

# FIELD EVALUATION REPORT INTERTEK TESTING SERVICES NA INC.

3210 AMERICAN DRIVE, MISSISSAUGA, ONTARIO L4V 1B3

Job No. 3109160

Issued: 11/17/2006

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REPORT NO. 3109160TOR-001

INSPECTION, TESTS AND EVALUATION  
OF A

BUILDING SENTRY ONE SYSTEM

RENDERED TO

BPSI BUILDING PROTECTION SYSTEMS INC.  
SAN FRANCISCO CA, 94108

**GENERAL:** This Report gives the results of the inspection, tests and evaluation of a Building Protection Systems Inc for compliance with applicable requirements of the Standard for Industrial Control Panels – UL 508A 1<sup>st</sup> Edition, date April 25, 2001, with revision through and including September 1, 2005. This investigation was authorized by Mr. Jay Poggi, order number 500010658 date November 01, 2006. The investigation was begun on November 13, 2006 and completed on November 17, 2006. A prototype sample in good condition was provided by the client on November 13, 2006 and tested at the client's facility in San Francisco CA, 94108.

**Standard for Industrial Control Panels – UL 508A 1<sup>st</sup> Edition, date April 25, 2001 with revision through and including September 1, 2005.**

Applicant: (BPSI) Building Protection Systems Inc.  
150 Post Street, Suite 750  
San Francisco CA 94108

Manufacturer: Same as Applicant

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Contact:  
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Fax:

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Intertek Testing Services NA Inc.

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BPSI Building Protection Systems Inc.

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Issued: 11/17/06

<u>Report Composition:</u>	<u>Numbering</u>
Cover	1
Revisions	2
Main Report	3-13
Illustrations	13
Markings	
Total Number of Pages	13

REVISION SUMMARY - The following changes have been made to this Report:

<u>Date/Project #</u>	<u>Project Handler</u>	<u>Reviewer</u>	<u>Page</u>	<u>Item</u>	<u>Description of Change</u>
					None

**PRODUCT DESCRIPTION**

**PRODUCT COVERED**

Building Sentry One System, model Building Sentry One, Chemical Sensor Array, Radiation Area Detector and Remote terminal Board.

**PRODUCT DESCRIPTION**

The product covered by this report is a permanently connected Building Sentry One System, it is an ATT – “Anti-Terrorism Technology” detection and sensing system, designed to provide a building protection system responsive to the release of chemical and/or airborne nuclear agents into a Commercial, Industrial or Government building to help prevent occupant injury and the loss of human life.

The Unit consists of the BSO - Building Sentry One (Main control/monitor panel), CSA – Chemical Sensor Array Box, RAD – Radiation Area Detector Box, RTB remote terminal Board Panel and the remote PC monitoring. All four Units connect together as systems.

**MODEL SIMILARITY**

None

**ELECTRICAL RATINGS**

<u>Product</u>	<u>Voltage</u>	<u>Current</u>	<u>Frequency</u>
Building Sentry One (BSO)	120	5.0	60
Chemical Sensor Array (CSA)	120	0.5	60
Radiation Area Array (RAD)	120	1.0	60
Remote Terminal Board (RTB)	120	1.81	60

**TEST PERFORMANCE NO. 1**

A representative sample of the product was tested in accordance with the Standard for Industrial Control Panels – UL 508A 1<sup>st</sup> Edition, date April 25, 2001, with revision through and including September 1, 2005.

The following tests were conducted by: NO TEST REQUIREMENT AS PER THE ABOVE REFERENCE STANDARD

Test Description: N/A

The following tests were performed:

<u>Test Description</u>	<u>«StandardNumberOnly» Clause</u>
N/A	

Results of the tests indicate the specimens conform to applicable test criteria.

**CONCLUSION**

A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the Standard for the Standard for Industrial Control Panels – UL 508A 1<sup>st</sup> Edition, date April 25, 2001, with revision through and including September 1, 2005.

Equipment Identification and Field Label Number


Manufacturer	Model	Serial No.	Ratings	ETL Label
BPSI	Building Sentry One (1/4)	BSO-30-05-0001	120V/60Hz/5.0A	LPC 535376
	Chemical Sensor Array (2/4)	CSA-22-06-0002	120V/60Hz/0.5A	LPC 535377
	Radiation Area Detector (3/4)	RAD-12-06-001	120V/60Hz/1.0A	LPC 535378
	Remote Terminal Board (4/4)	RTB-2206-01-001	120V/60Hz/1.8A	LPC 535379

Report prepared by:



Tuat Van Huynh  
Engineering Team Leader

Report Reviewed/Approved by:



Sherman Hsu  
Operation Manager

### **GENERAL INFORMATION**

The Applicant and Manufacturer have agreed to produce, test and label ETL Listed products in accordance with the requirements of this Report. The Manufacturer has also agreed to notify Intertek and to request authorization prior to using alternate parts, components or materials.

### **COMPONENTS**

Components used shall be those itemized in this Intertek report covering the product, including any amendments and/or revisions.

### **LISTING MARK**

The ETL Listing mark applied to the products shall either be separable in form, such as labels purchased from Intertek, or on a product nameplate or other media only as specifically authorized by Intertek. Use of the mark is subject to the control of Intertek.

### **MANUFACTURING AND PRODUCTION TESTS**

Manufacturing and Production Tests shall be performed as required in this Report.

### **FOLLOW-UP SERVICE**

Periodic unannounced audits of the manufacturing facility shall be scheduled by Intertek. An audit report shall be issued after each visit. Special attention will be given to the following:

1. Conformance of the manufactured product to the descriptions in this Report.
2. Conformance of the use of the ETL mark with the requirements of this Report and the Certification Agreement.
3. Manufacturing changes.
4. Performance of specified Manufacturing and Production Tests.

In the event that the Intertek representative identifies non-conformance(s) to any provision of this Report, the Applicant shall take one or more of the following actions:

1. Correct the non-conformance.
2. Remove the ETL Mark from non-conforming product.
3. Contact the issuing product safety evaluation center for instructions.

**GENERAL REQUIREMENTS AND DEFINITIONS**

Recognized Component – A component part, which has been previously evaluated by an accredited certification body with restrictions and must be evaluated as part of the basic product considering the restrictions as specified by the Conditions of Acceptability.

Listed Component – A component part, which has been previously Listed or Certified by an accredited Certification Organization with no restrictions and is used in the intended application within its ratings.

Unlisted Component – A part that has not been previously evaluated to the appropriate designated component standard. It may also be a listed or recognized component that is being used outside of its evaluated Listing or component recognition.

Critical Component – An essential part, material, subassembly, system, software, or accessory of a product that has a direct bearing on the product’s conformance to applicable requirements of the product standard.

Construction Details - For specific construction details, reference should be made to the following photographs and descriptions. All dimensions are approximate unless specified as exact or within a tolerance. In addition to the specific construction details described in this Report, the following general requirements may also apply as applicable.

1. Spacing – Spacing in feeder circuits, minimum spacing are maintained through air and over surfaces of insulating material between current-carrying parts of opposite polarity and between current-carrying parts and dead-metal parts.

Voltage involved	Minimum spacing, inch (mm)		
	Between live parts of opposite polarity		Between live parts and grounded metal parts, through air and over surface
	Through air	Over surface	
125 or less	1/2 (12.7)	3/4 (19.1)	1/2 (12.7)
126 – 250	3/4 (19.1)	1-1/4 (31.8)	1/2 (12.7)
251 – 600	1 (25.4)	2 (50.8)	1 <sup>3</sup> / <sub>4</sub> (25.4) <sup>a</sup>

2.

Mechanical Assembly - Components such as switches, fuseholders, connectors, wiring terminals and display lamps are mounted and prevented from shifting or rotating by the use of lockwashers, starwashers, or other mounting format that prevents turning of the component.

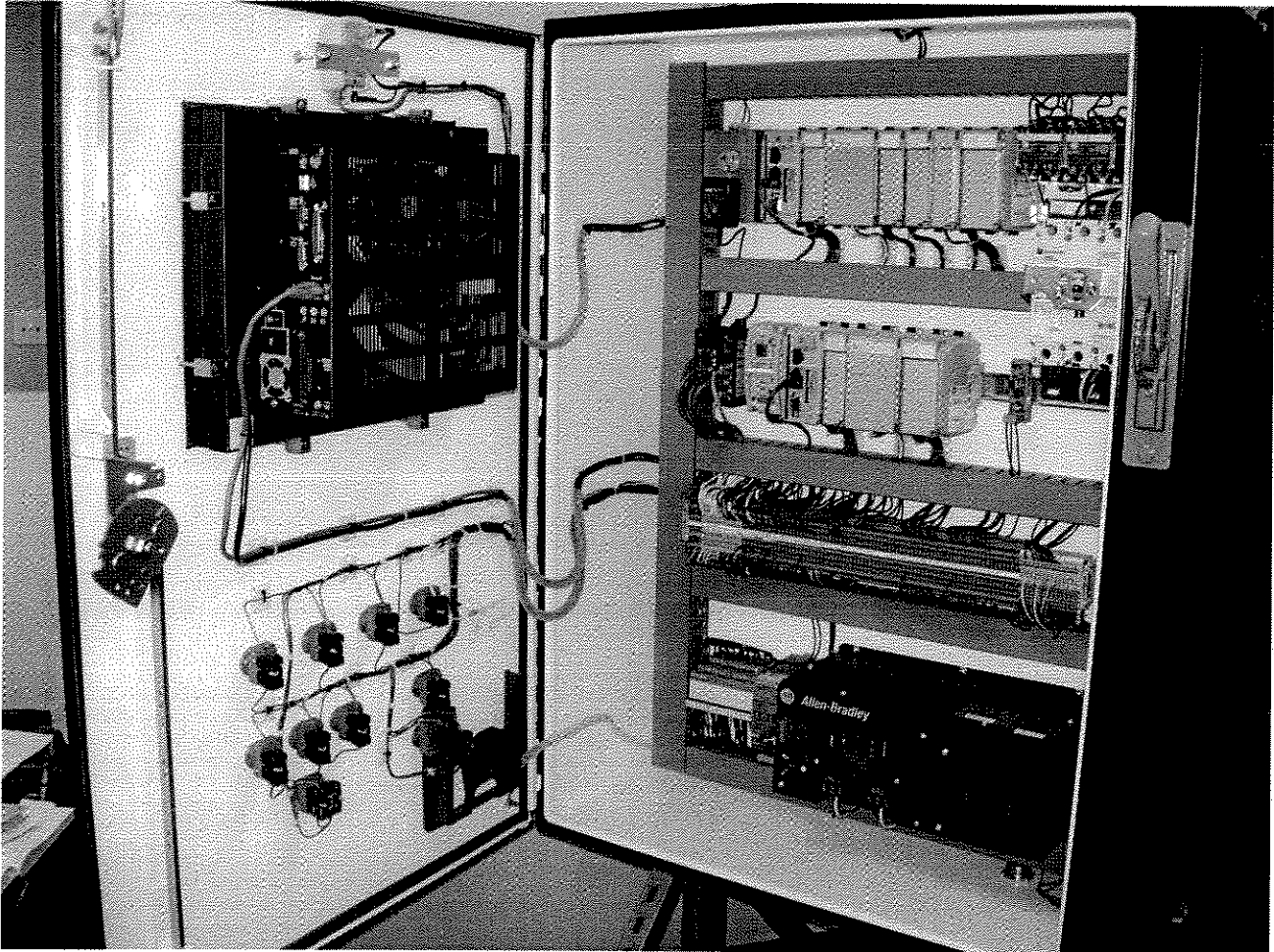
3. Corrosion Protection - All ferrous metal parts are protected against corrosion by painting, plating or other means specifically identified in the specific construction details.
4. Grounding - All exposed dead-metal parts and all dead-metal parts within the enclosure that are exposed to contact during any servicing operation are to be connected to the grounding terminal.
5. Internal Wiring - Internal wiring is routed away from sharp or moving parts. Internal wiring leads terminating in soldered connections are made mechanically secure prior to soldering. Recognized separable (quick disconnect) connectors of the positive detent type, closed loop connectors, or other types specifically described in the text of this report are also acceptable as internal wiring terminals. At points where internal wiring passes through metal walls or partitions, the wiring insulation is protected against abrasion or damage by plastic bushings or grommets. All wiring is minimum 16 AWG, with a minimum rating of 300V, 90°C.
6. Accessibility of Live Parts - All uninsulated live parts in primary circuitry are housed within a enclosure constructed with no openings other than those specifically described in the construction details.
7. Markings – The product is marked on a component labeling system as follows:  
manufacturer's name, model number, date of manufacturer, electrical ratings, enclosure type rating

8. Cautionary Markings – The following are required: Disconnect Power before Servicing
  
9. Installation, Operating and Safety Instructions - Instructions for installation and use of this product are provided by the manufacturer as required by the standard. Refer to Marking Illustration for details

Building Sentry one System

PHOTO NO. 1

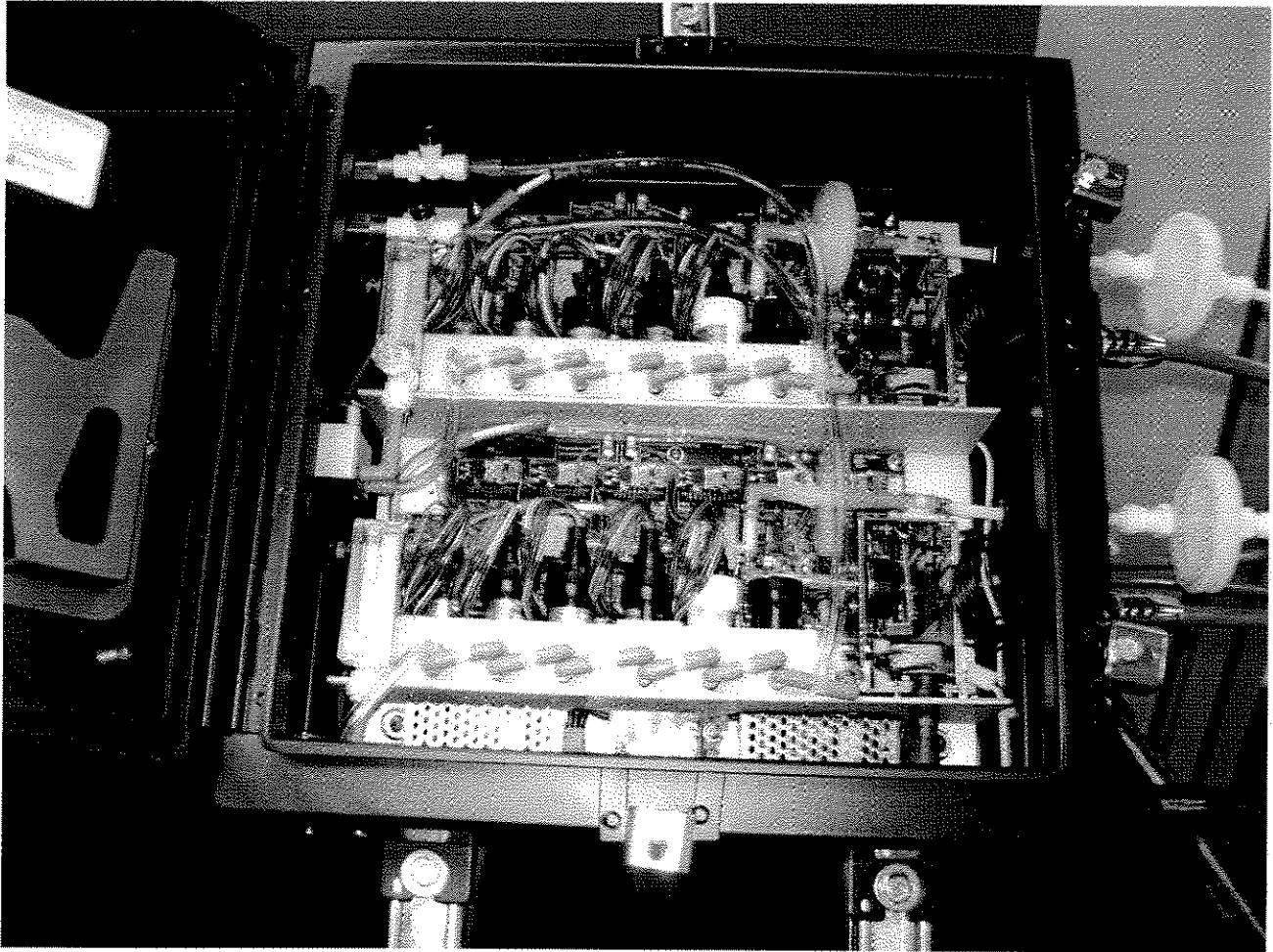
General: Photo shows model Building Sentry One (BSO) - Panel number (1 of 4) one of fours



Building Sentry One System

PHOTO NO. 2

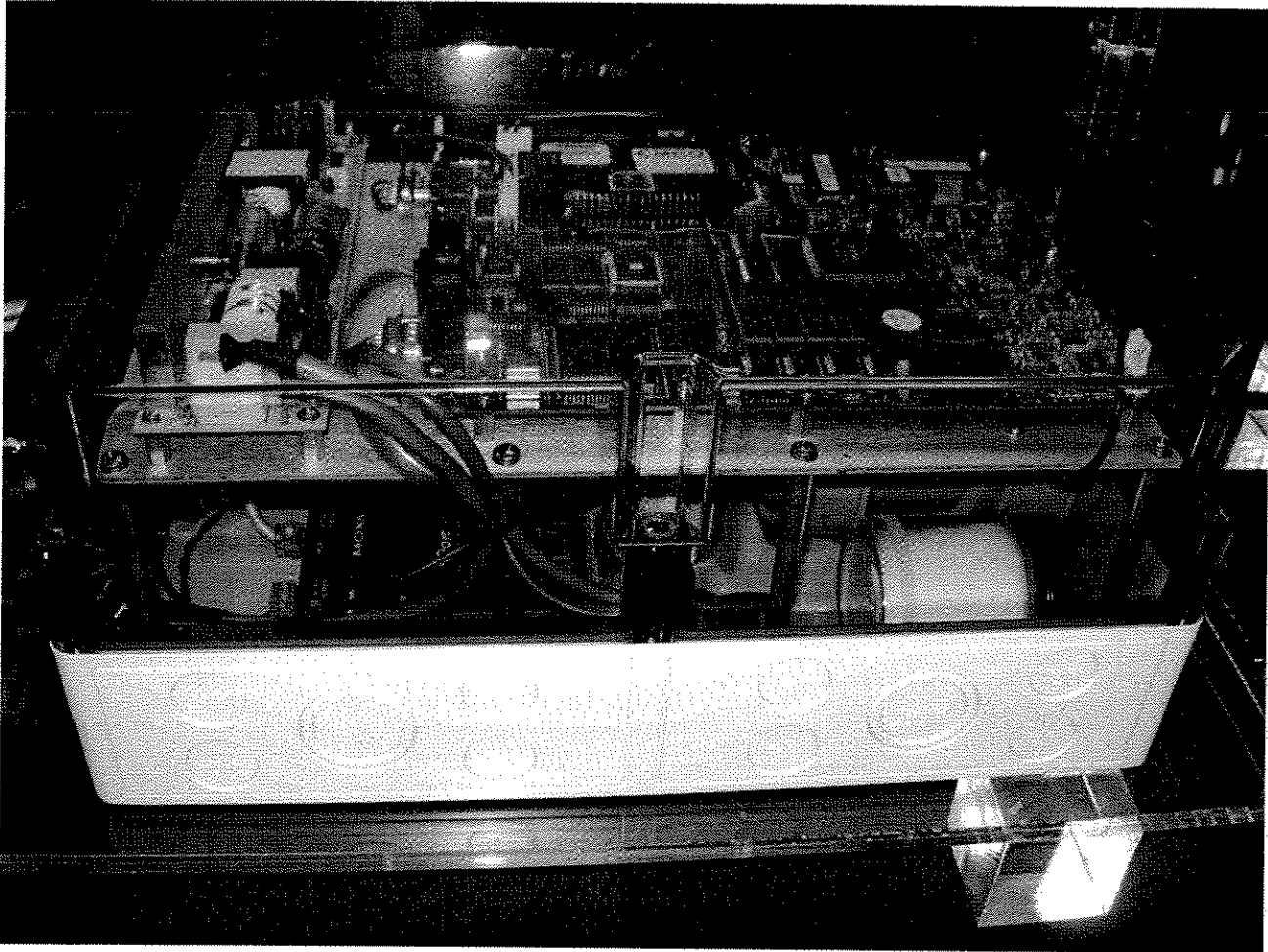
General: Photo shows model Chemical Sensor Array (CSA) - Panel number (2 of 4) two of fours



Building Sentry One System

PHOTO NO. 3

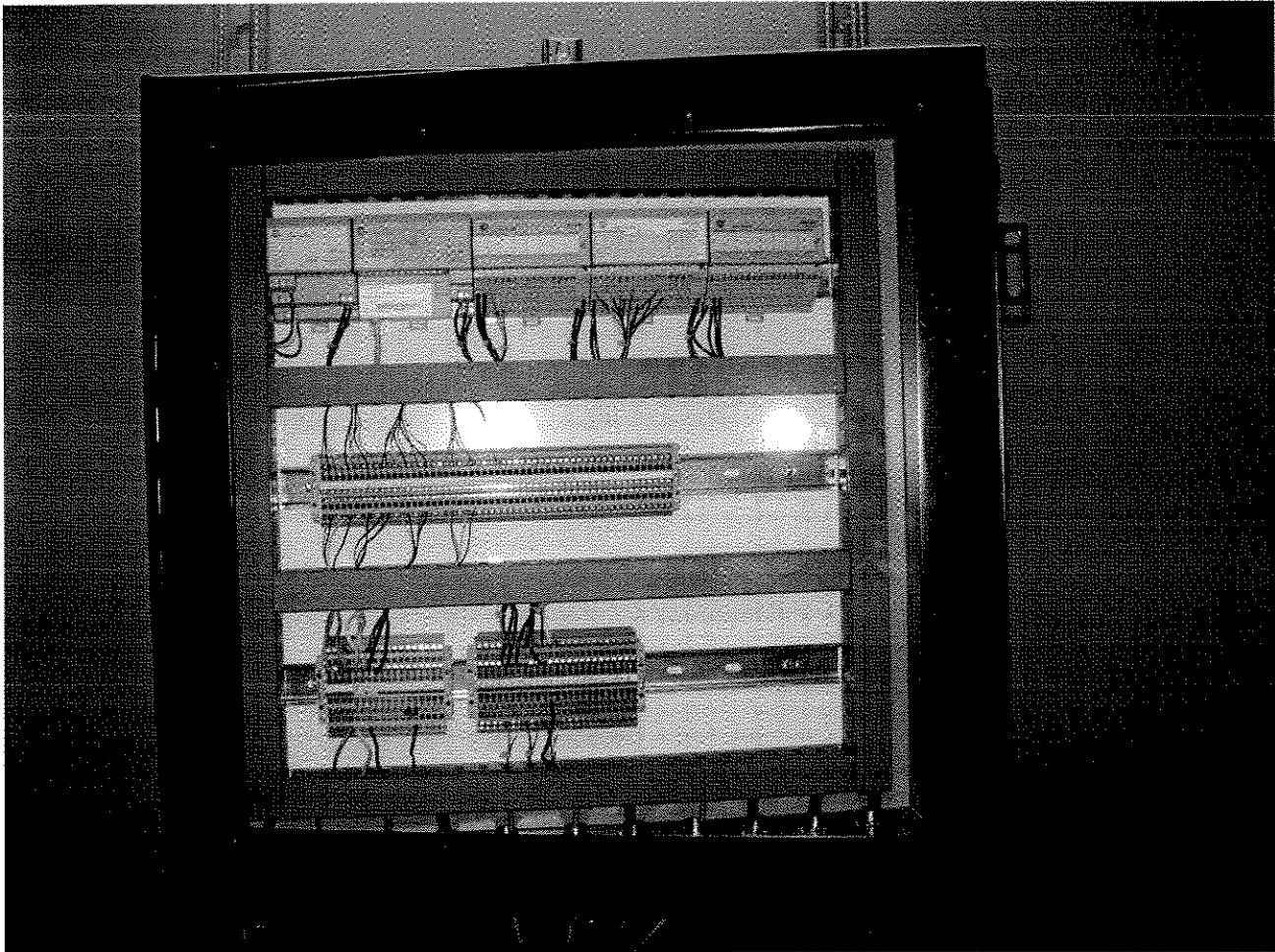
General: Photo shows model Radiation Area Detector (RAD) - Panel number (3 of 4) three of fours



Building Sentry One System

PHOTO NO. 4

General: Photo shows model Remote Terminal Board (RTB) - Panel number (4 of 4) four of fours



Building Sentry One System

Marking Illustration

Block Diagram

