Gilbane Building Company
1 Dana Street, Suite 501
Portland, ME 04101
Telephone: (207) 772-3725
Fax: (207) 772-3741

September 9, 2008

Jeanie Bourke
City of Portland
389 Congress Street
Portland, ME 04101

Re: Mercy Hospital, Final Certificate of Occupancy

Dear Jeanie:

In preparation for our final certificate of occupancy, I have enclosed various documents requested from numerous sources within the City and State. In some cases many of these documents have been previously submitted however I felt it important to submit them in total to simplify matters.

Documents contained herein are as follows:

- State Fire Marshal Inspection of 8/25/08
- Mercy response to Fire Marshal inspection with plan of corrections
- Sprinkler letter prepared by High Tech Fire Protection
- Fire Alarm letter prepared by Siemens
- Fire Pump test results
- Kitchen grease hood exhaust system design prepared by BR+A
- Med-Gas storage room design prepared by BR+A
- Final report of inspections certificate. Copy of all inspections previously submitted
- Med-Gas certification
- Verification that storm drainage system has been cleaned
- Sewer system testing letters and photographs. Video to be provide to Planning Department under separate cover.
- Generator noise level inspection report.
- UL rating for continuous hinges
- Flame spread rating for wood wall paneling & ceilings

Please review the enclosed information and advise should you require any additional information. Please also forward to any additional individuals who may require this documentation. It has been a pleasure working with the City and State and I look forward to hopefully working with you again.

Sincerely,

Michael Poulin
Project Manager
Gilbane Building Company.

Cc: Jon Klages, Greg Cass, Chris Hanson, Michael Collins, Michael Connolly, Philip DiPierro

John Elias Baldacci
Governor

Phone 207-626-3880

Maine Department of Public Safety
State Fire Marshal's Office
52 State House Station
Augusta, Maine 04333-0052

Anne H. Jordan
Commissioner
Chief John C. Dean
State Fire Marshal
Fax 207-287-6251

Statement of Deficiencies and Plan of Corrections

Facility Name: Mercy Hospital Location: Facility Type: Hospital Telephone : Resource ID :	Owner Name: Address:
During an inspection of your facility a certified State Inspector has found the following violations.	**In this right hand column you are required to indicate how and when you will have these violations corrected. Complete this information and return this "Plan of Correction" to the above address within 10 days of receipt of this statement.**

This inspection was conducted at the request of Mercy Hospital. This is not a Federal Health Care Survey. The building is a five story Type I(332 construction.

General Notes:

A. Provide flame spread rating for all wood paneling in facility
B. All electrical panels must have breakers marked as to use or marked spare.
C. Provide information on rating of all fire doors with piano hinges on them.
D. Provide Medical Gas certification when done.
E. Provide statement from both Fire Alarm Company and Sprinkler Company that systems are working in accordance with applicable code.

GROUND FLOOR

1. Room SGE-01 Repair sprinkler pipe penetration to corridor wall.

2. Stair well area at SSGST-101. Area under stairs must be sealed to retain two hour rating of stair tower.

3. Verify door rating to room SG-008. NOTE: This will be required for all piano type hinges on any rated door that is not clearly labeled.

4. Room SGM-01 repair fire proofing on steal structure above fire damper.

Date of Inspection: 25 August 2008
Inspector: Jon Klages

Owner/Occupant Signature
Date:

John Elias Baldacci
Governor

Anne H. Jordan
Commissioner

Chief John C. Dean
State Fire Marshal

Phone 207-626-3880
Fax 207-287-6251

Maine Department of Public Safety
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Statement of Deficiencies and Plan of Corrections

Facility Name: Mercy Hospital Location: Facility Type: Hospital Telephone : Resource ID :	Owner Name: Address:
During an inspection of your facility a certified State Inspector has found the following violations.	**In this right hand column you are required to indicate how and when you will have these violations corrected. Complete this information and return this "Plan of Correction" to the above address within 10 days of receipt of this statement.**

6. SG-040 Service air compressor is protruding into the exit door. Change exit door so the right side door has exit hardware and becomes the exit path. Mark the area to prevent buildup of storage that would block the door.

7. Fire Pump room GG-042 repair sprinkler pipe penetrations in wall to Central supply

FIRST FLOOR

1. Adjust smoke door SIX100 to close and latch

2. S1-001 (main Lobby) Remove or disconnect gas from non-vented fuel fired heater. This is per Chapter 20 of State Fire Marshal Rules.

3. S1E-01 Repair penetrations to corridor

4. Stair one first floor landing repair sprinkler penetration S1ST01

5. S1-E02 Rate wall behind electrical conduit

6. Repair shaft access to smoke damper in corridor S1X0440

7. Stair two first floor S1ST02 repair pipe penetrations

8. Repair penetrations in rooms; 2047, 2045, and 2032, 2019.

Date of Inspection: 25 August 2008
Inspector: Jon Klages

Owner/Occupant Signature
Date:

John Elias Baldacci
Governor

Phone 207-626-3880

Maine Department of Public Safety
State Fire Marshal's Office
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Statement of Deficiencies and Plan of Corrections

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During an inspection of your facility a certified State Inspector has found the following violations.	**In this right hand column you are required to indicate how and when you will have these violations corrected. Complete this information and return this "Plan of Correction" to the above address within 10 days of receipt of this statement.**

9. IV preparation room must have smoke detection or a door separating it from the corridor. If the us of the space involves treatment then a door will be required.

Third Floor

1. Repair steal beam with required fire spray to return beam to two hour rating in room S3025

2. Stair one-third floor repair penetrations in wall.

Fourth Floor

1. S4032 Repair walls to required rating

2. Repair smoke wall in room S4037 around pneumatic tube

3. In room S4040B repair 1 hour rated wall

Date of Inspection: 25 August 2008
Inspector: Jon Klages

Owner/Occupant Signature
Date:

MERCY HOSPITAL

August 29, 2008

Nelson E. Collins, Supervisor
Licensing & Inspections Unit
State of Maine
Department of Public Safety
Office of State Fire Marshal
52 State House Station
Augusta, Maine 04333-0052

Dear Mr. Collins:

Attached is the Statement of Deficiencies and Plan of Corrections for the deficiencies identified during the Fire Marshal Inspection on August 25, 2008.

I do hope that I have submitted this response in an acceptable format. Should you have any immediate questions, please contact me directly at 207-879-3574 or connollym@mercyme.com.

On behalf of Mercy Hospital, I thank you for your time and efforts.

Sincerely,

Michael Connolly
Director of Plant and Engineering
Mercy Hospital
144 State Street
Portland, ME 04101

cc: Eileen Skinner, President and CEO
Robert Nutter, VP of Human Resources and Support Services
Rhonda Lanzara-Dalfonzo, RN Quality Specialist
Timothy Prince, VP of Planning and Ancillary Services
Jon Klages, Fire Marshal Inspector
Capt. Greg Cass, Portland Fire Department
Mike Collins, Portland Building Department

John Elias Baldacci
Governor

Maine Department of Public Safety
State Fire Marshal's Office
52 State House Station
Augusta, Maine 04333-0052

Phone 207-626-3880

Anne H. Jordan
Commissioner
Chief John C. Dean
State Fire Marshal
Fax 207-287-6251

Statement of Deficiencies and Plan of Corrections

Facility Name: Mercy Hospital Location: Facility Type: Hospital Telephone : Resource ID :	Owner Name: Address:
During an inspection of your facility a certified State Inspector has found the following violations.	**In this right hand column you are required to indicate how and when you will have these violations corrected. Complete this information and return this "Plan of Correction" to the above address within 10 days of receipt of this statement.**

This inspection was conducted at the request of Mercy Hospital. This is not a Federal Health Care Survey. The building is a five story Type I(332 construction.

General Notes:

A. Provide flame spread rating for all wood paneling in facility
B. All electrical panels must have breakers marked as to use or marked spare.
C. Provide information on rating of all fire doors with piano hinges on them.
D. Provide Medical Gas certification when done.
E. Provide statement from both Fire Alarm Company and Sprinkler Company that systems are working in accordance with applicable code.

A. GILBANE WILL SEND TO FM OFFICE ON 9/2/2008

B. PANELS WILL BE LABELED BY 9/12/2008

C. GILBANE WILL SEND TO FM OFFICE ON 9/2/2008

D. GILBANE WILL SEND THIS TO THE FIRE MARSAL OFFICE BY 9/21/2008

E. GILBANE WILL SEND TO FM OFFICE ON 9/2/2008.

GROUND FLOOR

1. Room SGE-01 Repair sprinkler pipe penetration to corridor wall.

1. THIS ITEM HAS BEEN COMPLETED.

2. Stair well area at SSGST-101. Area under stairs must be sealed to retain two hour rating of stair tower.

2. THIS ITEM HAS BEEN COMPLETED.

3. Verify door rating to room SG-008. NOTE: This will be required for all piano type hinges on any rated door that is not clearly labeled.

3. ALL FIRE RATED DOORS WELL BE TAGGED BY 9/21/2008

4. Room SGM-01 repair fire proofing on steal structure above fire damper.

4. THIS ITEM HAS BEEN COMPLETED.

Date of Inspection: 25 August 2008
Inspector: Jon Klages

Owner/Occupant Signature
Date:

John Elias Baldacci
Governor

Phone 207-626-3880

Maine Department of Public Safety
State Fire Marshal's Office
52 State House Station
Augusta, Maine 04333-0052

Anne H. Jordan
Commissioner
Chief John C. Dean
State Fire Marshal
Fax 207-287-6251

Statement of Deficiencies and Plan of Corrections

Facility Name: Mercy Hospital Location: Facility Type: Hospital Telephone : Resource ID :	Owner Name: Address:
During an inspection of your facility a certified State Inspector has found the following violations.	**In this right hand column you are required to indicate how and when you will have these violations corrected. Complete this information and return this "Plan of Correction" to the above address within 10 days of receipt of this statement.**

6. SG-040 Service air compressor is protruding into the exit door. Change exit door so the right side door has exit hardware and becomes the exit path. Mark the area to prevent buildup of storage that would block the door.

6. DOORS WILL BE REPLACED BY 10/26/2008. FLOOR WILL BE MARKED BY 10/26/2008.

7. Fire Pump room GG-042 repair sprinkler pipe penetrations in wall to Central supply

7. THIS ITEM HAS BEEN COMPLETED.

FIRST FLOOR

1. Adjust smoke door SIX100 to close and latch

1. THIS ITEM HAS BEEN COMPLETED.

2. S1-001 (main Lobby) Remove or disconnect gas from non-vented fuel fired heater. This is per Chapter 20 of State Fire Marshal Rules.

2. THIS ITEM HAS BEEN COMPLETED.

3. S1E-01 Repair penetrations to corridor

3. THIS ITEM HAS BEEN COMPLETED.

4. Stair one first floor landing repair sprinkler penetration S1ST01

4. THIS ITEM HAS BEEN COMPLETED.

5. S1-E02 Rate wall behind electrical conduit

5. THIS ITEM WILL BE COMPLETED BY 9/5/2008

6. Repair shaft access to smoke damper in corridor ~~S1X0440~~ S1X040

6. THIS ITEM HAS BEEN COMPLETED.

7. Stair two first floor S1ST02 repair pipe penetrations

7. THIS ITEM HAS BEEN COMPLETED.

8. Repair penetrations in rooms; 2047, 2045, and 2032, 2019.

8. THIS ITEM HAS BEEN COMPLETED.

Date of Inspection: 25 August 2008
Inspector: Jon Klages

Owner/Occupant Signature
Date:

John Elias Baldacci
Governor

Phone 207-626-3880

Maine Department of Public Safety
State Fire Marshal's Office
52 State House Station
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Statement of Deficiencies and Plan of Corrections

Facility Name: Mercy Hospital Location: Facility Type: Hospital Telephone : Resource ID :	Owner Name: Address:
During an inspection of your facility a certified State Inspector has found the following violations.	**In this right hand column you are required to indicate how and when you will have these violations corrected. Complete this information and return this "Plan of Correction" to the above address within 10 days of receipt of this statement.**

9. IV preparation room must have smoke detection or a door separating it from the corridor. If the us of the space involves treatment then a door will be required.

9. THIS ITEM WILL BE COMPLETED BY 9/21/2008.

Third Floor

1. Repair steal beam with required fire spray to return beam to two hour rating in room S3025

1. THIS ITEM HAS BEEN COMPLETED

2. Stair one-third floor repair penetrations in wall.

2. THIS ITEM HAS BEEN COMPLETED

Fourth Floor

1. S4032 Repair walls to required rating

1. THIS ITEM WILL BE COMPLETED BY 9/5/2008

2. Repair smoke wall in room S4037 around pneumatic tube

2. THIS ITEM HAS BEEN COMPLETED

3. In room S4040B repair 1 hour rated wall

3. THIS ITEM HAS BEEN COMPLETED.

Date of Inspection: 25 August 2008
Inspector: Jon Klages

Owner/Occupant Signature
Date:

High Tech Fire Protection
P.O. Box 156
Minot, Maine 04258
Tel: (207) 998-2551

Date: July 17, 2008

To: Gilbane Building Company.

From: Ed Poulin

Re: Sprinkler System NFPA Compliances

High Tech Fire Protection hereby guarantees all design, materials and workmanship supplied by High Tech Fire Protection on the project entitled **Mercy Hospital @ the Fore** in Portland, Maine to meet or exceed all requirements necessary for an approved NFPA #13 Sprinkler System, NFPA #14 Standpipe Systems, and NFPA #20 Fire Pumps.

High Tech Fire Protection
Ed Poulin
Design Manager
207-998-2551

Ed Poulin

Siemens Building Technologies
66 Mussey Rd.
Scarborough, ME. 04740

RE: Mercy Fore River Hospital
Fire Alarm System Testing

To whom it may concern,

We (SBT) certify that the fire alrm system in the afore mentioned facility has been tested per NFPA 72 requirements. Please see previously provided Certificate of Completion for further details.

Regards,

Brian W. Baird
Brian W. Baird

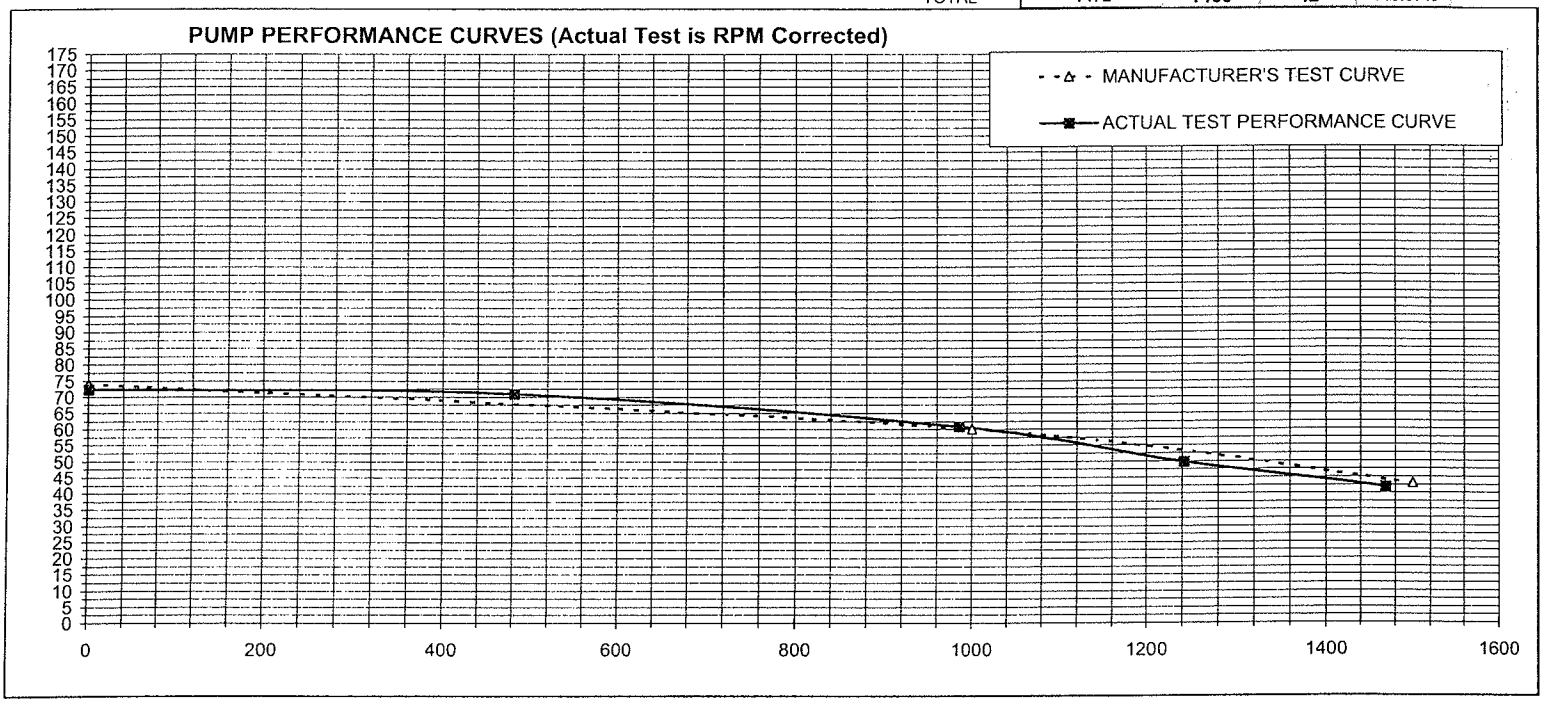
R. T. Stearns, Inc. 150 Zachary Road, Unit # 6 Manchester, NH 03109 Phone: (603) 668-4557 Fax: (603) 668-4559

Pump Performance Test Report (0 to 2800 gpm)

Client:	MERCY HOSPITAL c/o: High Tech Fire Protection	Location:	Portland, ME
Date:	16-Jul-08	Tested by:	Pete Stearns

Pump Identification:				Patterson Inline Fire Pump Model : 6 x 5 x 17 SSC		S/N : C067962
Rated GPM	1000	Rated PSIG:	60	Rated PSIG @ 0% :	74	
Rated GPM @ 150% :	1500	PSIG @ 150% :	43	Rated Pump RPM:	1775	
*** Distance from the pumping water level to the center of the discharge gauge in FEET - Vertical Turbine Pumps						0.00 Feet

Rated Pump RPM	As Tested Pump RPM	Test Discharge Pressure	Test Suction Pressure (+ or -) ***	Test Net Head (PSIG)	Nozzle Diameters	Nozzle "K"	Test Nozzle Pitot Pressure	Calculated Test Flow (GPM)	ACTUAL FLOW (GPM) (rpm corrected)	ACTUAL NET HEAD (PSIG) (rpm corrected)	Actual % of Rated Flow
1775	1795	170	96.00	74.00	1.75	0.97	0	0	0	72	0
"A-B" Leg Amperage		26	Voltage	485							
"B-C" Leg Amperage		25	Voltage	485							
"A-C" Leg Amperage		26	Voltage	485							
1775	1788	162	90.00	72.00	1.75	0.97	30	485	482		
"A-B" Leg Amperage		38	Voltage	484	1.75	0.97	0	0	0		
"B-C" Leg Amperage		37	Voltage	484	1.75	0.97	0	0	0		
"A-C" Leg Amperage		38	Voltage	484	1.75	0.97	0	0	0		
							TOTAL	485	482	71	48.18%
1775	1778	148	87.00	61.00	1.75	0.97	30	485	485		
"A-B" Leg Amperage		53	Voltage	483	1.75	0.97	32	501	500		
"B-C" Leg Amperage		51	Voltage	483	1.75	0.97	0	0	0		
"A-C" Leg Amperage		52	Voltage	483	1.75	0.97	0	0	0		
					1.75	0.97	0	0	0		
							TOTAL	987	985	61	98.50%
1775	1780	134	84.00	50.00	1.75	0.97	20	396	395		
"A-B" Leg Amperage		57	Voltage	483	1.75	0.97	22	416	414		
"B-C" Leg Amperage		55	Voltage	483	1.75	0.97	24	434	433		
"A-C" Leg Amperage		57	Voltage	483	1.75	0.97	0	0	0		
					1.75	0.97	0	0	0		
					1.75	0.97	0	0	0		
							TOTAL	1246	1243	50	124.25%
1775	1779	123	81.00	42.00	1.75	0.97	30	485	484		
"A-B" Leg Amperage		59	Voltage	483	1.75	0.97	30	485	484		
"B-C" Leg Amperage		58	Voltage	483	1.75	0.97	32	501	500		
"A-C" Leg Amperage		59	Voltage	483	1.75	0.97	0	0	0		
					1.75	0.97	0	0	0		
					1.75	0.97	0	0	0		
					1.75	0.97	0	0	0		
							TOTAL	1472	1469	42	146.87%



* NOTES: Move jockey pump relief valve - needs to be before jockey pump check valve. Move 2nd jockey pump indicating valve - must be after jocke pump sensing line.

BARD, RAO + ATHANAS CONSULTING ENGINEERS, LLC
The Arsenal On The Charles
311 Arsenal Street
Watertown, Massachusetts 02472-5789
617 254-0016 (P) 617 924-9339 (F)

August 5, 2008

Mr. Mike Connolly
Mercy Hospital
144 State Street
Portland, ME 04101-3729

RE: MERCY HEALTH SYSTEM OF MAINE
Mercy at the Fore Hospital
Med/Gas Storage Room

Dear Mr. Connolly:

This letter is to state the Med/Gas Storage Room is compliant to NFPA 55 and the kitchen hood grease duct and exhaust fan are compliant with NFPA 96. Please see description with responses for both items.

Chapter 6 sections 6.4.1 and 6.4.2 of NFPA 55 are the applicable sections for the HVAC systems.

- 6.4.1 Pressure Control. Gas rooms shall operate at a negative pressure in relationship to the surrounding area.

  BR+A response: Med/Gas rooms complies, maintained at negative pressure to surrounding area.

- 6.4.2 Exhaust Ventilation. Gas rooms shall be provided with an exhaust ventilation system.

  BR+A response: Med/Gas is served by a dedicated exhaust fan EX-23 (with spark proof motor and on emergency power).

Chapter 7, 8 and 9 are the applicable chapters of NFPA 96 with respect to the kitchen grease hood exhaust system.

- Chapter 7 General

  BR+A response: The exhaust system leads directly to the exterior via a dedicated 2-hour fire rated shaft not passing through any fire walls. Openings have been provided for cleaning of horizontal duct runs and also openings at each floor for vertical risers. Complies with termination of exhaust systems.

- Chapter 8 Exhaust Fans for Cooling Equipment

  BR+A response: Complies

- Chapter 9 Auxiliary Equipment

  BR+A response: Complies

Very truly yours,

BARD, RAO + ATHANAS CONSULTING ENGINEERS, LLC

Richard W. Adams
Associate

cc: Kristen Damuth / SMRT
GK, KJS, File #25-250

RWA/lp

J:\JOBS\2523000.CW\DOCS\RWA\MED-GAS STORAGE ROOM.DOC

Francis | Cauffman

MEMO

Francis Cauffman

The Crown Building
Suite 201
304 S. Franklin Street
Syracuse, NY 13202
315 423-0463
315 423-9830 *fax*
www.franciscauffman.com

To: **Josh McVeigh**

Cc: Kristen Damouth, SMRT
Matt Skillen, Gilbane
Mike Connolly, Mercy Hospital
Aran McCarthy, Francis Cauffman
John Ceresoli, Francis Cauffman

From: Wolfgang Tschaar

Date: August 19, 2008

Subject: **Mercy Hospital**

FCFH #: 05-4898

Josh,

The Med/Gas Storage Room located within the loading dock building complies with the International Building Code 2003 and NFPA55.

Very truly yours,

Wolfgang Tschaar

Wolfgang Tschaar
Project Manager

Final Report of Special Inspections

Project: *Mercy Hospital At Fore River, Project 2(Short Stay Hospital)*

Location: *Portland, ME*

Owner: *Mercy Hospital*

Owner's Address: *144 State Street*
Portland, ME 04101

Architect of Record: *Francis Cauffman Foley Hoffmann, 2120 Arch St., Philadelphia, PA 19103*
(215) 568-8250
Associate Architect: SMRT. 144 Fore Street. Portland. ME 04104. (207) 772-3846

Structural Engineer of Record: *Janusz S. Wszola, P.E.*
SMRT,144 Fore Street, Portland, ME 04104

To the best of my information, knowledge and belief, the Special Inspections required for this project, and itemized in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved other than the following:

Comments: (*NONE)*

(Attach continuation sheets if required to complete the description of corrections.)

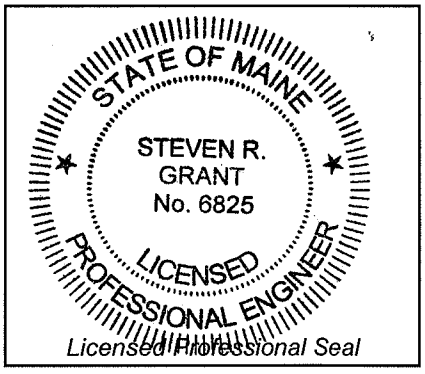
Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report.

Respectfully submitted,
Special Inspector

Steven R. Grant, P.E. (Maine License# 6825)
(Type or print name)

Signature

7-3-08
Date



Licensed Professional Seal

Youngblood Co., Inc.

32 Ashland Street

Haverhill, MA 01830

Phone: 978-373-5607
Fax: 978-521-1572

TRANSMITTAL
No. 00061

PROJECT: Mercy Health Care

DATE: 9/5/2008

TO: Gilbane Building Co.
201 Fore River Parkway
Portland, ME 04102

REF: MEDICAL GAS & EQUIPMENT CERTIFICATE

ATTN: Michael G Poulin

WE ARE SENDING:	SUBMITTED FOR:	ACTION TAKEN:
☑ Shop Drawings	☐ Approval	☑ Approved as Submitted
☐ Letter	☐ Your Use	☐ Approved as Noted
☐ Prints	☑ As Requested	☐ Returned After Loan
☐ Change Order	☐ Review and Comment	☐ Resubmit
☐ Plans		☐ Submit
☐ Samples	**SENT VIA:**	☐ Returned
☐ Specifications	☑ Attached	☐ Returned for Corrections
☐ Other:	☐ Separate Cover Via:	☐ Due Date:

ITEM	PACKAGE	SUBMITTAL	DRAWING	REV.	ITEM NO.	COPIES	DATE	DESCRIPTION	STATUS
					0001	1	9/5/2008	MEDICAL GAS AND EQUIPMENT CERTIFICATE	APP

CC:

Signed: _____
Peter Viens

Wm. G. FRANK
MEDICAL GAS SERVICES LLC.

P.O. BOX 1595
CONCORD, NH 03302-1595
1-888-633-4494
FAX 1-603-227-0271
Member NFPA, ASPE, ASHE

CERTIFICATION

FOR THE

MEDICAL GAS SYSTEMS

AT THE

NEW MERCY HOSPITAL

PORTLAND, MAINE

FOR

YOUNGBLOOD COMPANY, INC.

***Test Performed*: August 25th, 26th, 27th, and 28th, 2008**

Complete MEDICAL GAS SYSTEM SERVICE
From the sources to the outlets.

WGFMS

Wm. G. FRANK
MEDICAL GAS SERVICES LLC.

P.O. BOX 1595
CONCORD, NH 03302-1595
1-888-633-4494
FAX 1-603-227-0271
Member NFPA, ASPE, ASHE

August 29, 2008

Youngblood Company, Inc.
Attention: Peter Viens
32 Ashland Street
Haverhill, MA 01830

RE: Certification of the Medical Gas Systems after new installation of the entire New Mercy Hospital.

The Medical Gas Systems at the new Mercy Hospital in Portland, Maine is certified under the requirements of NFPA 99 2005 edition. **(Please see comments section on report).** The Guidelines for Design and Construction of Hospitals and Health Care Facilities handbook paragraph number 7.31.E5 states:

> *The installation, testing, and certification of nonflammable medical gas and air systems shall comply with the requirements of NFPA 99.*

Therefore, the Medical Gas Systems Certification that was completed on the above date is in compliance with both the Guidelines for Design and Construction of Hospitals and Health Care Facilities handbook paragraph number 7.31.E5 and NFPA 99 2005 edition.

If you have any questions concerning this issue, please call us at (888) 633-4494.

Sincerely,

Jason D. Sweatt

Medical Gas System Performance Criteria and Testing after NEW CONSTRUCTION or RENOVATION Per NFPA 99, 2005 edition

5.1.12.3 System Verification

5.1.12.3.1.3-Testing shall be conducted by a party technically competent and experienced in the field of medical gas and vacuum pipeline testing and meeting the requirements of ANSI/ASSE Standard 6030, Medical Gas Verifiers Professional Qualifications Standard.

Tests Performed by Verifier

1.	5.1.12.3.2	Standing Pressure Test (10 minute test with Nitrogen or Source Gas)	Met Requirements	YES
2.	5.1.12.3.3	Cross Connection Test	Met Requirements	YES
3.	5.1.12.3.4	Valve Test	Met Requirements	YES
4.	5.1.12.3.5.2	Master Alarm Testing	Met Requirements	NO
5.	5.1.12.3.5.3	Area Alarm Testing	Met Requirements	YES
6.	5.1.12.3.6 & 5.1.12.3.7	Piping Purge Test & Particulates Test	Met Requirements	YES
7.	5.1.12.3.8	Piping Purity Test	Met Requirements	YES
8.	5.1.12.3.9	Final Tie-In Test	Met Requirements	N/A
9.	5.1.12.3.10	Operational Pressure Test	Met Requirements	YES
10.	5.1.12.3.11	Medical Gas Concentration Test	Met Requirements	YES
11.	5.1.12.3.12	Medical Air Purity Test (New Compressor Systems Only)	Met Requirements	YES
12.	5.1.12.3.14	Source Equipment Verification (New Sources Only)	Met Requirements	YES
13.	5.1.13.2	Gas Systems Information and Warning Signs-Level 1 Testing in accordance with 5.1.11.1 for piping and 5.1.11.2 for valves.	Met Requirements *(Labels with NFPA 99 Color Codes)*	YES
14.	5.1.12.3.14.4	Medical-Surgical Vacuum Systems *(Level 1 Testing)*	Met Requirements	YES

Data Sheet

.45-Micron Filter Results

1st Floor

Oxygen: Inpatient Holding	Medical Air: Inpatient Holding
Pre-Weight: .0765g Sample Weight: .0768g (Passed)	Pre-Weight: .0731g Sample Weight: .0735g (Passed)
Oxygen: X-Ray 2	**Medical Air: X-Ray 2**
Pre-Weight: .0791g Sample Weight: .0791g (Passed)	Pre-Weight: .0801g Sample Weight: .0804g (Passed)

2nd Floor

Oxygen: OR 1	Medical Air: OR 1
Pre-Weight: .0822g Sample Weight: .0825g (Passed)	Pre-Weight: .0833g Sample Weight: .0835g (Passed)
Carbon Dioxide: OR 1	**Nitrogen: OR 1**
Pre-Weight: .0746g Sample Weight: .0748g (Passed)	Pre-Weight: .0820g Sample Weight: .0825g (Passed)
Nitrous Oxide: OR 1	
Pre-Weight: .0814g Sample Weight: .0819g (Passed)	
Oxygen: OR 2	**Medical Air: OR 2**
Pre-Weight: .0817g Sample Weight: .0817g (Passed)	Pre-Weight: .0727g Sample Weight: .0727g (Passed)
Carbon Dioxide: OR 2	**Nitrogen: OR 2**
Pre-Weight: .0773g Sample Weight: .0775g (Passed)	Pre-Weight: .0772g Sample Weight: .0773g (Passed)

Nitrous Oxide: OR 2	
Pre-Weight: 0772g Sample Weight: .0775g (Passed)	

3rd Floor

Oxygen: Nursery	Medical Air: Nursery
Pre-Weight: .0743g Sample Weight: .0746g (Passed)	Pre-Weight: .0760g Sample Weight: .0763g (Passed)
Nitrous Oxide: C-Section 2	**Carbon Dioxide: C-Section 2**
Pre-Weight: .0751g Sample Weight: .0751g (Passed)	Pre-Weight: .0723g Sample Weight: .0723g (Passed)

4th Floor

Oxygen: OBS 8	Medical Air: OBS 8
Pre-Weight: .0856g Sample Weight: .0859g (Passed)	Pre-Weight: .0818g Sample Weight: .0819g (Passed)

SEE ATTACHED LABORATORY REPORT "ANALYSIS RESULTS" FROM THIRD PARTY LABORATORY

TRI Air Testing, Inc.
A Texas Research International Company
1607 N. Cuernavaca Drive, Suite 500
Austin, Texas 78733-1600
(512)263-2101 (800)880-8378 FAX:(512)263-7039
http://www.airtesting.com

Laboratory Report
Compressed Air/Gas Quality Testing

WILLIAM G FRANK MEDICAL
ATTN JASON D SWEATT
P.O. BOX 1595
CONCORD, NH 03302-1595

YOUNGBLOOD COMPANY
NEW MERCY HOSPITAL

ANALYSIS RESULTS

Report Number: 89878 - 0 **Report Date:** 08/29/08
Air/Gas Source: 4TH FLOOR OBS # 8
Air/Gas Sampled From: O2 WALL OUTLET
Compared to Air/Gas Specification: NFPA99 SAMPLE ANALYSIS REPORT (see below) (1.0)

Customer No: D000299 - 1
Order Number: 33959
Sample Date: 08/26/08
Date Received: 08/28/08
Date Analyzed: 08/28/08

These test results may be used to determine if this sample meets the applicable NFPA99 specification.

ANALYTE	SOURCE AIR/GAS	REPORTING LIMITS
Total Gaseous Hydrocarbons - Methane (ppmv)	< 1	1
Halogenated Hydrocarbons (ppmv)	< 1	1

N/A = Not Applicable
This report shows test results only. No comparisons to any specifications have been made.

Analyzed By: VICKY EVANS
Using: 70SOP-36 REV3 & 70SOP-41 REV6 GC: 70-09 BALANCE : 70-03
Sample Media: S B: KA134 A B: Filter: HH: 134

End Report

Ed Golla, Ph.D., CIH, Laboratory Director

TRI Air Testing, Inc.
A Texas Research International Company
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Laboratory Report
Compressed Air/Gas Quality Testing

WILLIAM G FRANK MEDICAL
ATTN JASON D SWEATT
P.O. BOX 1595
CONCORD, NH 03302-1595

YOUNGBLOOD COMPANY
NEW MERCY HOSPITAL

ANALYSIS RESULTS

Report Number: 89880 - 0
Air/Gas Source: 4TH FLOOR OBS # 8
Report Date: 08/29/08
Air/Gas Sampled From: MEDICAL AIR OUTLET
Compared to Air/Gas Specification: NFPA99 SAMPLE ANALYSIS REPORT (see below) (1.0+GAS)

Customer No: D000299 - 1
Order Number: 33959
Sample Date: 08/26/08
Date Received: 08/28/08
Date Analyzed: 08/28/08

These test results may be used to determine if this sample meets the applicable NFPA99 specification.

ANALYTE	SOURCE AIR/GAS	REPORTING LIMITS
Total Gaseous Hydrocarbons - Methane (ppmv)	< 1	1
Halogenated Hydrocarbons (ppmv)	< 1	1
Oxygen (Volume %)	20.9	0.5
Nitrogen (Volume %)	77.9	0.5
Carbon Monoxide (ppmv)	< 1	1
Carbon Dioxide (ppmv)	358	25

N/A = Not Applicable
This report shows test results only. No comparisons to any specifications have been made.

Analyzed By: VICKY EVANS
Using: 70SOP-36 REV3 & 70SOP-41 REV6 GC: 70-09 BALANCE : 70-03
Sample Media: S B: KA004 A B: Filter: HH: 4

End Report

Ed Golla, Ph.D., CIH, Laboratory Director

TRI Air Testing, Inc.
A Texas Research International Company
1607 N. Cuernavaca Drive, Suite 500
Austin, Texas 78733-1600
(512)263-2101 (800)880-8378 FAX:(512)263-7039
http://www.airtesting.com

Laboratory Report
Compressed Air/Gas Quality Testing

WILLIAM G FRANK MEDICAL
ATTN JASON D SWEATT
P.O. BOX 1595
CONCORD, NH 03302-1595

YOUNGBLOOD COMPANY
NEW MERCY HOSPITAL

ANALYSIS RESULTS

Report Number: 89877 - 0 **Report Date:** 08/29/08
Air/Gas Source: 3RD FLOOR C-SECTION # 2
Air/Gas Sampled From: N2O OUTLET IN COLUMN
Compared to Air/Gas Specification: NFPA99 SAMPLE ANALYSIS REPORT (see below) (1.0)

Customer No: D000299 - 1
Order Number: 31807
Sample Date: 08/26/08
Date Received: 08/28/08
Date Analyzed: 08/28/08

These test results may be used to determine if this sample meets the applicable NFPA99 specification.

ANALYTE	SOURCE AIR/GAS	REPORTING LIMITS
Total Gaseous Hydrocarbons - Methane (ppmv)	10.3	1
Halogenated Hydrocarbons (ppmv)	<1	1

N/A = Not Applicable
This report shows test results only. No comparisons to any specifications have been made.

Analyzed By: VICKY EVANS
Using: 70SOP-36 REV3 & 70SOP-41 REV6 GC: 70-09 BALANCE : 70-03
Sample Media: S B: KA059 A B: Filter: HH: 59

End Report

Ed Golla, Ph.D., CIH, Laboratory Director

TRI Air Testing, Inc.
A Texas Research International Company
1607 N. Cuernavaca Drive, Suite 500
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http://www.airtesting.com

Laboratory Report
Compressed Air/Gas Quality Testing

WILLIAM G FRANK MEDICAL
ATTN JASON D SWEATT
P.O. BOX 1595
CONCORD, NH 03302-1595

YOUNGBLOOD COMPANY
NEW MERCY HOSPITAL

ANALYSIS RESULTS

Report Number: 89879 - 0 **Report Date:** 08/29/08 **Customer No:** D000299 - 1
Air/Gas Source: OR # 6 **Order Number:** 33959
Air/Gas Sampled From: N2 OUTLET **Sample Date:** 08/26/08
Compared to Air/Gas Specification: NFPA99 SAMPLE ANALYSIS REPORT (see below) (1.0) **Date Received:** 08/28/08
Date Analyzed: 08/28/08

These test results may be used to determine if this sample meets the applicable NFPA99 specification.

ANALYTE	SOURCE AIR/GAS	REPORTING LIMITS
Total Gaseous Hydrocarbons - Methane (ppmv)	<1	1
Halogenated Hydrocarbons (ppmv)	<1	1

N/A = Not Applicable
This report shows test results only. No comparisons to any specifications have been made.

Analyzed By: VICKY EVANS
Using: 70SOP-36 REV3 & 70SOP-41 REV6 GC: 70-09 BALANCE : 70-03
Sample Media: S B: KA167 A B: Filter: HH: 167

End Report

Ed Golla, Ph.D., CIH, Laboratory Director

TRI Air Testing, Inc.
A Texas Research International Company
1607 N. Cuernavaca Drive, Suite 500
Austin, Texas 78733-1600
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http://www.airtesting.com

Laboratory Report
Compressed Air/Gas Quality Testing

WILLIAM G FRANK MEDICAL
ATTN JASON D SWEATT
P.O. BOX 1595
CONCORD, NH 03302-1595

YOUNGBLOOD COMPANY
NEW MERCY HOSPITAL

ANALYSIS RESULTS

Report Number: 89876 - 0 **Report Date:** 08/29/08
Air/Gas Source: 3RD. FLOOR C-SECTION # 2
Air/Gas Sampled From: CO2 IN BOOM OUTLET
Compared to Air/Gas Specification: NFPA99 SAMPLE ANALYSIS REPORT (see below) (1.0)

Customer No: D000299 - 1
Order Number: 33959
Sample Date: 08/26/08
Date Received: 08/28/08
Date Analyzed: 08/28/08

These test results may be used to determine if this sample meets the applicable NFPA99 specification.

ANALYTE	SOURCE AIR/GAS	REPORTING LIMITS
Total Gaseous Hydrocarbons - Methane (ppmv)	**8.8**	1
Halogenated Hydrocarbons (ppmv)	**< 1**	1

N/A = Not Applicable
This report shows test results only. No comparisons to any specifications have been made.

Analyzed By: VICKY EVANS
Using: 70SOP-36 REV3 & 70SOP-41 REV6 GC: 70-09 BALANCE : 70-03
Sample Media: S B: KA110 A B: Filter: HH: 110

End Report

Ed Golla, Ph.D., CIH, Laboratory Director

Moisture Analysis

1st Floor

Gas	Room #	Dew point
Oxygen Pressure Dew Point @ 50psi	X-Ray #2	-28.7°F (Within NFPA requirements)
Medical Air Pressure Dew Point @ 50psi	X-Ray #2	+29.5°F (Within NFPA requirements)

2nd Floor

Oxygen Pressure Dew Point @ 50psi	OR #1	-21.2°F (Within NFPA requirements)
Medical Air Pressure Dew Point @ 50psi	OR #1	+31.7°F (Within NFPA requirements)
Nitrous Oxide Pressure Dew Point @ 50psi	OR #1	-14.4°F (Within NFPA requirements)
Carbon Dioxide Pressure Dew Point @ 50psi	OR #1	-26.8°F (Within NFPA requirements)
Nitrogen Pressure Dew Point @ 170psi	OR #1	-16.1°F (Within NFPA requirements)

Oxygen Pressure Dew Point @ 50psi	OR #2	-21.4°F (Within NFPA requirements)
Medical Air Pressure Dew Point @ 50psi	OR #2	+33.6°F (Within NFPA requirements)
Nitrous Oxide Pressure Dew Point @ 50psi	OR #2	-12.1°F (Within NFPA requirements)
Carbon Dioxide Pressure Dew Point @ 50psi	OR #2	-21.2°F (Within NFPA requirements)
Nitrogen Pressure Dew Point @ 170psi	OR #2	-16.1°F (Within NFPA requirements)

Oxygen Pressure Dew Point @ 50psi	**PACU**	**-28.7°F (Within NFPA requirements)**
Medical Air Pressure Dew Point @ 50psi	**PACU**	**+24.2°F (Within NFPA requirements)**

3rd Floor

Oxygen Pressure Dew Point @ 50psi	**Nursery**	**-20.1°F (Within NFPA requirements)**
Medical Air Pressure Dew Point @ 50psi	**Nursery**	**+29.2°F (Within NFPA requirements)**
Nitrous Oxide Pressure Dew Point @ 50psi	**C-Section #2**	**-11.4°F (Within NFPA requirements)**
Carbon Dioxide Pressure Dew Point @ 50psi	**C-Section #2**	**-27.8°F (Within NFPA requirements)**

4th Floor

Oxygen Pressure Dew Point @ 50psi	**OBS #8/4001**	**-28.2°F (Within NFPA requirements)**
Medical Air Pressure Dew Point @ 50psi	**OBS #8/4001**	**+29.6°F (Within NFPA requirements)**

Inventory of Medical Gas Components Inspected

Medical Gas Outlets/Inlets	Zone Valves	Alarms Master/area	Vacuum Pump	Compressed Air Pump	Medical Air Compressor	Nitrous Oxide Manifold	Nitrogen Manifold	Carbon Dioxide Manifold
472	22	2/13	1	1	1	1	1	1

Comments:

1. The Compressed Air LAG alarm did not function on the master alarm panels. Per NFPA 99 2005 edition paragraph 5.1.9.2.4 and 5.1.9.5.2 the master alarms shall have a lag alarm.

END OF REPORT

Areas tested are safe for patient use.

Medical gas concentrations are measured with following medical gas analyzers.

Oxygen- MiniOx I range 0-100% +/- 1% accurate,

Nitrous Oxide- Bacharach range 95-100% +/- 1% accurate,

Carbon Dioxide- MED-CON ranges 80-100% +/- 1% accurate,

Nitrogen & Medical Air- See Oxygen analyzer.

Flow rates are measured with a calibrated flow tube (model: **KEY INSTRUMENTS**).

Pressure Dew points are measured with a calibrated dew point monitor.
(Range is –40 to +80 Degrees Fahrenheit)

Medical Gas Purity is measured with reagent tubes or off-site laboratory analysis.

Particulate test - tested with pre-weighed .45-micron filters, then sample is weighed on a calibrated microbalance. **Accurate to 0.001g (1mg)**

Pressure gauge readings are taken with calibrated pressure gauges (model: **WIKA**), used for all vacuum and pressure gas systems.

Ultrasonic leak detection completed with a Calibrated Ultra probe 100 from UE Systems

Please find all copies of the onsite worksheets attached to the report.

If you have any questions, please give us a call.

SYSTEMS INSPECTED BY:

Print Name: **Thomas B. Hill**

Signature: Thomas B Hill

Print Name: **Cassandra L. Sweatt**

Signature: Cassandra L Sweatt

Print Name: **Neil Gagne**

Signature: Neil Gagne

Print Name: **Jason D. Sweatt**

Signature: Jason D. Sweatt

July 22, 2008

Mark Barns
Shaw Brothers
P.O. Box 69
Gorham, ME 04038

Dear Mark:

Shaw Brothers has hired EcoClean to vactor and clean all storm structures at the new Mercy Site in Portland. All work will be completed by the end of day, July 23rd, 2008.

Should you have any questions please give us a call at 207-310-8429.

Sincerely,

Greg Goan

EcoClean, LLC- P.O. Box 10255 - Portland, Maine 04104
Phone: (207) 310-8429 Fax: (207) 571-9466
Email: ecoclean@maine.rr.com

SHAW BROTHERS CONSTRUCTION, INC.
P.O. Box 69 • 511 Main St. • Gorham, ME 04038
Tel: (207) 839-2552 • Fax: (207) 839-6239
Website: www.shawbrothers.com

July 25, 2008

Gilbane Building Company
Attn: Mike Poulin
P.O. Box 10019
Portland, ME 04104

RE: Mercy at the Fore

Dear Mike,

Shaw Brothers pressure tested the project sewer lines and vacuum tested all of the manhole's on March 23, 2007, according to our project specifications. We notified the City of Portland's Sewer District and the Portland Water District's Sewer Division prior to testing and were told they would not have to witness the tests as all of the sewer lines and structures were located on private property. They were however, witnessed and documented by Rob Sullivan of Gilbane Building Company.

If you have any questions, please do not hesitate to call.

Sincerely,

Mark Barnes
Project Manager

Cc: Steve Walton

Gilbane Building Company
201 Fore River Parkway
Portland, ME 04102
Telephone: (207) 772-3725
Fax: (207) 772-3826

August 4, 2008

Mr. Philip DiPierro
Development Review Coordinate
City of Portland
389 Congress Street
Portland, ME 04101-3509

Re: Mercy Hospital Project

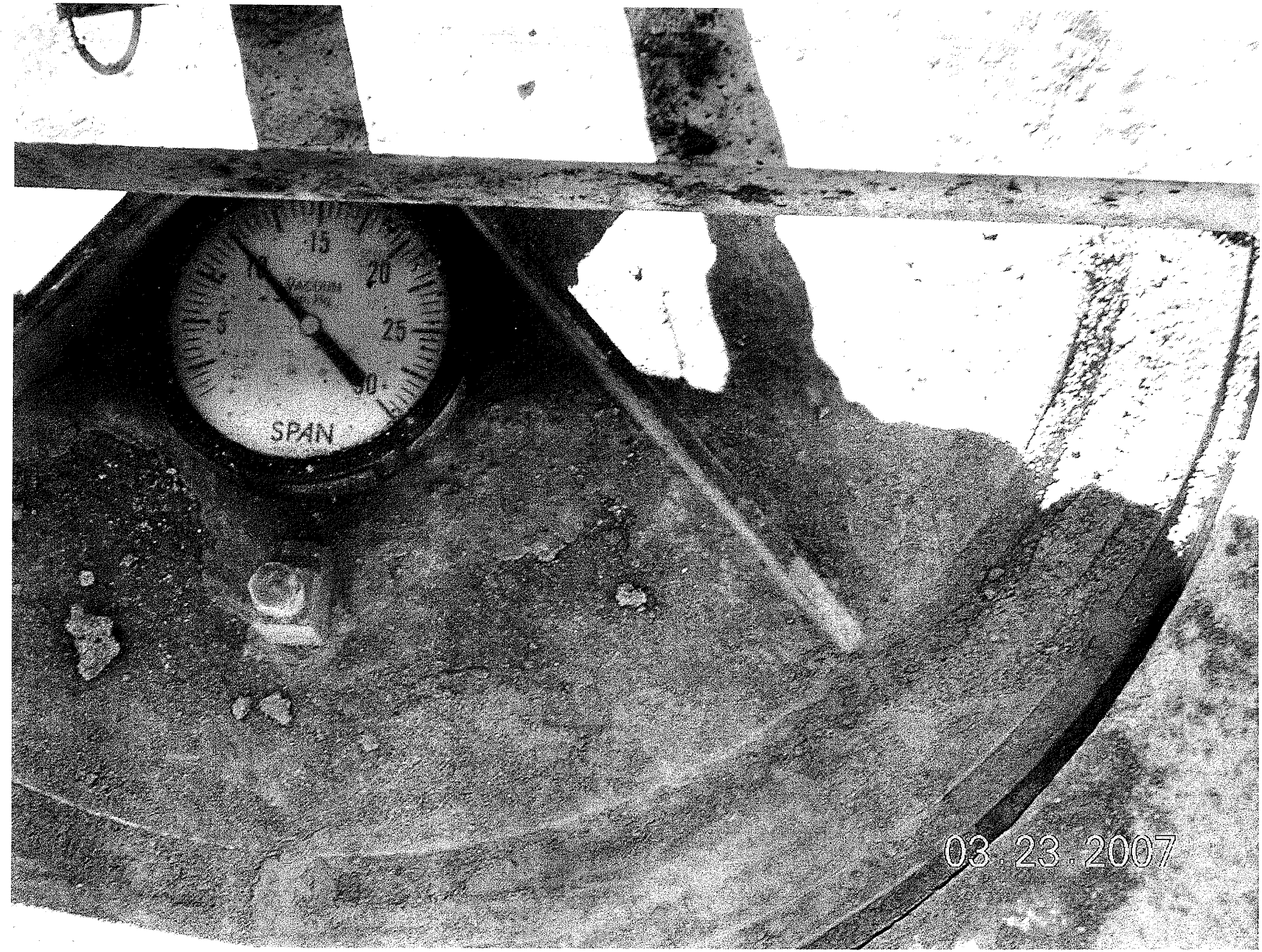
Dear Phil:

Please be advised all of the testing of the sewer manholes and lines were witnessed by a Gilbane representative.

Sincerely,

Michael Poulin
Project Executive
Gilbane Building Company

08/28/2014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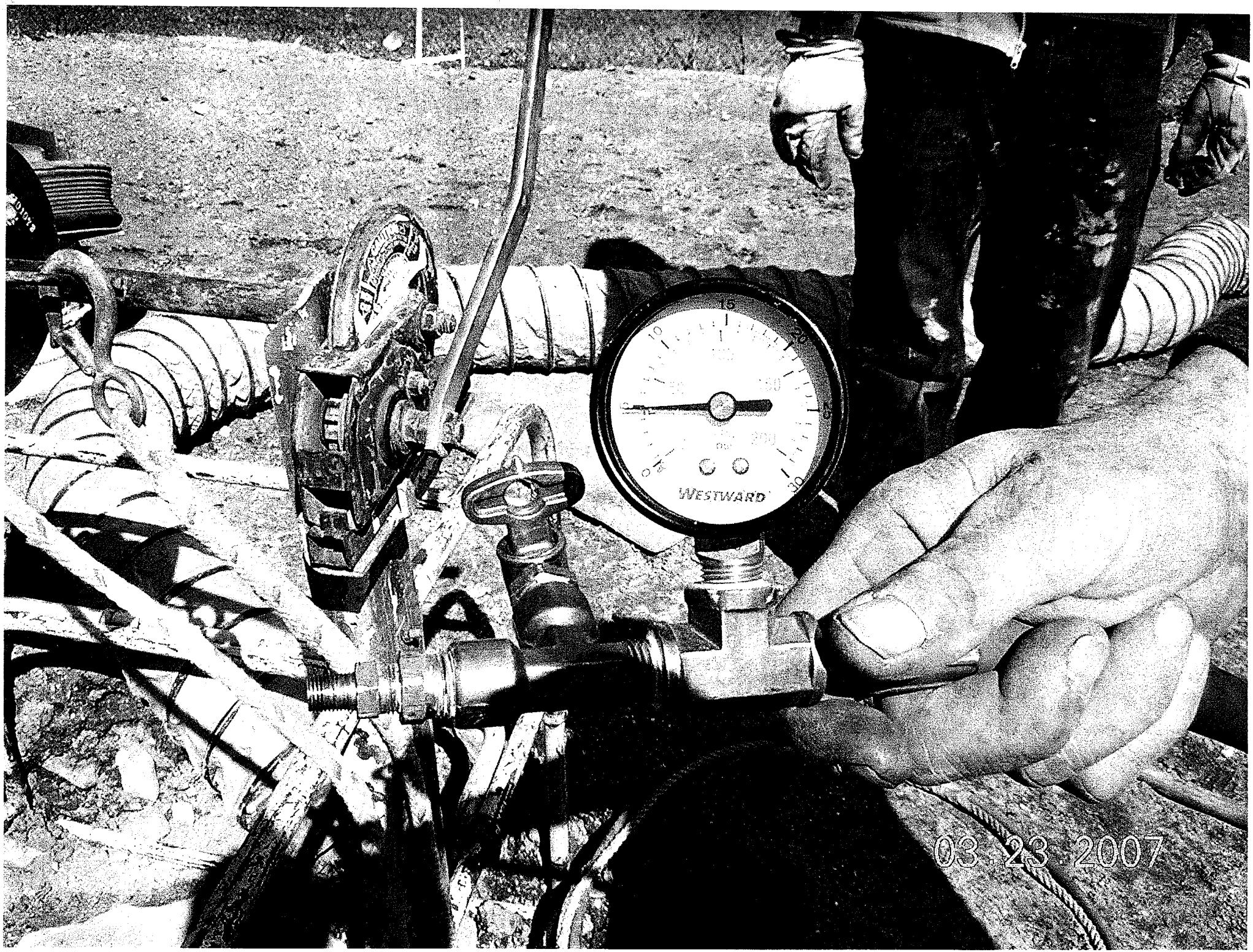
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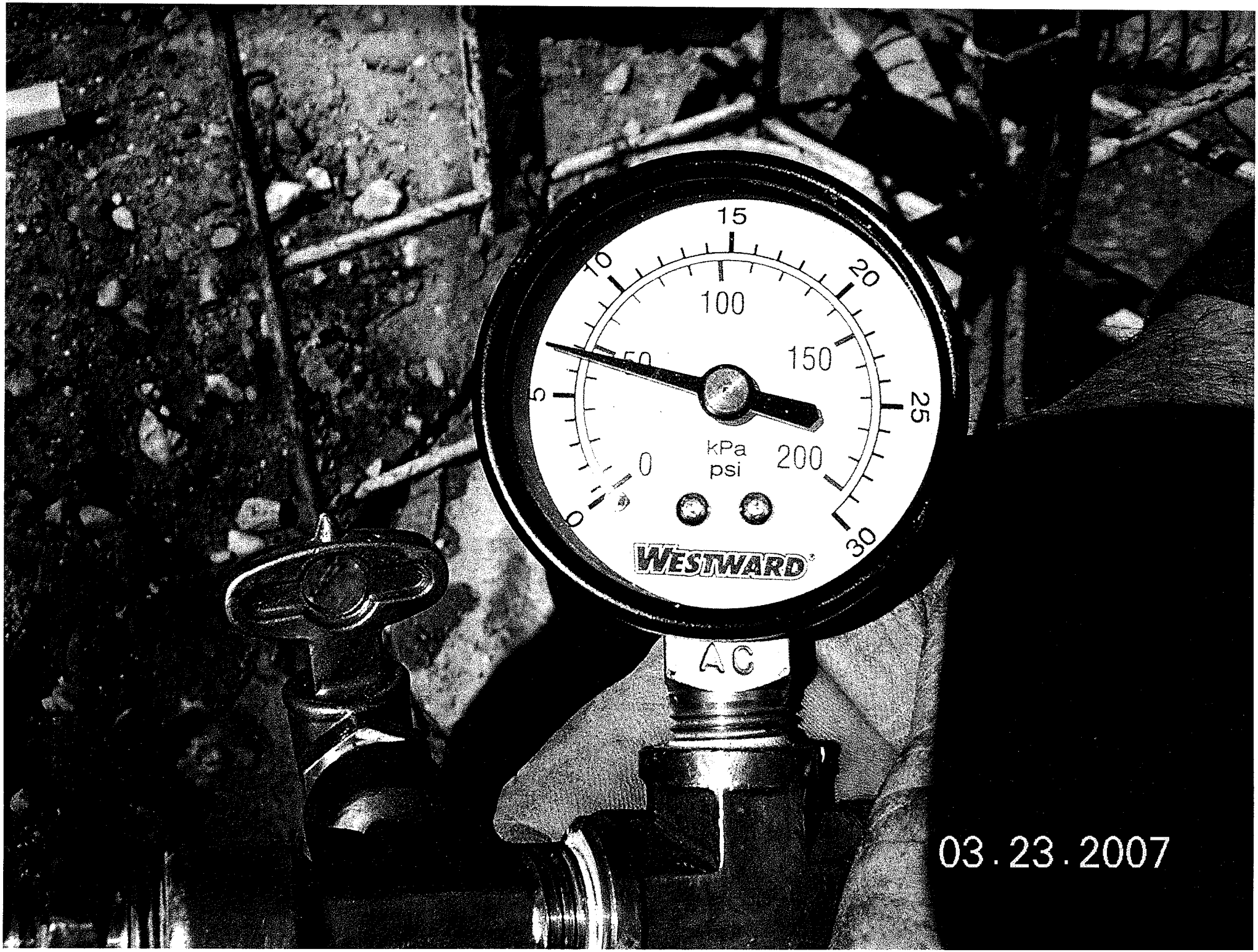
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Resource
Systems
Engineering

August 14, 2008
File 080725

DRAFT

Mercy Hospital
144 State Street
Portland, Maine 04101

ATTENTION: Mike Connolly, Director of Plant and Engineering

REFERENCES: 1) Mercy at the Fore Conditions of Approval from City of Portland's Final Approval Letter (Exhibit 1), Portland, Maine
2) City of Portland Noise Ordinance (Exhibit 2)

SUBJECT: Emergency Generator Noise Compliance Test

Dear Mr. Connolly,

Resource Systems Engineering (RSE) completed a noise compliance test of the emergency generator located at Mercy Hospital on Fore River Parkway in Portland, Maine. The test was completed on August 6, 2008. RSE understands that Mercy Hospital had to complete this test in order to comply with its permit from The City of Portland Conditions of Approval:

> "xxiii. That the applicant shall submit further information on the noise levels of any generator likely to be used on the site and confirm what measures will be taken to meet the noise standards of the City's Ordinance; and…".

RSE has measured sound levels emitted by the emergency generator. Measurements were compared to the City of Portland Noise ordinance for the I-M zone and the generator specs. The following presents the results of RSE's work.

Site Description

The site of Mercy Hospital is a newly developed parcel located adjacent Fore River Parkway. Based on site plans, aerial photography and field surveys, the surrounding land use is predominantly commercial. To the east is a variety of commercial buildings. To the west and south are Fore River Parkway, Fore River and the City South Portland. To the north is a corrections facility.

Noise Standards

The City of Portland established a noise standard as Section 14-252 of its Land Use Ordinance. Section 14-252. *Performance Standards* states:

Uses in the I-M, I-Ma, and I-Mb zones shall meet the following standards:

30 Parkers Way
P.O. Box K
Brunswick, Maine 04011

Phone 207 725-7896
Fax 207 729-6245

(a) Noise:

1. Definitions:
   a. Tonal sounds are defined as sound waves usually perceived as a hum or whine because their instantaneous sound pressure varies essentially as a simple sinusoidal function of time.
   b. Impulse sounds are defined as sound events characterized by brief excursions of sound pressure, each with a duration of less than one (1) second.

2. Measurement: Sound levels shall be measured with a sound level meter with a frequency weighting network manufactured according to standards prescribed by the American National Standards Institute (ANSI) or its successor body. Measurements shall be made at all major lot lines of the site, at a height of at least four (4) feet above the ground surface. In measuring sound levels under this section, sounds with a continuous duration of less than sixty (60) seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of sixty (60) seconds or more shall be measured on the basis of the energy average sound level over a period of sixty (60) seconds (LEQ1).

3. Maximum permissible sound levels: The maximum permissible sound level of any continuous, regular or frequent source of sound produced by an activity shall be as follows:

   a. Seventy (70) dBA between the hours of 7:00 a.m. and 10:00 p.m.
   b. Fifty-five (55) dBA between the hours of 10:00 p.m. and 7:00 a.m., as measured at or within the boundaries of any residential zone.

In addition to the sound level standards established above, all uses located within this zone shall employ best practicable sound abatement techniques to prevent tonal sounds and impulse sounds or, if such tonal and impulse sounds cannot be prevented, to minimize the impact of such sounds in residential zones.

4. Exemptions:
   a. Noises created by construction and maintenance activities between 7:00 a.m. and 10:00 p.m. are exempt from the maximum permissible sound levels set forth in subsection (d)3 of this section. Construction activities on a site abutting any residential use between the hours of 10:00 p.m. of one (1) day and 7:00 a.m. of the following day shall not exceed fifty (50) dBA.
   b. The following uses and activities shall also be exempt from the requirements of subsection (d)3 of this section:

      i. The noises of safety signals, warning devices, emergency pressure relief valves, and any other emergency devices.
      ii. Traffic noise on public roads or noise created by airplanes and railroads.
      iii. Noise created by refuse and solid waste collection, provided that the activity is conducted between 6:00 a.m. and 7:00 p.m.
      iv. Emergency construction or repair work by public utilities, at any hour.
      v. Noise created by any recreational activities which are permitted by law and for which a license or permit has been granted by the city, including but not limited to parades, sporting events, and fireworks displays.

There are no residential properties or residential zones on any property line of the new Mercy Hospital or nearby the facility. For purposes of this test, RSE assumes that demonstration of compliance with Section 14-252(a)3 at the nearest property line of the facility also demonstrates compliance at all off-site locations.

Sound Levels

On August 6, 2008, RSE monitored sound levels at the site from approximately 6:20 a.m. to 7:45 a.m. to compare results in accordance to the City's nighttime (10 pm to 7 am) hours and daytime (7 am to 10 pm) hours. RSE monitored sound levels at three positions as follows and as shown on Figures 1 through 5.

Position	Description
MH-1 (control point)	Approximately 50 feet westerly of the Generator Exhaust
MH-2*	Near west property line, approximately 190 feet from the Generator Exhaust
MH-3	Near east property line, approximately xx feet from the Generator Exhaust

* MH-2 was selected to avoid terrain shielding effects from the generator.

Instrumentation consisted of two Larson-Davis Model 824 Integrating Sound Level Meters and Real Time Analyzers. The instruments were programmed to continuously measure sound levels every 1/8 second and calculate statistics at both one and five-minute intervals. In addition, the LD 824s measured one-third octave-band sound levels.

The sound level meters meet Type 1 (precision) performance requirements of American National Standard Specification for Sound Level Meters, ANSI S1.4-1983. The microphones were fitted with standard windscreens and mounted on tripods at a height of four to five feet above the ground. Line of site was maintained between the microphone and the generator. The sound level meters were calibrated before and after the monitoring period using a Bruel & Kjaer 4231 Sound Level Calibrator. Additionally, a certified laboratory performs a calibration within 12 months of field measurements. Calibration certificates are available upon request.

Measurements were recorded in accordance with the Portland ordinance. Measurement procedures are also consistent with American National Standard ANSI S12.9 Quantities and Procedures for Description and Measurement of Environmental Sound.

During monitoring, temperatures ranged from 63 to 64 degrees F; winds were generally light and from the east. Relative humidity ranged from 87% to 90%. Skies were mostly cloudy and overcast throughout the monitoring period.

Traffic on Fore River Parkway ranged from light to heavy during the sound test. The nearest property line is westerly of the generator along Fore River Parkway approximately 240 ft from the generator exhaust. Traffic never completely stopped even for a one-minute period during the test. The importance of this observation is that even with light traffic, sound levels from the traffic at the nearest property line exceeded the levels of the generator making direct measurement of compliance with the City Noise

Ordinance infeasible at this point (e.g. a one-minute L_{Aeq}). Recognizing this possibility in advance, a control point was established approximately 50 ft from the generator exhaust in the same direction as the nearest property line (MH-1). Control point measurements were intended to track generator on and off periods and to provide a basis for calculating generator sound at the property lines in the event direct measurement proved infeasible. The Marley Cooling Tower was also running continuously during the generator test. Measurements at 50 ft were dominated by the generator when it was running and contributed more than 10 dBA above the ambient background (e.g. sound level without the generator). At 50 ft the generator consistently produced 66 dBA. With the nearest property line approximately 240 ft from the generator exhaust, the generator was calculated to produce 54 dBA. Light traffic during generator 'off' periods was measured at 55 dBA at a position close to the property line (MH-2). During generator 'on' periods sound levels at MH-2 measured 57 – 58 dBA and included traffic from Fore River Parkway.

RSE then selected a position (MH-3) for additional measurements. MH-3 is easterly of the generator in a direct line of sight and in close proximity to the east property line in this direction. MH-3 was less affected by traffic on Fore River Parkway due to distance and partial terrain shielding. However, sounds from neighboring and nearby commercial and industrial sources dominated sound levels along Mercy's east property line and measured approximately 54 dBA with or without the generator running. The generator was cycled on and off three times while measuring and observing at MH-3. The generator was not audible during this test.

Sound level measurements for the Generator test are presented in Figures 3, 4 and 5 which includes the 1-minute equivalent sound level (L_{Aeq}). The L_{Aeq} is used to represent the sound energy during the sampling period as a constant decibel level taking all sound level fluctuations into account similar to an averaging technique.

Conclusion

Measurements and analysis indicate that the emergency generator is at or below 55 dBA, The City of Portland's most restricted nighttime standard applicable to the I-M zone, when measured at any adjacent residential zone. The emergency generator is inside an acoustical enclosure and the exhaust is via a "Critical Grade Silencer" produced by GT Exhaust Systems, Inc (see Appendix 1). RSE finds that the housing and engine exhaust silencer meets best practicable sound abatement treatments for the emergency generator.

Sincerely,
Resource Systems Engineering

Charles F. Wallace, Jr., P.E.
President

Enclosures

ONLINE CERTIFICATIONS DIRECTORY

GWZQ.R14452
Door Hinges

Page Bottom

Door Hinges

See General Information for Door Hinges

MARKAR ARCHITECTURAL PRODUCTS INC R14452
260 SANTA FE ST
POMONA, CA 91767 USA

Models 200, 300 or 3500 Series continuous door hinge for use on swinging type fire doors, rated up to 3 h. May have prefix letters.

4000 Series full-mortise continuous door hinges for use on swinging type fire doors rated up to 1-1/2 h with a maximum overall size of 4 ft x 8 ft. May have prefix letters; FS 4002 Series is a surface mounted continuous hinge.

Also evaluated in accordance with Standard UL 10C.

Also Classified in accordance with Uniform Building Code Standard 7-2, "Fire Test of Door Assemblies" (1997)

Last Updated on 2006-04-06

Questions? Notice of Disclaimer Page Top

FM 300

Standard Features

Material
Heavy-duty 14 Gauge 304 stainless steel

Finishes
US32D Satin stainless steel (630)

Cycle Testing
ANSI/BHMA Standard A 156.26 Grade 1

Mounting Hardware
No exposed mounting fasteners when closed
Universal screw pack

Capacity
Supports weights up to 600 lbs.
4' 0" maximum door width

Sizes
6' 8" · 7' 0" · 7' 2" · 8' 0" . 10' 0"

Hole Pattern
Symmetrically templated
Non-handed

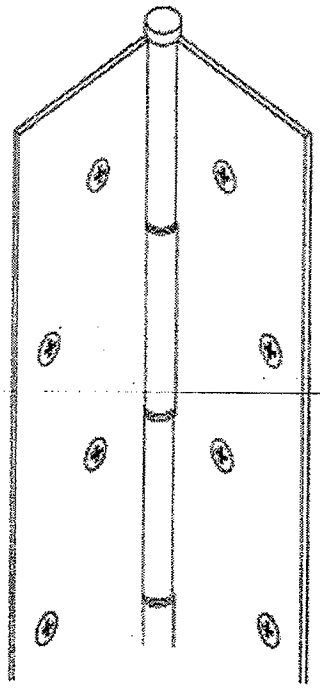
Barrel Type Hinge
1/4" diameter stainless steel pin
Long-life split nylon bearings

Fire Rating
Classified in accordance with UBC code standard 7-2 for positive pressure.

3 hours - hollow metal doors mounted singly

90 minutes - hollow metal and composite core wood fire doors

20 minutes - wood doors



Optional Features

Finishes
US32 Bright Polished stainless steel (629)
Scratch-resistant powder coated paint
84 standard colors

Other Features
Custom lengths specify in inches

Custom hole pattern

Tamper-proof security screws

Dutch door hinges suffix hinge "DD"

Hospital tips suffix hinge "HT"

Raised barrel

Special sheared leaf

Electrical Modifications
Current transfer contacts are broken when hinge opens. 4 or 8 wires suffix hinge "CT4" or "CT8"
Concealed Current Transfer - suffix hinge CE 4-D or CE 8-D

Exposed switch with adjusting screw suffix hinge "ES"

Current Transfer Prep suffix hinge "CTP"

This edge-mounted pin & barrel type hinge is used on many of today's high traffic, high abuse doors. The hinge works well in locations that used anchor hinges, pivot reinforcement hinges or thrust pivot unit and hinge sets. This hinge saves on special door and frame preparation charges and makes the installer's job easier. It can be used on both fire labeled and non-labeled openings.

HG-305

Standard Features

Material
Heavy-duty 14 Gauge 304 stainless steel

Finishes
US32D Satin stainless steel (630)

Cycle Testing
ANSI/BHMA Standard
A 156.26 Grade 1

Mounting Hardware
No exposed mounting fasteners when closed
Universal screw pack

AdjustaScrews for correcting frame fit problems up to 3/8"

Capacity
Supports weights up to 600 lbs.
4' 0" maximum door width

Sizes
6' 8" · 7' 0" · 7' 2" · 8' 0" · 10' 0"

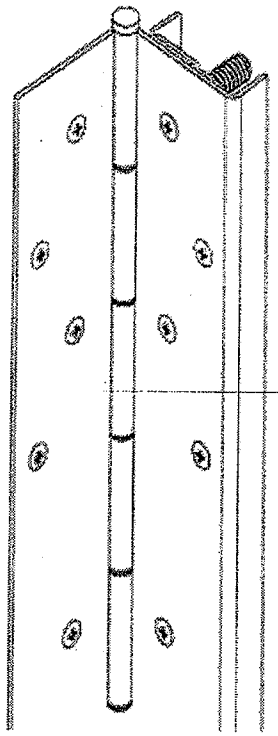
Hole Pattern
Symmetrically templated
Non-handed

Barrel Type Hinge
1/4" diameter stainless steel pin
Long-life split nylon bearings

Fire Rating
3 hours - hollow metal doors mounted singly

90 minutes - hollow metal and composite core wood fire doors

20 minutes - wood doors



Optional Features

Finishes
US32 Bright Polished stainless steel (629)
Scratch-resistant powder coated paint
84 standard colors

Other Features
Custom lengths specify in inches

Custom hole pattern

Tamper-proof security screws

Dutch door hinges suffix hinge "DD"

Hospital tips suffix hinge "HT"

Raised barrel

Special sheared leaf

Electrical Modifications
Current transfer contacts are broken when hinge opens. 4 or 8 wires suffix hinge "CT4" or "CT8"

Exposed switch with adjusting screw suffix hinge "ES"

Current transfer preparation suffix hinge "CTP"

Concealed current transfer suffiz hinge "CE-4D"

This is the greatest continuous hinge ever engineered. This unique design answers the problem of adjusting doors where frames are not installed plumb or properly aligned. Not only that, but the wrap-around edge guard protects the door from unsightly dents and gouges and will deflect objects, preventing further damage. Strategically located fasteners coupled with the AdjustaScrew fastener allow the door to be adjusted up to 3/8" within the channel of the hinge and distribute the load of the door down the entire length of the jamb. The proper alignment of the door to the frame will allow your closers, panics, magnetic locks, electronic strikes and automatic operators to assist you in meeting all your life safety code requirements.

Charles Tartre

From: Padilla, Joe [jpadilla@adamsrite.com]
Sent: Tuesday, August 26, 2008 6:10 PM
To: ctartre@exactitudeinc.com
Subject: UL Stamp
Attachments: HG305FM300UL.pdf

Charlie,

I understand we failed to apply the UL stamp on the FM 300 and HG 305 on your sales order number 7021437. Please advise if the following catalog cut sheet and UL document will be suffice.

Thanks,

Joe Padilla
Supervisor-Technical Services
Adams Rite Manufacturing Co.
Email: jpadilla@adamsrite.com
Website: www.adamsrite.com
Phone: 800-872-3267 Ext. 3035
Fax: 909-632-2370

Flakeboard

FLAME SPREAD PERFORMANCE OF COMPOSITE WOOD PANELS AND FINISHES

Unless otherwise stated, Flakeboard particleboard or MDF in industrial or laminated[1] forms are not certified for a specific flame spread rating.

Untreated[2] particleboard and MDF have been tested for flame spread by a number of different manufacturers and the results met the **Class III or C** rating. The Department of Housing and Urban Development(HUD) in their Manufactured Home Construction and Safety Standards(Section 3280.203) accepts particleboard 3/8 inch and thicker as having a flame spread rating of 76 to 200 for general use in mobile homes.

The American Wood Council (AWC) of the American Forest and Paper Association (AF&PA) has published information in their "Design for Code Acceptance" series (DCA1) relating to Flame Spread Performance of Wood Products. The document can be found at www.awc.org . Table 1 in that document places particleboard and MDF in the Class III or C rating. Likewise, Table 2 in that document places factory finished products (i.e. printed or with overlays) containing untreated particleboard and MDF substrates in the Class III or C flame spread rating.

Smoke data specific to every product is currently not available; however other manufacturers have found typical values of 100-200 for smoke developed. The AF&PA document states that "a smoke-developed index was measured for some of the wood products listed in Tables 1 and 2". None of the products tested exceeded 450, a limiting value commonly used in building code regulations.

Flakeboard particleboard and MDF treated with fire-retardant[3] (FR) additives are certified by Underwriters Laboratories to have a **Class A or Class I** flame spread rating. In addition, TFM laminated on Flakeboard's fire-rated particleboard or MDF substrates at the St. Stephen, NB or Simsboro, LA laminating facilities are classified by Underwriters Laboratories to have a Class A or Class I flame spread rating.

George Woodson
Technical Manager
Ph. 318-247-2188
george.woodson@flakeboard.com
www.flakeboard.com

[1] TFM (thermally fused melamine), decorative paper overlay, wet coated – i.e./ Rezcote-paint or direct print
[2] Without a fire-retardant additive
[3] Trade names: Duraflake® FR, Premier® FR, VESTA FR Particleboard, VESTA FR MDF

Flakeboard

DURAFLAKE® FR | fire rated particleboard

passion for panels®

THE PARTICLEBOARD SOLUTION OF CHOICE FOR FIRE SAFETY NEEDS

Duraflake® FR from Flakeboard is the solution of choice when building code and public safety specifications demand fire safety compliance. Duraflake® FR particleboard is a UL® approved, Class A/Class 1-rated fire retardant panel that's ideal for interior, non-structural use in restaurants, schools, hospitals, hotels, malls, airports, offices and public buildings.

Duraflake® FR offers:
- Superior strength and dimensional stability
- Low linear expansion and thickness swell
- Smooth surface properties for laminating and finishing
- Easy machining and low tool wear
- Wide range of products and sizes
- Variety of veneers and laminates

Grade	Duraflake® FR Particleboard - Albany	
Thickness (in)*	$^{3}/_{8}$ - $^{3}/_{4}$	$^{13}/_{16}$ - $1^{1}/_{2}$
Specification	Class A/Class 1 Flame Spread	Class A/Class 1 Flame Spread
Density (pcf)	47-50	44-47
MOR (psi)	1,600	1,600
MOE (psi)	300, 000	250,00
Internal Bond (psi)	80	60
Face Screw Hold (lb)	250	250
Edge Screw Hold (lb)	225	175
Linear Expansion (%)	0.40	0.35
Thickness Tolerance (in)	+/- .005	+/- .005
Length and Width (in)	+/- $^{1}/_{16}$	+/- $^{1}/_{16}$
Squareness (in)	+/- $^{1}/_{8}$	+/- $^{1}/_{8}$

* Metric thickness available. The above physical properties are based on averages of normal production.

- Material Safety Data Sheets are available upon request
- All panels are approved for use in interior, non-structural applications
- Contains 100% Recycled/Recovered Wood Content
- Conforms to formaldehyde emission requirements for particleboard in ANSI A208.1 Table A and HUD 24 CFR Part 3280

APPLICABLE STANDARD TESTS
- ASTM E 84 Standard Test for Surface Burning Characteristics of Building Materials
- ASTM C 236 Guarded Hot Box Test
- UL 723 Test for Surface Burning Characteristics of Building Materials

BUILDING CODES
- ICC - International Code Council - 2000, 2003, 2006 International Building Code
- NFPA - National Fire Protection Association - NFPA 101 Life Safety Code - NFPA 5000 Building Construction Safety Code

AGENCY APPROVALS
California State Fire Marshall 2660-1627:100, City of New York MEA 177-78-M, City of Los Angeles RR 24811, City and County of San Francisco 6260W34.1B, City and County of Denver M-88-46

Underwriter's Laboratories, Inc. Classified Wood Particleboard Surface Burning Characteristics, UL 723 (Based on 100 for Untreated Red Oak)

Flame Spread	20 USA	25 Canada
Smoke Developed	25 USA	25 Canada

Thermal Conductivity (k) and Thermal Resistance (1/k = R)[1]

Thickness (in)	$^{3}/_{8}$"	$^{1}/_{2}$"	$^{3}/_{4}$"	1"
k	0.54	0.62	0.55	0.69
R	1.85	1.16	1.82	1.45

USAGE NOTES:
Some laminates applied to Duraflake® FR particleboard may change the flame spread rating. Standard available woodworking glues have been successfully used in lamination. However, some adhesives may have compatibility problems with the chemical system used to manufacture Duraflake® FR particleboard. Any adhesive should be tested for compatibility with the chemical system in Duraflake® FR particleboard prior to full-scale gluing. Questions should be directed to the glue supplier. When using Duraflake® FR particleboard in wall systems, an integral vapor barrier must be a properly installed component of the wall in any of the following conditions: the wall has an exterior side and the wall separates spaces conditioned unequally. Joints between panels to be designed to accommodate movement of up to .40 percent. Splined or articulated joints for reveals per AWI Section 500, 500A-G-4 "Joints and Transitions" or similar is suggested.

STORAGE AND HANDLING
Duraflake® FR particleboard should never be stored or used outdoors. The indoor storage area should be clean, dry, well ventilated, and free of dust, dirt or particles that could contaminate the particleboard. Store flat on stickers on a level, hard, dry surface. Constant relative humidity and temperature should be maintained. Before use, allow to stabilize to the same conditions as are expected after the panel is installed. Condition 48 to 72 hours prior to lamination. For more information, see Composite Panels Association Technical. Bulletin: Storage and Handling of Particleboard and MDF.

EPP EPA CERTIFIED

CPA-3-08 Specification AVAILABLE UPON REQUEST

c UL us LISTED

www.flakeboard.com 1.800.268.9830

MÖHRING
Atlantic Veneer Corp. GROUP

Atlantic Veneer Corp.
AV Plywood
Balti Shpon OOO
Balti Spoon OÜ
K.Heinz Möhring GmbH & Co KG
Moehring Polska Sp. z o.o

August 27, 2008

To Whom It May Concern:

In reference to North Pacific Group's purchase order #00415570 and 403310 and AVC Plywood S.O. 4427 and 4044 / FG1682. Please be advised that the core used to manufacture the 64 sheets – 3/4x 4x8 fire retardant MDF plain sliced white ash is medium density fire retardant fiber board manufactured by Flake Board. Please find the manufactures specification for this product enclosed.

Best Regards,

Calvin C. Wiltshire Jr.
North East Territory Manager

RULON COMPANY

Date: August 25, 2008
Project: Merey Hospital
Product: Aluratone 500 Grooved Acoustical Panels

Certificate of Conformance for Fire Retardancy Treatment

This is to certify that the wood ceiling products, supplied by Rulon Company for the above mentioned project, will conform to a Class 1 level of fire resistance under the ASTM E-84, and NFPA specifications.

The surface burning characteristics of wood materials conforming to fire retardant performance is obtained by the application of fire retardant materials to all wood surfaces. The fire retardant treatment on wood surfaces when tested according to ASTM E-84 specifications will produce a performance rating of:

Flame Spread-Less than 25
Smoke Development-Less than 450

STEINER TUNNEL
SUMMARY OF RESULTS

ENGINEER	:	Karen Foxx-Smith	TECHNICIAN	:	Phil Pastor
FILE NO.	:	R20962	TEST DATE	:	6/27/02
ASSIGNMENT NO.	:	02RT06985	TEST TIME	:	7:33 AM
APPLICANT	:	Weyerhaeuser	TEST CODE	:	06270206
MATERIAL	:	1 3/4" 38 pcf lite FR	TEST NO	:	1
			MOUNTING	:	Self

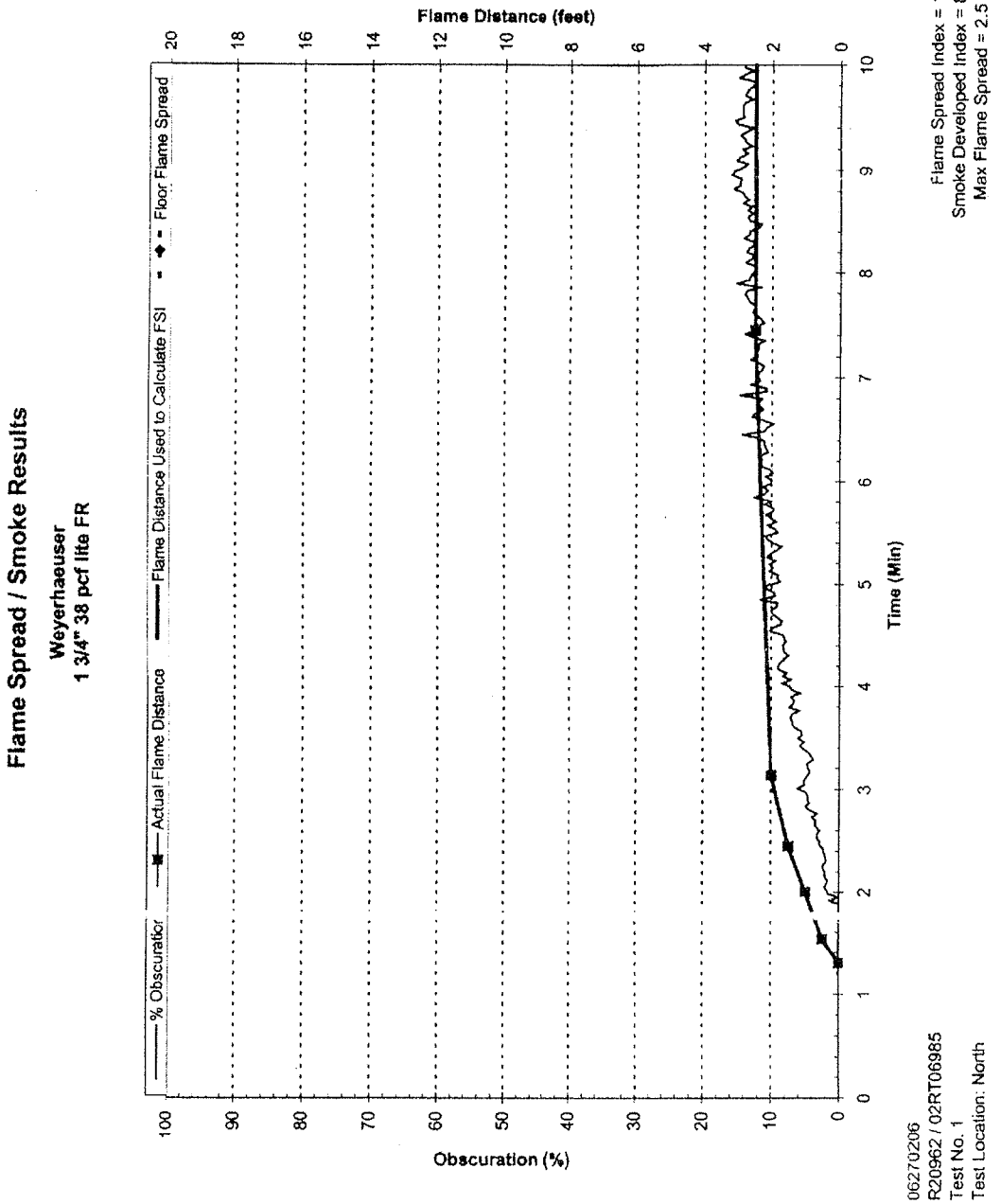
FLAME SPREAD RESULTS

Distance (ft.)	Time (sec)
0.00	78
0.50	92
1.00	120
1.50	147
2.00	188
2.50	447

Calculated Flame Spread (CFS):	8.89
Flame Spread Index(FSI):	10
Duration of test:	10 min
Time to ignition:	78 sec
Maximum Flame Spread:	2.5 ft prior to 10 minutes
Actual area under the Flame spread Curve (ft.-min):	17.3

SMOKE RESULTS

Calculated Smoke Developed (CSD) :	83.9
SmokeDeveloped Index (SDI):	85
Area under the Smoke Curve:	3.98 square inches
Area under the Red Oak Curve:	4.75 square inches


Flame Spread / Smoke Results
Weyerhaeuser
1 3/4" 38 pcf lite FR
% Obscuration
Actual Flame Distance
Flame Distance Used to Calculate FSI
Floor Flame Spread
Flame Distance (feet)
Obscuration (%)
Time (Min)
Flame Spread Index = 10
Smoke Developed Index = 85
Max Flame Spread = 2.5 ft.
062702O6
R20962 / 02RT06985
Test No. 1
Test Location: North

STEINER TUNNEL
SUMMARY OF RESULTS

ENGINEER	: Karen Foxx-Smith	TECHNICIAN	: Phil Pastor
FILE NO.	: R20962	TEST DATE	: 6/27/02
ASSIGNMENT NO.	: 02RT06985	TEST TIME	: 8:17 AM
APPLICANT	: Weyerhaeuser	TEST CODE	: 06270208
MATERIAL	: 1 3/4" Plus FR @ 45 pcf	TEST NO	: 2
		MOUNTING	: Self

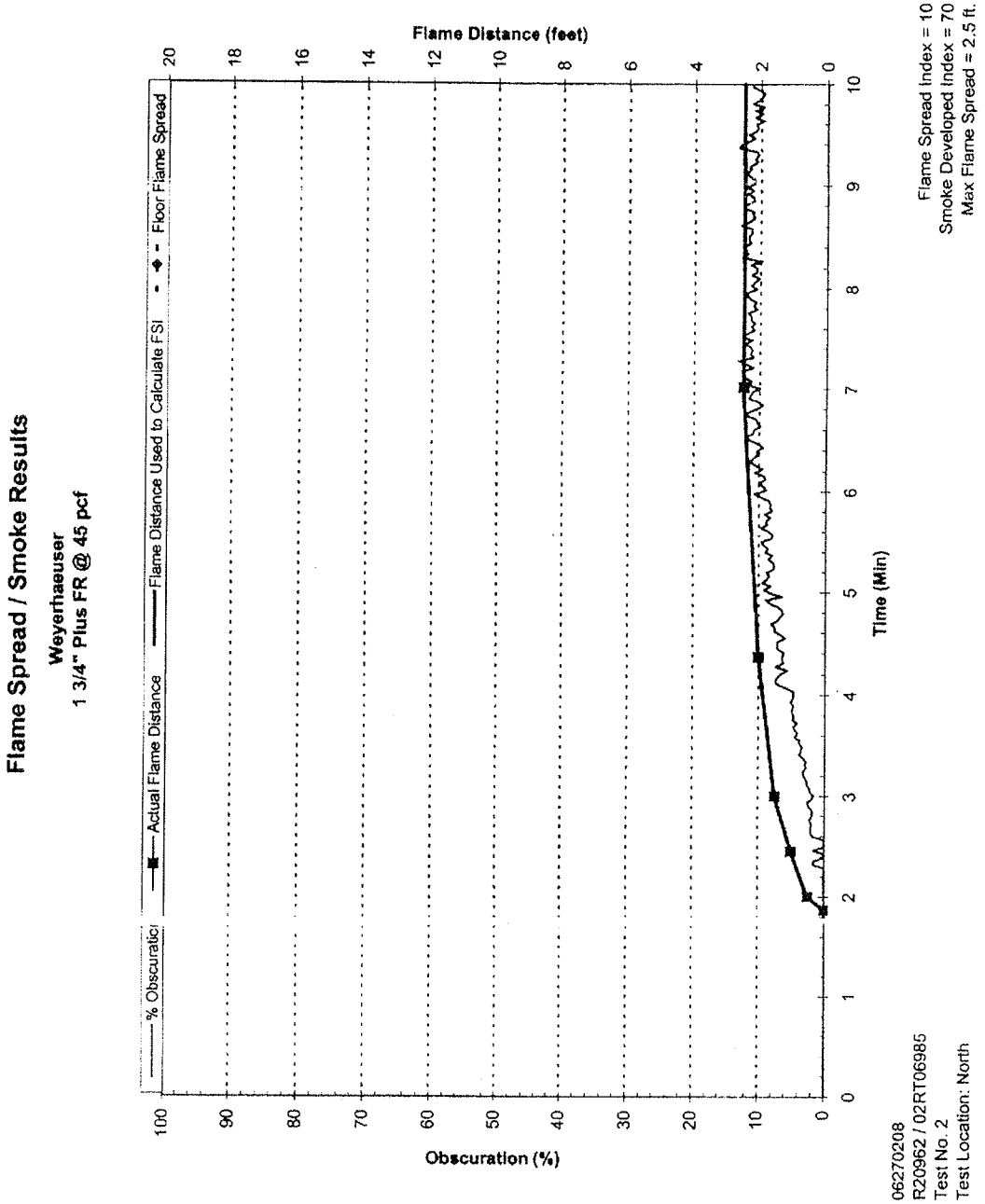
FLAME SPREAD RESULTS

Distance (ft.)	Time (sec)
0.00	112
0.50	120
1.00	147
1.50	180
2.00	262
2.50	421

Calculated Flame Spread (CFS):	8.29
Flame Spread Index(FSI):	10
Duration of test:	10 min
Time to ignition:	112 sec
Maximum Flame Spread:	2.5 ft prior to 10 minutes
Actual area under the Flame spread Curve (ft.-min):	16.1

SMOKE RESULTS

Calculated Smoke Developed (CSD) :	68.1
SmokeDeveloped Index (SDI):	70
Area under the Smoke Curve:	3.24 square inches
Area under the Red Oak Curve:	4.75 square inches


Flame Spread / Smoke Results
Weyerhaeuser
1 3/4" Plus FR @ 45 pcf
% Obscuratic
Actual Flame Distance
Flame Distance Used to Calculate FSI
Floor Flame Spread
Flame Distance (feet)
Obscuration (%)
Time (Min)
Flame Spread Index = 10
Smoke Developed Index = 70
Max Flame Spread = 2.5 ft.
06270208
R20962 / 02RT06985
Test No. 2
Test Location: North

STEINER TUNNEL
SUMMARY OF RESULTS

ENGINEER	:	Karen Foxx-Smith	TECHNICIAN	:	Phil Pastor
FILE NO.	:	R20962	TEST DATE	:	6/27/02
ASSIGNMENT NO.	:	02RT06985	TEST TIME	:	9:51 AM
APPLICANT	:	Weyerhaeuser	TEST CODE	:	06270211
MATERIAL	:	11/16" Lite FR @ 38 pcf	TEST NO	:	4
			MOUNTING	:	Self

FLAME SPREAD RESULTS

Distance (ft.)	Time (sec)
0.00	39
0.50	51
1.00	78
2.00	98
3.00	129
3.50	202

Calculated Flame Spread (CFS):	15.02
Flame Spread Index(FSI):	15
Duration of test:	10 min
Time to Ignition:	39 sec
Maximum Flame Spread:	3.5 ft prior to 10 minutes
Actual area under the Flame spread Curve (ft.-min):	29.2

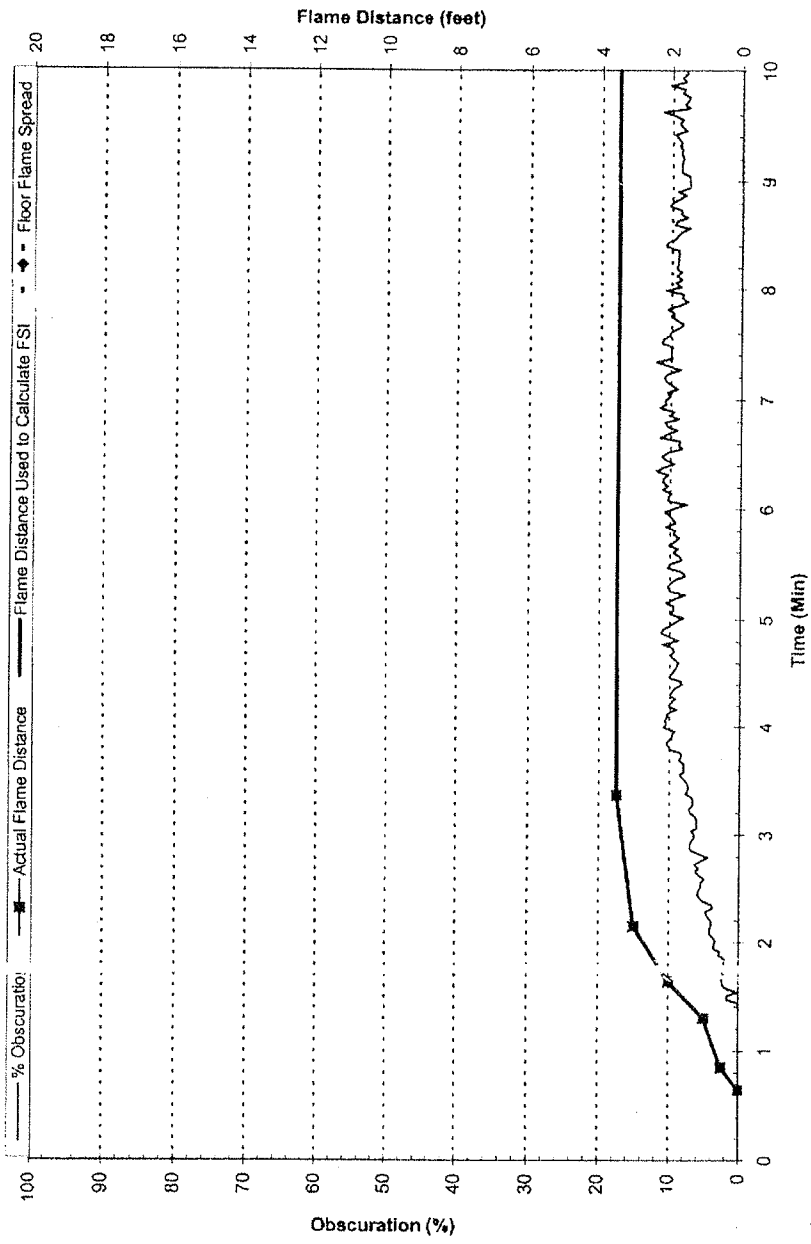
SMOKE RESULTS

Calculated Smoke Developed (CSD) :	75.0
SmokeDeveloped Index (SDI):	75
Area under the Smoke Curve:	3.56 square inches
Area under the Red Oak Curve:	4.75 square inches

Flame Spread / Smoke Results

Weyerhaeuser

11/16" Lite FR @ 38 pcf



Flame Spread Index = 15
Smoke Developed Index = 75
Max Flame Spread = 3.5 ft.

06270211
R20962 / 02RT06985
Test No. 4
Test Location: North

STEINER TUNNEL
SUMMARY OF RESULTS

ENGINEER	:	Karen Foxx-Smith	TECHNICIAN	:	Phil Pastor
FILE NO.	:	R20962	TEST DATE	:	8/8/02
ASSIGNMENT NO.	:	02RT06985	TEST TIME	:	7:39 AM
APPLICANT	:	Weryerhaeuser	TEST CODE	:	08080206
MATERIAL	:	11/16" Lite FR @ 38 pcf	TEST NO	:	7
			MOUNTING	:	Self

FLAME SPREAD RESULTS

Distance (ft.)	Time (sec)
0.00	60
1.00	67
2.00	75
3.00	110
4.00	177

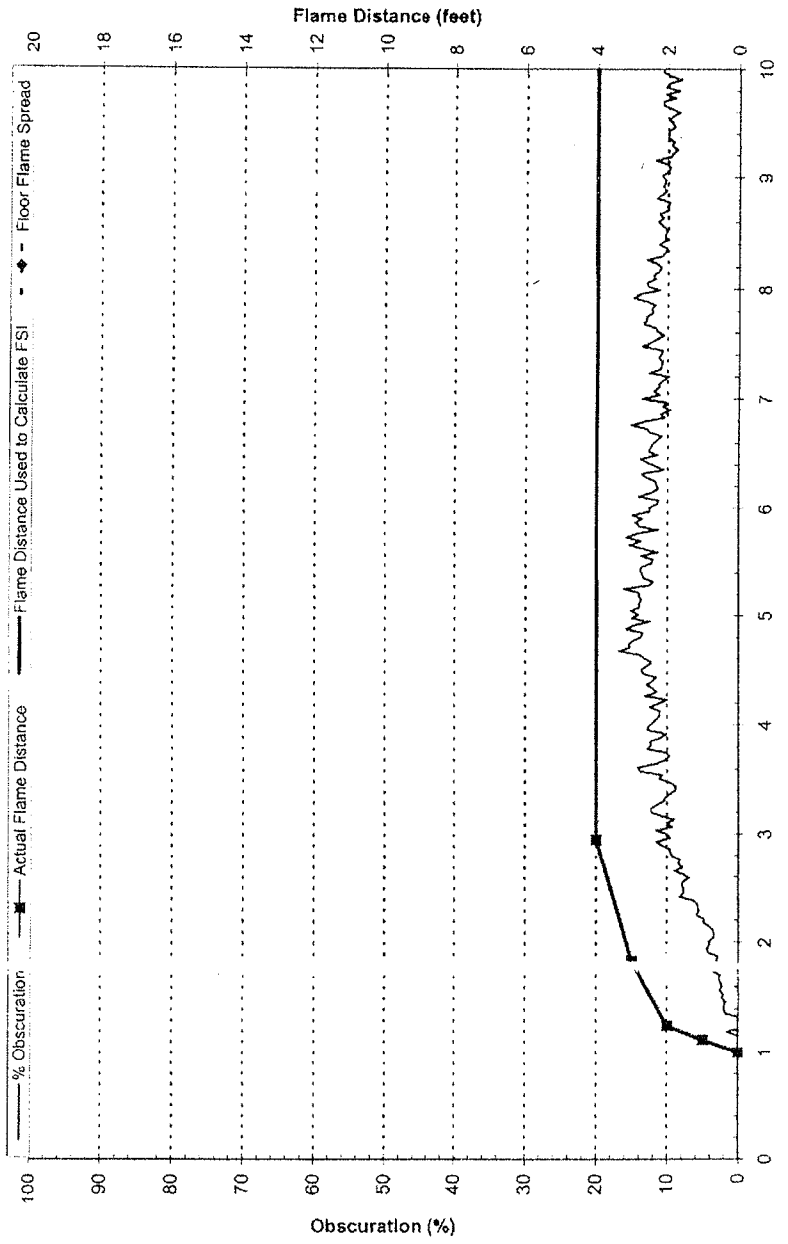
Calculated Flame Spread (CFS):	17.24
Flame Spread Index(FSI):	15
Duration of test:	10 min
Time to Ignition:	60 sec
Maximum Flame Spread:	4 ft prior to 10 minutes
Actual area under the Flame spread Curve (ft.-min):	33.5

SMOKE RESULTS

Calculated Smoke Developed (CSD) :	96.4
SmokeDeveloped Index (SDI):	95
Area under the Smoke Curve:	4.58 square inches
Area under the Red Oak Curve:	4.75 square inches

Flame Spread / Smoke Results

Weryerhaeuser
11/16" Lite FR @ 38 pcf



Flame Spread Index = 15
Smoke Developed Index = 95
Max Flame Spread = 4 ft.

08080206
R20962 / 02RT06985
Test No. 7
Test Location: North