4	106	POOR FUSE/ SWITCH CONN'S IN SWITCHGEAR	VINEGAR BUILDING
EX-16	IR	3	103	BAD HEATER ELEMENT ON STARTER	OLD VINEGAR BUILDING
EX-17	IR	4	103	POOR FUSE CLIP CONN. IN DISCONNECT	OLD VINEGAR BUILDING
EX-19	IR	2	100	POOR PIVOT CONTACT IN DISCONNECT	POWER/ BOILER HOUSE
EX-19	IR	2	003	POOR FUSE CLIP CONN.S/ PIVOT CON. IN DISC.	POWER/ BOILER HOUSE
EX-20	IR	4	015	POOR LEAD/LUG CONNECTION IN STARTER PNL	POWER/ BOILER HOUSE
EX-21	IR	2	090	EXCESSIVE TEMPERATURES IN LIGHTING PNL.	WAREHOUSE 1, ANNEX
EX-22	IR	4	123	POOR FUSE CLIP CONN.S/ PIVOT CON. IN DISC.	WAREHOUSE 1
EX-23	IR	4	115	BAD HEATER ELEMENT IN MCC BUCKET	CASE MAKING
EX-24	IR	2	115	POOR LEAD/LUG CONNECTION IN MCC BUCKET	CASE MAKING
EX-25	IR	3	137	POOR PIVOT CONTACT/ LEAD CONN. IN DISC.	CASE MAKING
EX-26	IR	2	138	POOR PIVOT CONTACT IN DISCONNECT	CASE MAKING
EX-27	IR	3	196	POOR LEAD/LUG CONNECTION IN C.P.	CASE MAKING

Sample Company

PREDICTIVE MAINTENANCE SUMMARY

Exception #	Inspection Type	Priority Rating	ITEM No.	PROBLEM DESCRIPTION	LOCATION
EX-28	IR	3	196	POOR CONTACT IN CONTACTOR IN C.P.	CASE MAKING
EX-29	IR	4	177	POOR LEAD CONN./ PIVOT CONTACT IN DISC.	CASE MAKING
EX-30	IR	2	019	POOR LEAD/LUG CONNECTION IN MCC BUCKET	LABELING, S. WALL
EX-31	IR	3	019	POOR LEAD/LUG CONNECTION IN MCC BUCKET	LABELING, S. WALL
EX-32	IR	3	028	POOR CONTACT IN CONTACTOR IN C.P.	LABELING
EX-33	IR	4	049	POOR LEAD/LUG CONNECTION IN MCC BUCKET	FILLING
EX-34	IR	3	037	POOR PIVOT CONTACT IN CONTROL PANEL	GLASS WAREHOUSE
EX-35	IR	4	081	POOR FUSE CLIP CONNECTION IN CONTROL PNL	2 ND FLOOR, KITCHEN
EX-36	IR	2	075	POOR LEAD/LUG CONNECTION IN MCC BUCKET	2 ND FLOOR, KITCHEN
EX-37	IR	2	075	POOR LEAD/LUG CONNECTION IN MCC BUCKET	2 ND FLOOR, KITCHEN
EX-38	IR	3	065	POOR PIVOT CONTACTS IN DISCONNECT	2 ND FLOOR, KITCHEN
EX-39	IR	3	072	POOR PIVOT CONTACT IN DISCONNECT	2 ND FLOOR, KITCHEN
EX-40	IR	4	068	POOR PIVOT CONTACT IN DISCONNECT	2 ND FLOOR, KITCHEN
EX-41	IR	3	069	POOR PIVOT CONTACT IN DISCONNECT	2 ND FLOOR, KITCHEN
EX-42	IR	3	087	POOR SCREW CONNECTION IN MCC BUCKET	3 RD FLOOR, KITCHEN
EX-43	IR	4	226	POOR FUSE CLIP CONNECTION ON POWER POLE	OUTSIDE, W. OF PLANT
EX-44	IR	3	227	POOR LEAD CONNECTION ON POWER POLE	OUTSIDE, W. OF PLANT
EX-45	IR	3	204	MOTOR OPERATING @ HIGH TEMPERATURE	SINGLE SERVE AREA
EX-46	IR	2	203	POOR LEAD/LUG CONNECTION IN DRIVE PANEL	SINGLE SERVE AREA
EX-47	VIB	2	V029	MASS UNBALANCE/ MISALIGNMENT	BAG PASTE AREA
EX-48	VIB	3	V030	MASS UNBALANCE/ MISALIGNMENT	BAG PASTE AREA
EX-49	VIB	3	V031	COUPLING MISALIGNMENT	BAG PASTE AREA
EX-50	VIB	3	V032	EARLY BEARING DEFECTS	BAG PASTE AREA
EX-51	VIB	2	V049	MOTOR SOFT FOOT CONDITION	FILLING AREA

INSPECTION LIST

2006 Feb .22	2006 Mar. 3	2006 Date	ITEM No.	EQUIPMENT DESCRIPTION	LOCATION
5	5		001	BLOWER/ MOTOR #1	KILN 6
5	5		002	BLOWER/ MOTOR #2	KILN 6
EX - 2	EX - 2		003	BLOWER/ MOTOR #3	KILN 6
5	5		004	BLOWER/ MOTOR #4	KILN 6
5	5		005	BLOWER/ MOTOR #5	KILN 6
EX - 4	EX - 4		006	BLOWER/ MOTOR #6	KILN 6
EX - 4	EX - 4		007	BLOWER/ MOTOR #7	KILN 6
EX - 4	EX - 4		008	BLOWER/ MOTOR #8	KILN 6
5	5		009	BLOWER/ MOTOR #9	KILN 6
EX - 1	EX - 1		010	BLOWER/ MOTOR #10	KILN 6
5	5		011	BLOWER/ MOTOR #11	KILN 6
5	5		012	BLOWER/ MOTOR #12	KILN 6
5	5		013	BLOWER/ MOTOR #13	KILN 6
5	5		014	BLOWER/ MOTOR #14	KILN 6
5	5		015	BLOWER/ MOTOR #15	KILN 6
5	5		016	BLOWER/ MOTOR #16	KILN 6
5	5		017	BLOWER/ MOTOR #17	KILN 6
5	5		018	BLOWER/ MOTOR #18	KILN 6
EX - 2	EX - 2		019	BLOWER/ MOTOR #19	KILN 6
5	5		020	BLOWER/ MOTOR #20	KILN 6
5	5		021	BLOWER/ MOTOR #21	KILN 6
5	5		022	WEST HYDRAULIC UNIT	KILN 6
5	5		023	EAST HYDRAULIC UNIT	KILN 6
5	5		024	HYDRAULIC UNIT 2	KILN 6

Priority Levels

1 Immediate Action Required

2 Repair Within 30 Days

3 Repair At Next Outage

4 Schedule Proactive Repair

5 No Problem / Continue to Monitor

N/D/C = No Data Collected

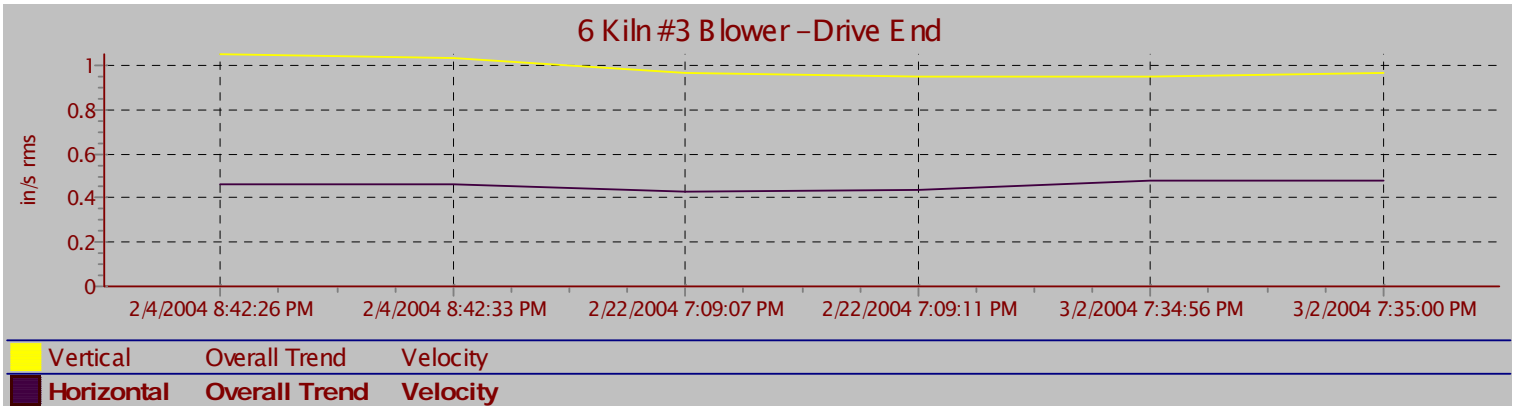
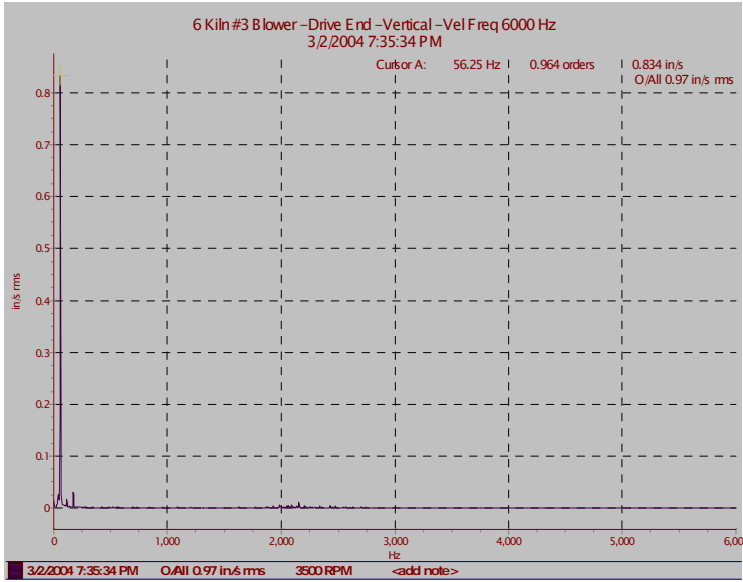
Company Name – City, State



6 Kiln #3 Blower Motor

PRIORITY 2

Date Collected: March 3, 2006



Findings: Overall amplitudes are high @ 0.97 in/sec. rms.. Condition indicates mass unbalance and/or misalignment.

Recommendations: Have motor PM'd and balanced during next 30 days.

Corrective Action Taken:

Date: _____ Signature: _____

Company Name - City, State

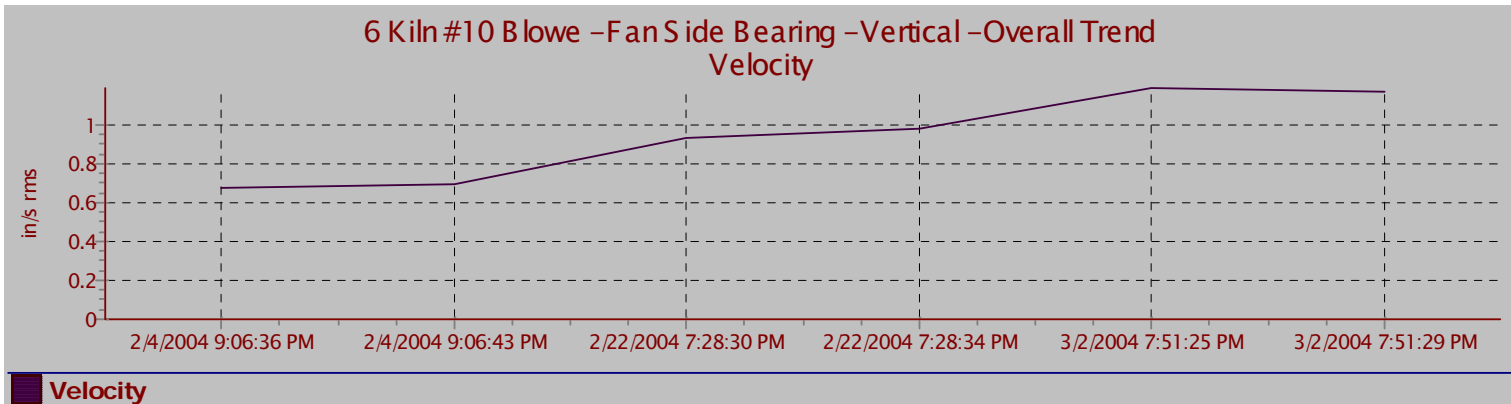
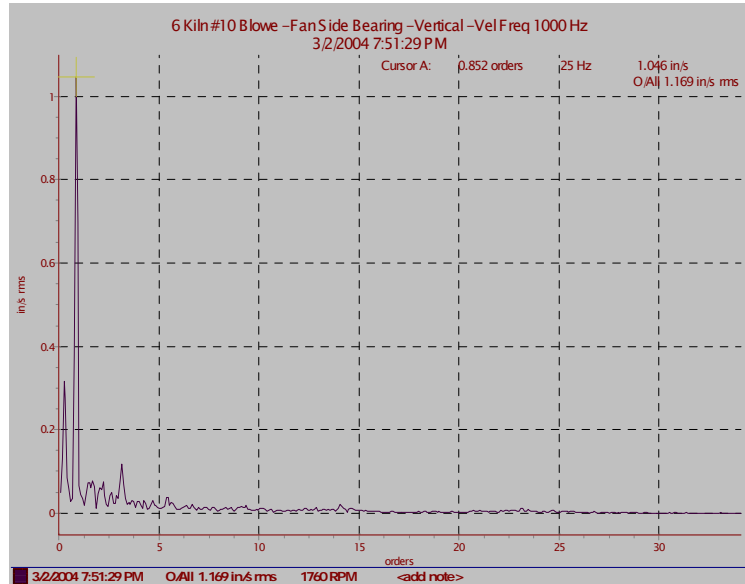
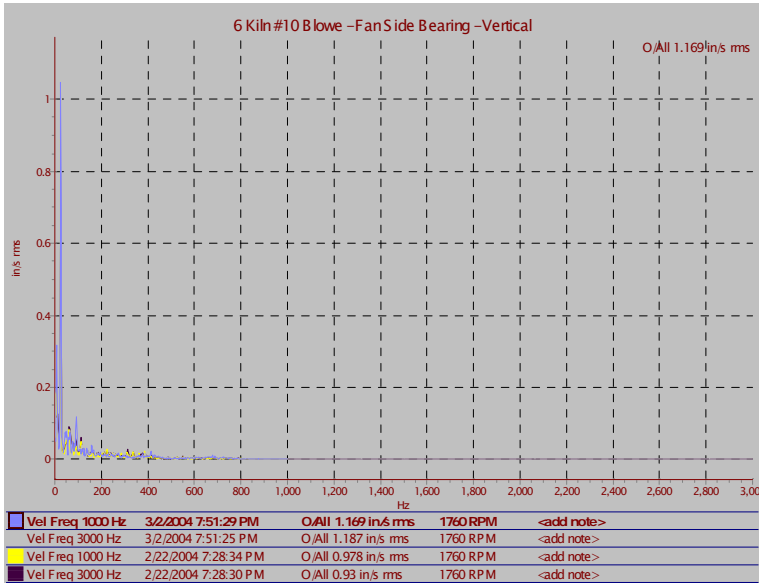


6 Kiln #10 Blower Motor & Bearings

PRIORITY

1

Date Collected: March 3, 2006



Findings: Overall amplitudes are high @ 1.169 in/sec. rms.. Structure is visibly damaged and causing shaft & fan blades to make contact with hood.

Recommendations: Have structure repaired immediately.

Corrective Action Taken:

Date: _____ Signature: _____

Company Name – City, State

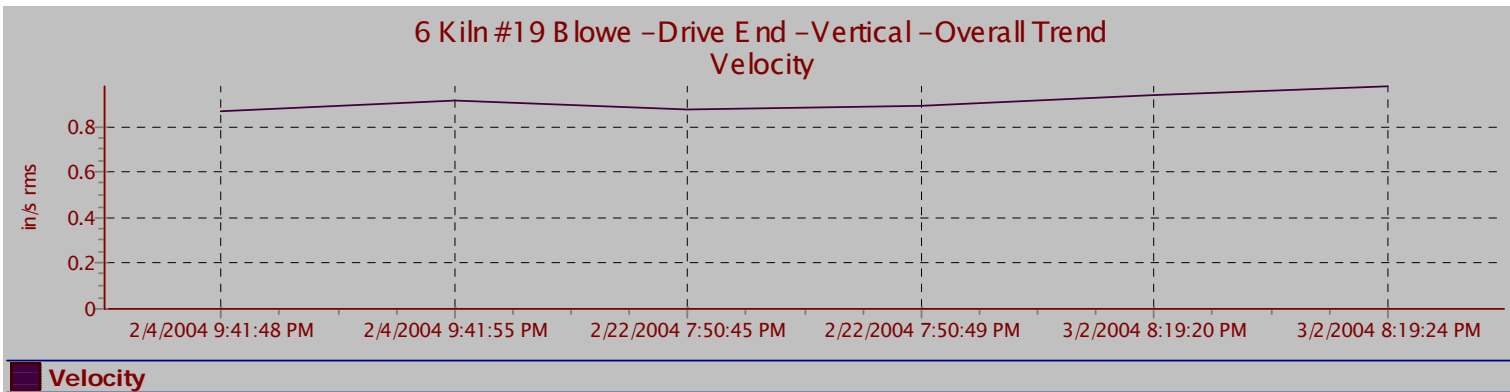
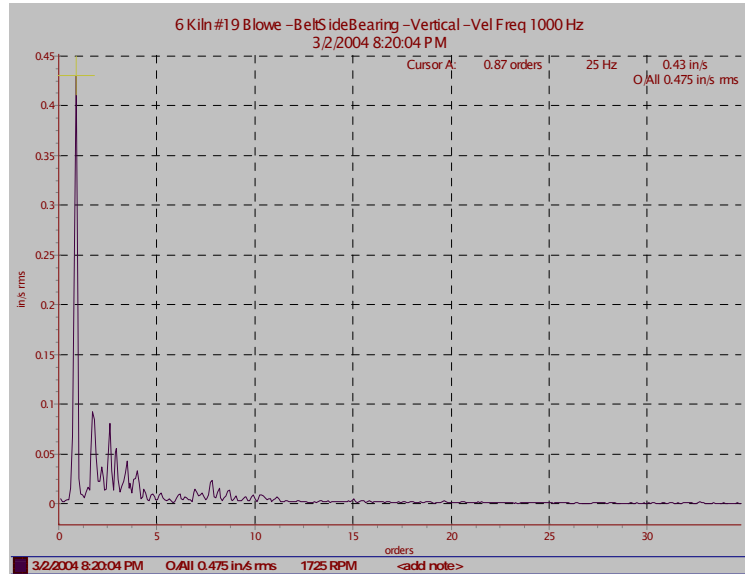
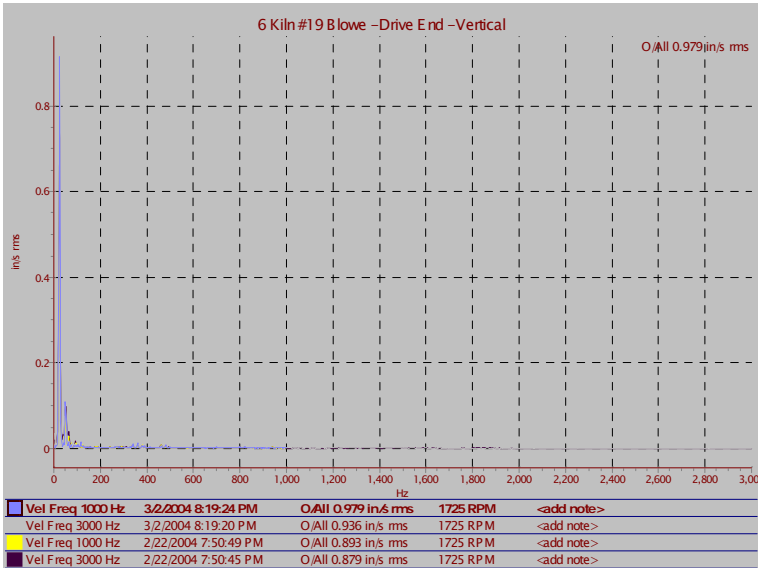


6 Kiln #19 Blower Motor & Bearings

PRIORITY

2

Date Collected: March 3, 2006



Findings: Overall amplitudes are high in (0.979 in/sec. rms.). Probable unbalance on motor and/or improper belt tension and/or eccentric pulley.

Recommendations: Have motor PM'd and balanced. Check belt tension and inspect pulley during next 30 days.

Corrective Action Taken:

Date: _____ Signature: _____

Company Name – City, State

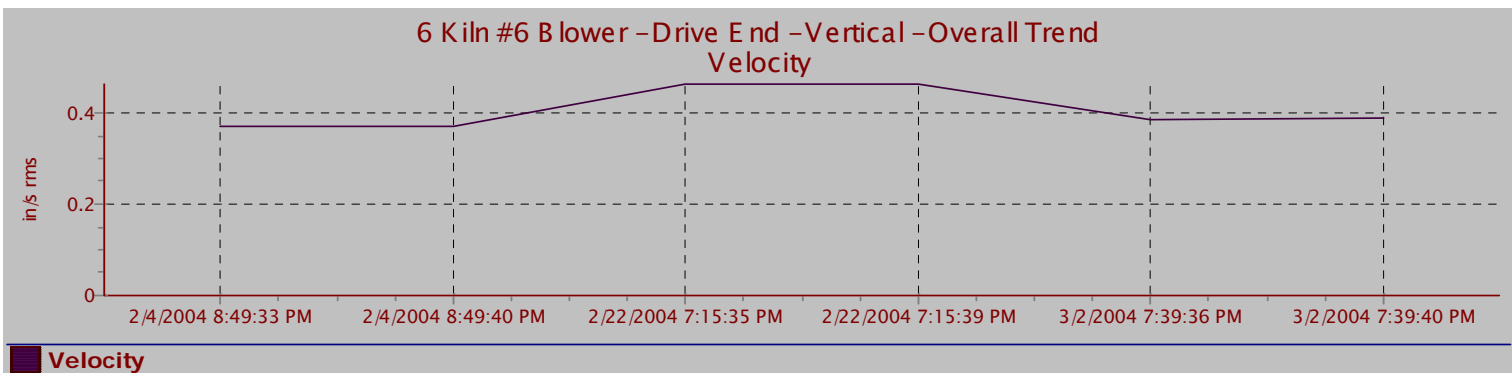
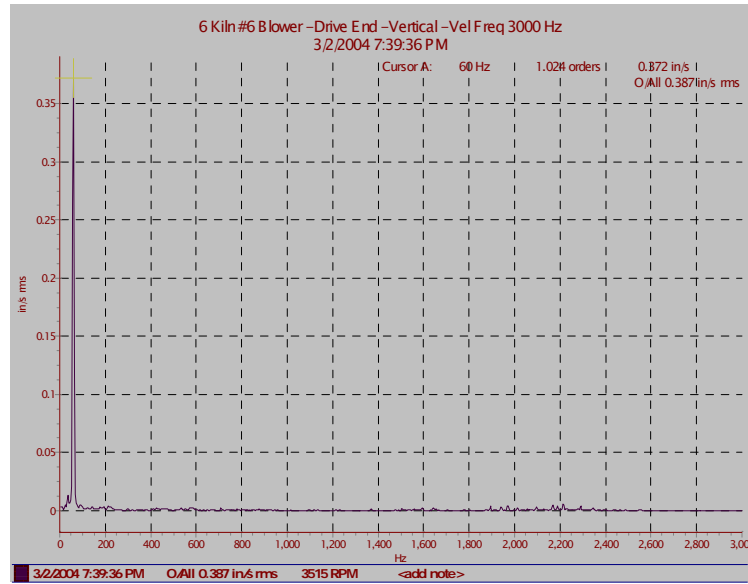
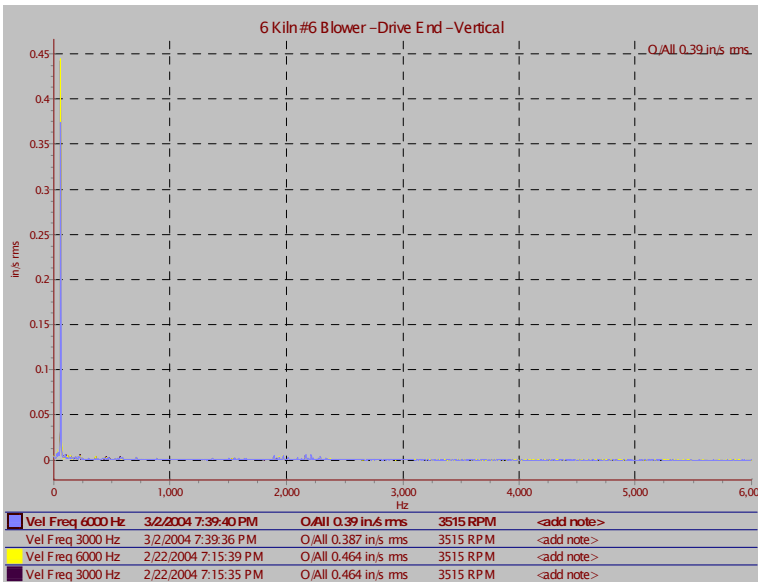


6 Kiln #6 Blower Motor

PRIORITY

4

Date Collected: March 3, 2006



Findings: Overall amplitudes are @ 0.372 in/sec. rms.. Indicates mass unbalance and/or misalignment. Condition not considered serious @ this time. Continue to monitor.

Recommendations: Schedule equipment for proactive repair. Begin to monitor for any changes in noise or heat.

Corrective Action Taken:

Date: _____ Signature: _____

Report Index

Date

Company Name

Machine Name	Priority Code	Problem Description
6 KILN #3 BLOWER/ MOTOR	2	Mass Unbalance/ Misalignment
6 KILN #10 BLOWER/ MOTOR	1	Structural Looseness
6 KILN #19 BLOWER/ MOTOR	2	Motor Unbalance/ Improper belt tension/ Eccentric pulley
6 KILN #6 BLOWER/ MOTOR	4	Misalignment/ Mass Unbalance
6 KILN #7 BLOWER/ MOTOR	3	Improper belt tension/ structurally loose shaft bearing.
6 KILN #8 BLOWER/ MOTOR	4	Early bearing defects
11 KILN #3 BLOWER/ MOTOR	3	Misalignment/ Mass Unbalance
11 KILN #5 BLOWER/ MOTOR	4	Misalignment/ Mass Unbalance
WASTE WATER TANK #3 AGITATOR MOTOR	4	Early Bearing Defects

Priority Levels

1 Immediate Action Required

2 Repair Within 30 Days

3 Repair At Next Outage

4 Schedule Proactive Repair

5 No Problem / Continue to Monitor

Company Name

City, State

INSPECTION DATE:

01-01-2007

COMPANY CONTACT:

Mr. Rod Scott

Senior Engineer/Utilities

ADDRESS:

2519 State Route 61

Norwalk, OH 44857

STANDARDS USED:

N.E.T.A. National Electrical Testing Association

ULTRASOUND ANALYSIS

Section III

ULTRASOUND INSPECTION LIST

1 st Qtr 10-31-06	2 nd Qtr Date	3 rd Qtr Date	4 th Qtr Date	Item No.	EQUIPMENT DESCRIPTION
OK				001	1160-1 FES Compressor
OK				002	1160-2 FES Compressor
OK				003	1160-3 FES Compressor
OK				004	775-1 ME FES Compressor
OK				005	775-2 ME FES Compressor
OK				006	775-3 ME FES Compressor
EX				007	Pump House No.1 Main Pump Moter
OK				008	East ROTOJET HP Water Pump
OK				009	225 ME FES Tandem Compressor
OK				010	270-2 FES Compressor
OK				011	270-1 FES Ammonia Compressor
OK				012	385-2 FES Compressor
OK				014	385-1 ME FES Compressor
OK				014	225-5 East ME-FES Compressor
OK				015	225-4 LE FES Ammonia Compressor
OK				016	225-3 West ME-FES Compressor
OK				017	140 FES Ammonia Compressor
OK				018	North Atlas COPCO Compressor
OK				019	South Atlas COPCO Compressor
OK				020	Center I-R Compressor
OK				021	South I-R Compressor
EX				022	Waste Water Pump #1
OK				023	New ROTOJET HP Water Pump #2
OK				024	480-B FES Ammonia Compressor
OK				025	East Parker-Hannifin Filter Pump
OK				026	West Parker-Hannifin Filter Pump
OK				027	20-150 Sullair Screw Compressor
OK				028	25-L200 Sullair Screw Compressor
OK				029	32-L200 Sullair Screw Compressor
OK				030	West HP Water Pump
OK				031	East HP Water Pump

SAMPLE REPORT

2007 Ultrasound Analysis

COMPANY TECHNICIAN: Mr. Rod Scott

ADDRESS: 2519 State Route 61 Norwalk
Plant

LOCATION: Pump House No.1

EQUIPMENT: Plant No.1 Main Pump
Line No.1 End Bell Bearing

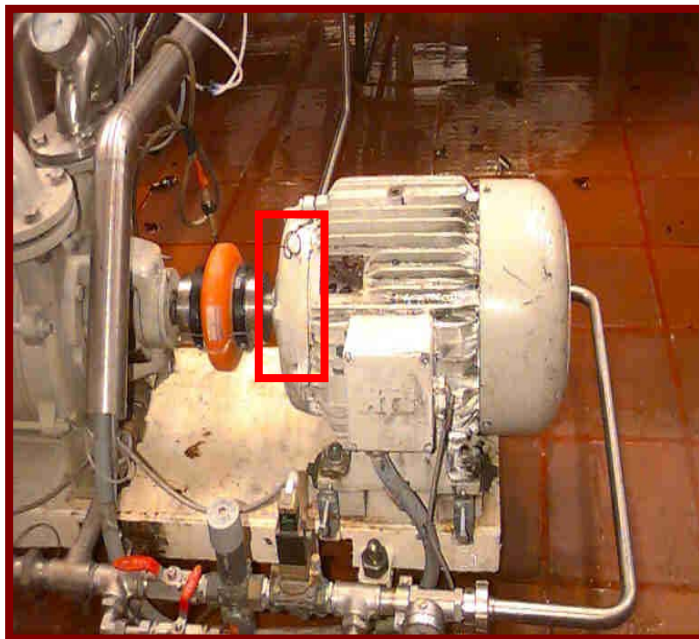
FINDINGS: Suspect lack of lubrication.

RECOMMENDATIONS: Lubricate bearing to proper specifications and inspect using non-destructive testing. If problem persist replace bearing.

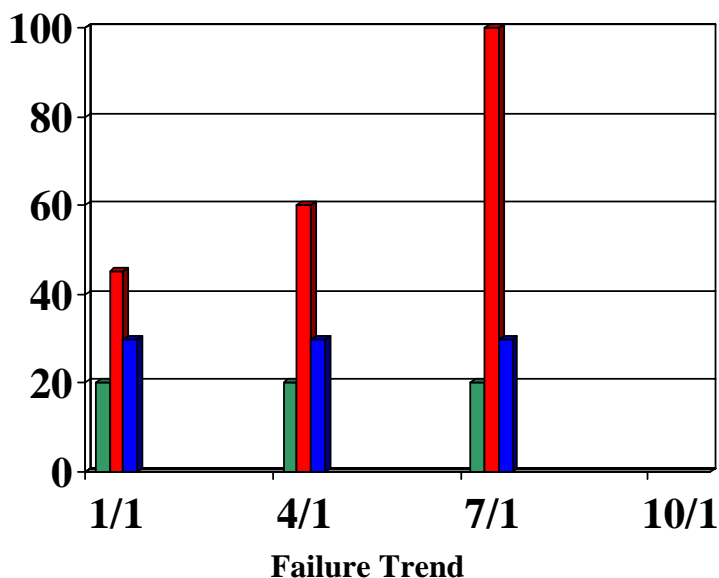
PRIORITY RATING: (NETA STANDARDS)

*Indicates probable deficiency; repair
as time permits.*

PRIORITY 2



Visual Photo



Decibel Max 100 dB

Decibel Min 20 dB

Frequency 30

Notes:

SAMPLE REPORT

2007 Ultrasound Analysis

COMPANY TECHNICIAN: Mr. Rod Scott

ADDRESS: 2519 State Route 61 Norwalk
Plant

LOCATION: Wastewater Treatment Plant

Pump No. 1

EQUIPMENT: Pump Upper Shaft Bearing

FINDINGS: Normal Range of operation is 40dB-70dB

RECOMMENDATIONS: None

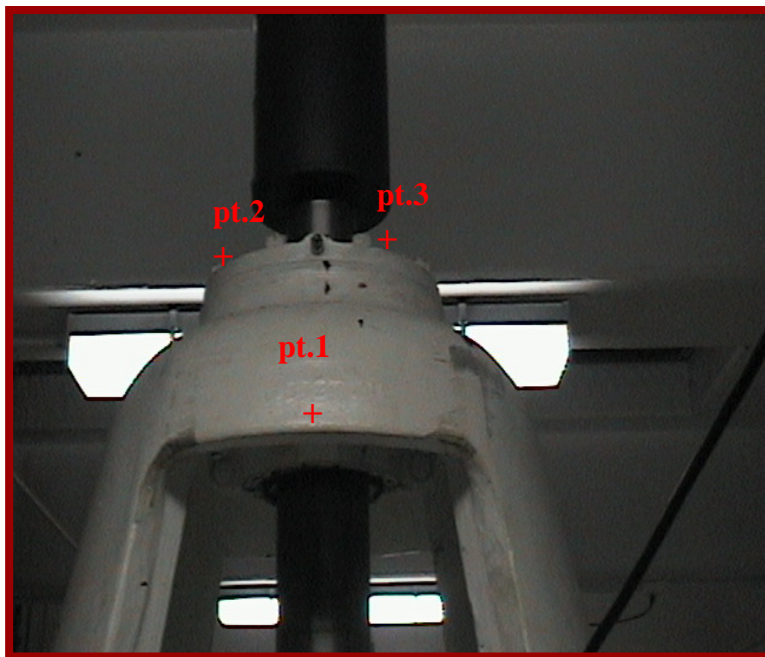
BASELINE TEMP.: (Point 1) 129F

BASELINE TEMP.: (Point 2) 111F

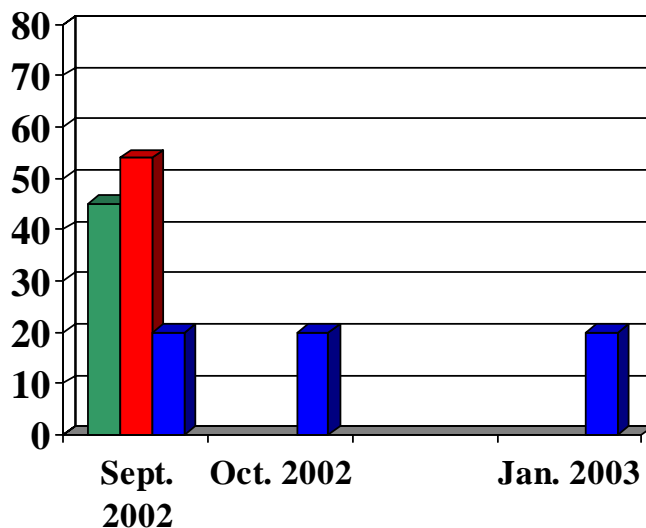
DELTA-T: 18F

**PRIORITY RATING: (NETA STANDARDS)
BASELINE READINGS**

PRIORITY OK



Visual Control Photo



Failure Trend

Decibel Max 56 dB

Decibel Min 45 dB

Frequency 20

(Failure Prediction@ 75dB)

Notes:

Company Name

City, State

INSPECTION DATE:

01-01-2007

COMPANY CONTACT:

Mr. Rod Scott

Senior Engineer/Utilities

ADDRESS:

2519 State Route 61

Norwalk, OH 44857

STANDARDS USED:

N.E.T.A. National Electrical Testing Association

Substation Maintenance & Construction

Section V

Sample Report

2006 SUBSTATION MAINTENANCE REPORT

Company Contact: Mr. Rod Scott

Inspection Date: April 30, 2006

Address: 1895 West Jefferson Street

Substation Name: Substation No. 2.

Fence Structure Condition: Poor

Notes: Plant side of substation fence is in need of some structural repairs.

Paint Conditions: Poor

Notes: Paint maintenance should be scheduled for near future.

Grounds Conditions(Stone, Concrete, ect.): Average

Notes: Suggest adding an additional layer of stone to help prevent weed growth.

ELECTRICAL HAZARDS & SAFETY REPORT

Overhead Conditions Good

Notes: Visual inspection of electrical connections show no signs of problems.

Grounding Conditions: Good

Notes: All grounding connections appear to be sound.

2006 Substation Maintenance Photographs

Date: April 30, 2006



Before



After

2006 Substation Maintenance Photographs

Date: September 18, 2006



Before



After



INVIZIONS ***INC.***

PREDICTIVE MAINTENANCE SERVICES

Thermographic/Infrared Testing & Consulting Applications

Residential

Heating Cooling and Insulation

Fuse Boxes and Electrical

Flat Roof Moisture

Commercial/Industrial

Electrical (High & Low Voltage)

Mechanical (Motors, Pumps, Bearings)

Flat Roof Moisture

Insulation and Structural

Refractory (Boilers, Stoves, Furnaces)

Vibration & Ultrasound Testing & Consulting Applications

Electrical

Leak Detection

Bearings condition

Valve testing

Mechanical

Corona

Steamtraps

Power & Communication Lines

Substation Maintenance & Construction Applications

Weed Control & Prevention

Fence Painting & Maintenance

Concrete Repair & Construction

Fence Repair & Construction

Stone & Fill

Safety & Hazards Documentation

COMPLETE SAFETY ANALYSIS & DOCUMENTATION