

Certificate of Conformity

issued by Curtis-Straus

Company: mini-box.com
Model Tested: WRAP-BOX-2A-1E
Testing Date: 9/14/05 – 9/16/05
Report No. NF0693-1

A sample of the product as configured in the accompanying test report has been found to comply with the following standards:

IEC 60529
IP65

**An asterisk indicates sections not fully compliant, see attached report for further details.*

Attested to by the hands and seals:

For Curtis-Straus

For the Manufacturer or Importer

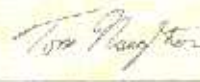


9/29/2005

Michael Kornitsky

Date

Date



9/29/2005

Tom Naughton

Date



Test Report

Report No	NF0693-1
Client	mini-box.com 4031 Clipper Ct Fremont, CA 94538
Items tested	WRAP-BOX-2A-1E
Specifications	IEC 60529 IP65 Rating
Results	As detailed within this report
Prepared by	M.P. Kornitsky
Authorized by	T. P. Naughton
Issue Date	29 September, 2005
Conditions of issue	This Test Report is issued subject to the conditions stated in 'terms and conditions' section of this report.

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Summary:

The WRAP-BOX-2A-1E, also referred to as the EUT in this report, was tested for compliance with the following requirements:

IEC 60529 – Degree of protection provided by enclosure (IP Code)

IP Rating IP65

Product Configuration

For IP Testing all of the internal electronics were removed from the EUT, as they are not relevant for these types of tests.

The Serial Numbers and corresponding Sample numbers for the EUTs tested are listed in the table below:

Sample #	Serial Number
1	B001-09493
2	B001-09504
3	B001-09391
4	B001-09483
5	B001-09362
6	B001-00416

Test Method

The EUT was tested and complies with the IP65 requirements, which include Accessibility to Hazardous Live Part, Exclusion of Dust and Protection Against the Effects of Water Jet Spray.

Accessibility to Hazardous Live Parts

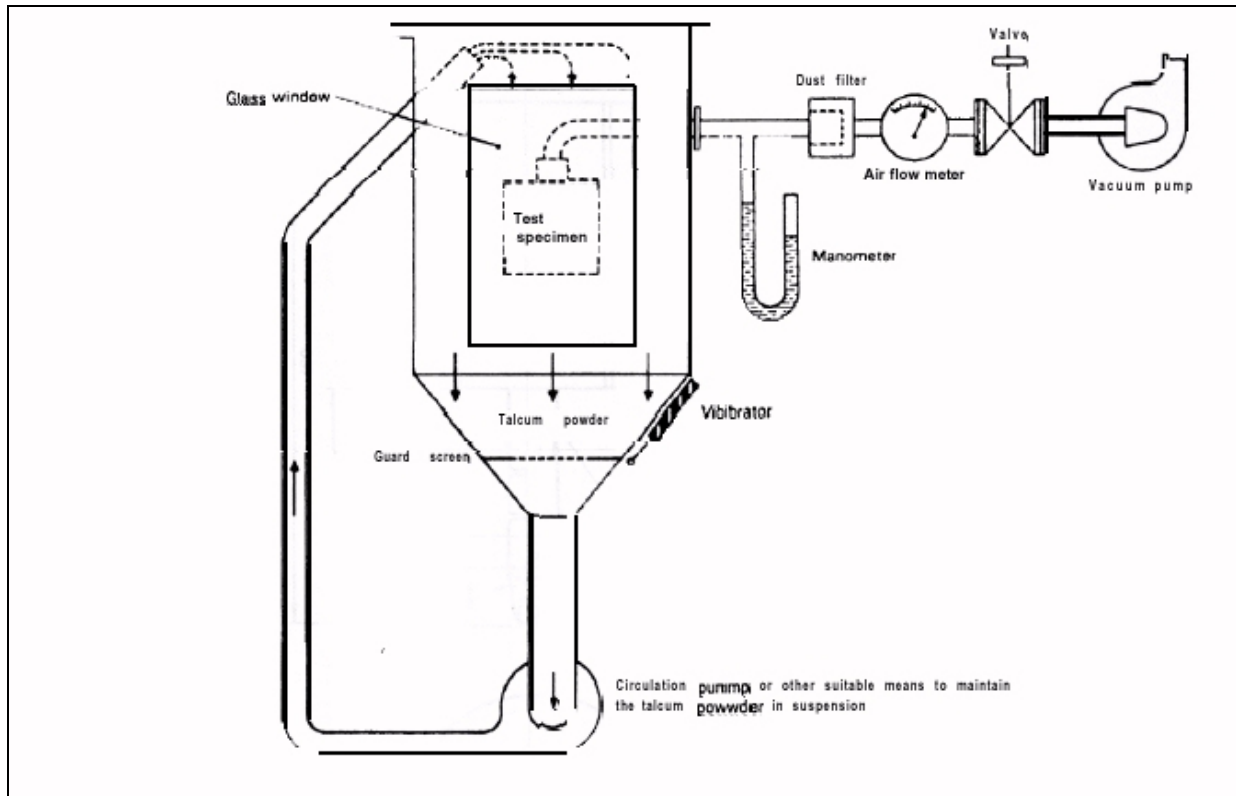
To comply with this condition adequate clearance shall be kept between the access probe and hazardous parts.

To test for this a 1.0 mm probe is used on multiple points on the EUT to try to penetrate the enclosure and come into contact with live parts.

Exclusion of Dust

To comply with this condition the enclosure must be Dust-tight. No dust is allowed to enter the enclosure during this test.

To test for this the EUT is placed in a dust chamber that incorporates the principles shown in the drawing below:



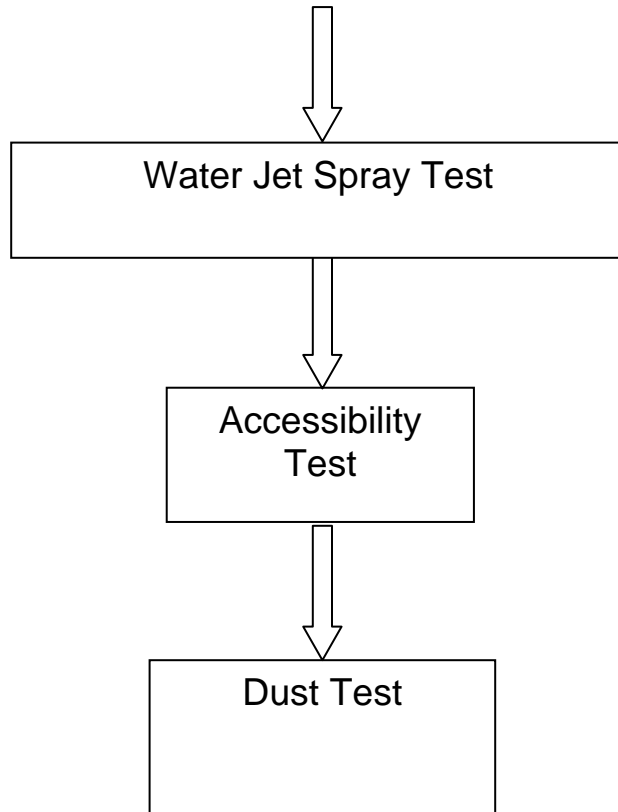
During the Dust Test talcum powder of is circulated. The talcum powder is able to pass through a square-meshed sieve the normal wire diameter of which is 50 μ m and the normal width of a gap between wires 75 μ m. The amount of talcum powder used is 1.0336 kg based on the chamber volume of 0.5168 m³.

During testing the EUT air connections are connected to a vacuum that draws 2 kPa (20 mbar) as measured by a manometer. The sample is held at this vacuum and subjected to the circulating dust for a period of 8 hours.

Protection Against the Effects of Water Jet Spray

To comply with this condition the EUT must not allow water to come into contact with live parts, after being sprayed, with the EUT in different orientations, for a period of 1 min/m² with a minimum duration of 3 minutes.

Test Flow



Test Data

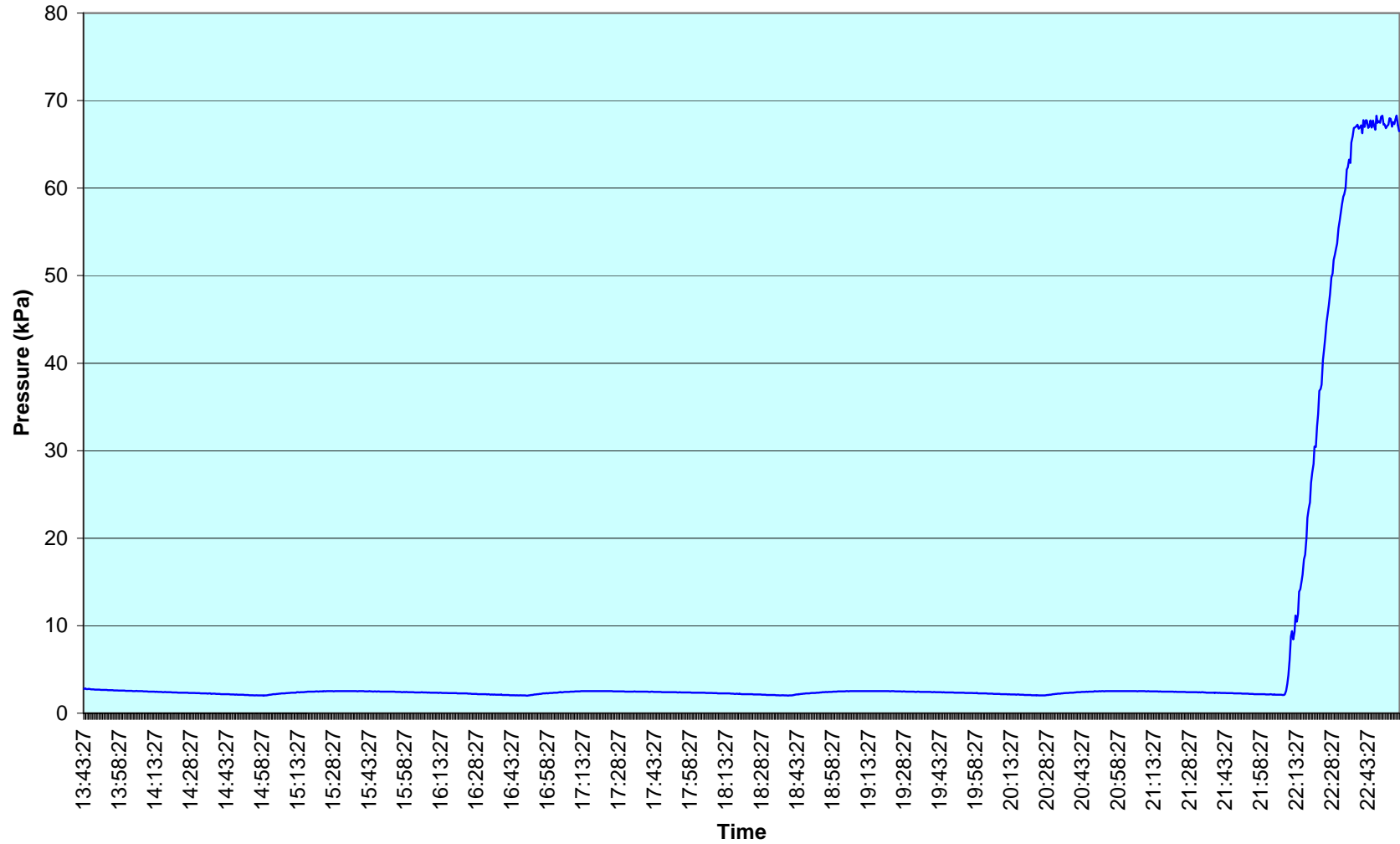
Accessibility Test Data

IP6X Accessibility Test	
Work Order: F0693 Date(s): 9/15/2005 Engineer: Mike Kornitsky EUT: WRAP-BOX-2A-1E Sample # 6 Company: mini-box.com Test Location: 168 Ayer Rd., Littleton, MA,01460	
Test Result: PASS	
Sample Condition: Good	
Modifications since start date:	None
Modifications this test:	None
Performance Criteria:	The test wire of 1.0 mm shall not penetrate and adequate clearance shall be kept
Test Data:	
Test Location	Penetration
RJ Connector	None
Between top and bottom covers	None
Antena Fitting	None
Ambient Conditions:	
Temp: 23°C	Humidity: 18%
Comments:	
No penetration of the 1 mm wire was possible on the EUT enclosure.	

Exclusion of Dust Test Data

IP6X Exclusion of Dust Test	
Work Order: F0693	
Date(s):	From: 9/15/2005 To: 9/16/2005
Engineer: Mike Kornitsky	
EUT: WRAP-BOX-2A-1E	
Sample# 1, 2, 3, 4, 5	
Company: mini-box.com	
Test Location: 168 Ayer Rd., Littleton, MA,01460	
Test Result: PASS	
Sample Condition: Good	
Modifications since start date:	None
Modifications this test:	None
Performance Criteria:	Enclosure must be Dust-tight. No dust is allowed to enter the enclosure during this test.
Test Parameters:	EUT is placed in a circulating dust chamber for 8 hours and is under a 2 kPa, (20 m Barr) Vacuum.
Test Data:	
Did Dust enter the enclosures during testing?	<u>No</u>
What was the vacuum used on the Enclosure?	<u>2 kPa</u>
Test Equipment Used:	
Environmental chamber:	Dust Chamber, Air Flow Meter, Chamber #2, Temperature/Humidity Sensor
Comments:	
Five samples were subjected to this test. No dust entered any of the enclosures during testing. On the next page is the graph of the vacuum that was placed on the EUT during testing.	

Manometer Vacuum



Dust Test Configuration Photographs



This is the Dust Chamber as configured for testing. The line coming out of the chamber is hooked to the vacuum.



This is the interior of one of the enclosure after the Dust Test

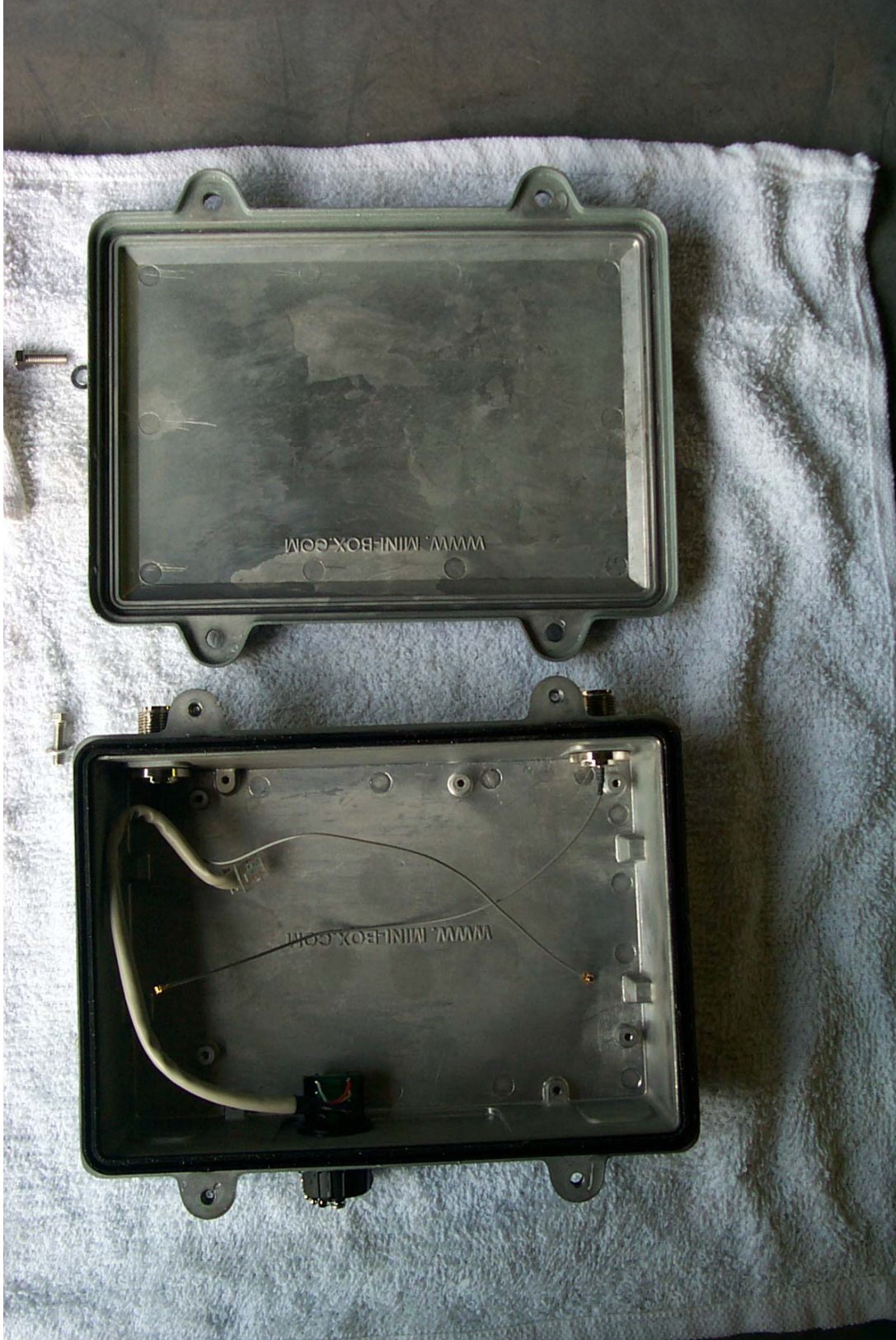
Protection Against Water Jet Spray Test Data

IPX6 Protection Against the Effects of Water Jet Spray Test	
Work Order: F0693 Date(s): 9/14/2005 Engineer: Mike Kornitsky EUT: WRAP-BOX-2A-1E Sample # 1, 2, 3, 4 and 5 Company: mini-box.com Test Location: 168 Ayer Rd., Littleton, MA,01460	
Test Result: PASS	
Samle Condition: Good	
Modifications since start date:	None
Modifications this test:	None
Performance Criteria:	<p>After testing the enclosure shall be inspected for ingress of water. It is the responsibility of the relevant technical committee to specify the amount of water which may be allowed to enter the enclosure and the details of a dielectric strength test, if any. In general, if any water has entered, it shall not: be sufficient to interfere with the correct operation of the equipment or impair safety; deposit on insulation parts where it could lead to tracking along the creepage distances; reach live parts or windings not designed to operate when wet; accumulate near the cable end or enter the cable if any.</p>
Test Parameters:	
<p>The test is made by spraying the enclosure from all practicle directions with a stream of water from a standard test nozzle as shown in figure 6 of IEC 60529. The conditions to be observed are as follows:</p> <p>a) Internal diameter of the nozzle: 6.3 mm; b) Delivery rate: 12.5 l/min (may vary 5%); c) water pressure: to be adjusted to achieve the specified delivery rate; d) test duration per square metre of enclosure surface area likely to be sprayed: 1 min; e) minimum test duration: 3 min. d) distance from nozzle to enclosure surface: between 2.5 and 3 m.</p>	
Test Data:	
Did water enter the enclosures during testing?	<u>No</u>
Surface Area of Enclsore?	<u>0.0333 m2</u>
Test Duration?	<u>3 min</u>
Test Equipment Used:	
<i>Environmental chamber: Tape Measure, IPX6 Sprayer, pressure gauge</i>	
Ambient Conditions:	
Temp: 23-25°C	Humidity: 25-30%
Comments:	
5 Samples were subjected to this test. All samples were opened after this test and found to have excluded water.	

Water Jet Spray Test Photograph



This is one of the enclosures during the Water Jet Spray Test



This is the inside one of the enclosures following the Water Jet Spray Test

Test Equipment Used

Description	Serial Number	Manufacturer	Model	Cal. Date	Cal. Due
Pressure Transducer	040331	Omega	PX303-030A10V	6/22/05	6/22/06
Digital Timer	24023327 8	Control Co.	62379-565	7/6/04	7/6/06
Test Wire Probe	N/A	ED&D	TRP-02	4/14/05	4/14/06

Terms and Conditions

Paragraph 1. SERVICES. LABORATORY will:

- 1.1 Use the degree of care and skill ordinarily exercised by and consistent with the standards of the profession.
- 1.2 Perform all technical services in substantial accordance with the generally accepted laboratory principles and practices.
- 1.3 Retain all pertinent records relating to the services performed for a period of three (3) years following submission of the report describing such services, during which period the records will be made available to CLIENT upon reasonable request.

Paragraph 2. CLIENT'S RESPONSIBILITIES. CLIENT or his authorized representative will:

- 2.1 Provide LABORATORY with all plans, schematics, specifications, addenda, change orders, drawings and other information for the proper performance of technical services.
- 2.2 Designate a person to act as CLIENT's representative with respect to LABORATORY's services to be performed on behalf of the CLIENT; such person or firm to have complete authority to transmit instructions, receive information and data, interpret and define CLIENT's policies and decisions with respect to the LABORATORY's work on behalf of the CLIENT and to order, at CLIENT's expense, such technical services as may be required.
- 2.3 Designate a person who is authorized to receive copies of LABORATORY's reports.
- 2.4 Undertake the following:
 - (a) Secure and deliver to LABORATORY, without cost to LABORATORY, preliminary representative samples of the equipment proposed to require technical services, together with any relevant data.
 - (b) Furnish such labor and equipment needed by LABORATORY to handle samples at the LABORATORY and to facilitate the specified technical services.

Paragraph 3. GENERAL CONDITIONS:

- 3.1 LABORATORY, by the performance of services covered hereunder, does not in any way assume any of those duties or responsibilities customarily vested in the CLIENT, its employees, or any other party, agency or authority.
- 3.2 LABORATORY shall not be responsible for acts of omissions of any other party or parties involved in the design, manufacture or maintenance of the equipment or the failure of any employee, contractor or subcontractor to undertake any aspect of equipment's design, manufacture or maintenance.
- 3.3 LABORATORY is not authorized to revoke, alter, release, enlarge or release any requirement of the equipment's design, manufacture or maintenance unless specifically authorized by CLIENT or his authorized representative.
- 3.4 THE ONLY WARRANTY MADE BY LABORATORY IN CONNECTION WITH ITS SERVICE PERFORMED HEREUNDER IS THAT IT WILL USE THAT DEGREE OF CARE AND SKILL AS SET FORTH IN PARAGRAPH 1 ABOVE. NO OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE OR INTENDED FOR SERVICES PROVIDED HEREUNDER.
- 3.5 Where the LABORATORY indicates that additional testing is advisable to obtain more valid or useful data, and where such testing has not been authorized, CLIENT agrees to view such test reports as inconclusive and preliminary.
- 3.6 The LABORATORY will supply technical service and prepare a report based solely on the sample submitted to the LABORATORY by the CLIENT. The CLIENT understands that application of the data to other devices is highly speculative and should be applied with extreme caution.
- 3.7 The LABORATORY agrees to exercise ordinary care in receiving, preserving and shipping (F.O.B. Littleton, MA) any sample to be tested, but assumes no responsibility for damages, either direct or consequential, which arise from loss, damage or destruction of the samples due to the act of examination, modification or testing, or technical services or circumstances beyond LABORATORY's control.
- 3.8 The LABORATORY will hold samples for thirty (30) days after tests are completed, or until the CLIENT's outstanding debts to the LABORATORY are satisfied, whichever is later.
- 3.9 The CLIENT recognizes that generally accepted error variances apply and agrees to consider such error variances in its use of test data.
- 3.10 It is agreed between LABORATORY and CLIENT that no distribution of any tests, reports or analysis shall be made to any third party without the prior written consent of both parties unless such distribution is mandated by operation of law. No reference to reports or technical services of the LABORATORY shall be made in any advertising or promotional literature without the express written permission of the LABORATORY.
- 3.11 The CLIENT acknowledges that all employees of LABORATORY operate under employment contracts with the LABORATORY and CLIENT agrees not to solicit employment of such employees or to solicit information related to other clients from said employees.

Paragraph 4. INSURANCE:

- 4.1 LABORATORY shall secure and maintain throughout the full period of the services provided to the CLIENT adequate insurance to protect it from claims under applicable Workmen's Compensation Acts and also shall maintain one million dollars of general liability coverage to cover claims for bodily injury, death or property damage as may arise from the performance of its services.
- 4.2 The CLIENT hereby warrants that it has sufficient insurance to protect its employees adequately under applicable Workmen's Compensation Acts and for bodily injury, death, or property damage.
- 4.3 No insurance of whatever kind or type, which may be carried by either party is to be considered as in any way limiting any other party's responsibility for damages resulting from their operations or for furnishing work and materials.

Paragraph 5. PAYMENT:

- 5.1 CLIENT shall pay to LABORATORY such fees for services as previously agreed, orally or in writing, within 30 days of presentment of a bill for such services performed. In the event CLIENT ordered, orally or in writing, services but such services were not assigned a rate for billing, such services shall be billed at the LABORATORY's reasonable and customary rate.
- 5.2 CLIENT shall be responsible for all shipping, customs and other expenses related to services provided by LABORATORY to the CLIENT, and shall fully insure any test sample or other equipment provided to LABORATORY by the CLIENT.
- 5.3 Amounts overdue from CLIENT to LABORATORY shall be charged interest at a rate of 1½% per month.

Paragraph 6. ISO Guide 25 ADDITIONS:

- 6.1 CLIENT agrees that this test report will not be reproduced except in full, without written approval from the LABORATORY.
- 6.2 CLIENT agrees that this test report shall not be used to claim product endorsement by ANSI or any agency of the U.S. Government.
- 6.3 CLIENT agrees that test results presented herein relate only to the sample tested by the LABORATORY.