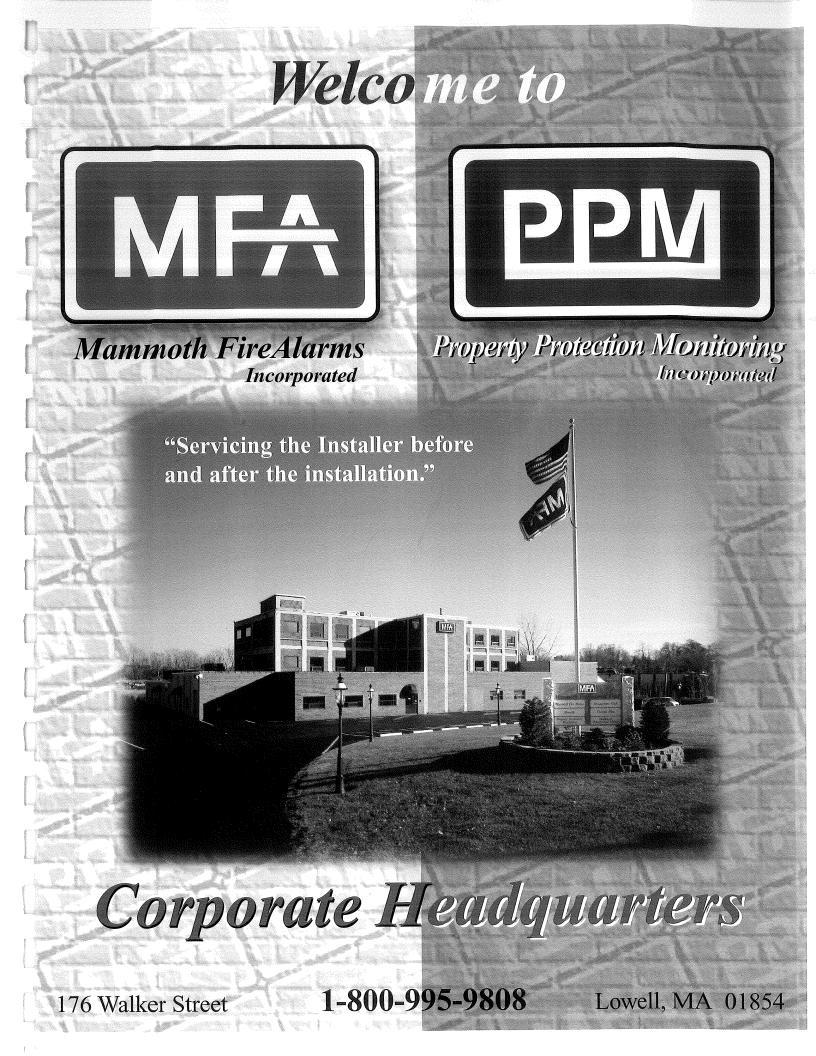
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OTHER REQUIRED APPROVALS
Health Dept
Appeal Board Other Department Name Director - Building & Inspection Services
PENALTY FOR REMOVING THIS CARD

CBL \* 267 A007

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Welcome to:

## Mammoth Fire Alarms

Incorporated



## Your local representative is:

SALES (978) 934-9130 (800) 995-9808 FAX (978) 934-9131



HUDSON OFFICE TEL (603) 595-7125 FAX (603) 880-8465



Mammoth Fire Alarms Incorporated

Corporate Headquarters 176 Walker Street Lowell, MA 01854-3126

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Meet the team ready to serve you!

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Many years of experience in "Building Systems"!

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Our own UL Monitoring Station for your convenience!

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Hands on product training!

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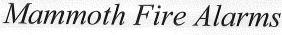
*R*eal point to point drawings with all submittal packages.

*E*verything you want in a systems distributor.

## AND MORE!

Mammoth Fire consists of a team of dedicated professionals with the single goal of serving you, the systems installer.





Incorporated

176 Walker Street Lowell, MA 01854

## Fire Alarm System Submittals

## LOCATION:

Burger King Restaurant New Addressable Fire Alarm System 132 River Street Portland, ME

## INSTALLER:

Morrill Electric Amesbury, MA

*"Servicing the installer before and after the installation."* <u>www.mammothfire.com</u> SALES (978) 934-9130 • 1-800-995-9808 • FAX (978) 934-9131

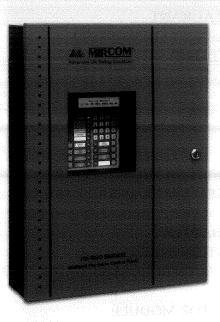
## FIRE ALARM SYSTEM FOR BURGER KING RESTAURANT NEW ADDRESSABLE FIRE ALARM SYSTEM (FX350) 132 RIVERSIDE STREET PORTLAND, ME

## MORRILL ELECTRIC

ITEM	QTY	PART #	DESCRIPTION
1	1	FX350/60DR	FACP 1/SLC 4/NAC DACT 5A W/ENCLOSURE
2	1	OCAC/304	CLASS A OUTPUT CONVERTER MODULE (4 CKTS)
3	2	PS1270	7 AMP 12V SEALED BATTERY
4			BATTERY CALCULATION STREET
5	3	MS-710IDU	ADDRESSABLE DBL ACTN PULL STAT W/BRK ROD
6	1	MIX-100P	ADDRESSABLE MONITOR MODULE
7	2	MIX/DH3100R	ANALOG PHOTO DUCT DET W/RELAYS (4 WIRE)
8	2	STN/5	5' SAMPLING TUBE DUCT WIDTHS 2.5'-5
9	2	SSU/KA/R	KEYED REMOTE TEST/ALARM INDICATOR
10	2	ZNS/MCWFR30	WALL MOUNT RED HORN STROBE 30CD
11	5	ZNS/MCWFR75	WALL MOUNT RED HORN STROBE 75CD
12	2	ZRS/MCWFR15	WALL MOUNT RED STROBE 15CD
13 contra	111	ZRS/MCWFR30	WALL MOUNT RED STROBE 30CD
14	1	490S/1280R	RED 12-80VDC STROBE LIGHT
15	1	FMSL/4RA	RED FLANGE MOUNT KIT FOR 490/500 STROBE
16			WIRING ESTIMATOR
17			MAMMOTH FIRE ALARM POLICIES
18			SYSTEM SEQUENCE OF OPERATION



## INTELLIGENT FIRE ALARM CONTROL PANELS



### Description

The FX-350 Series Intelligent Fire Alarm Control Panels are single loop addressable panels with support for up to 60 or 126 addressable points. The FX-350 Series panels are equipped with a two line by 20 character backlit LCD display, numerical keypad and an integrated UDACT/ Digital Communicator. The FX-350 Series family also includes remote LED and LCD annunciators.

The FX-350 Series panels are ideal for both new and retrofit applications. Designed for small to medium commercial, institutional and industrial occupancies, these panels are powerful enough to meet today's installation demands. The FX-350 Series panels are configurable by the keypad for onsite programming or by a PC for both onsite and remote programming. Easy to install and simple to operate and configure, the FX-350 Series panels enable the installer to configure the system to meet their specific requirements.

The FX-350 Series panels are equipped with a 5.5 Amp power supply, auxiliary resettable smoke power supply (300mA max.), an interface for a Remote Trouble Indicator (RTI-1) and an RS-485 interface for remote LCD and LED annunciators.

All FX-350 Series panels come complete with a red door, black enclosure, durable CAT-30 lock and key and space to mount up to 12 AH batteries. Optional trim rings are available for semi-flush mounting.

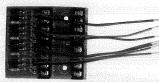
### Features

- Listed to UL 864, 9th edition
- Single Addressable SLC Loop that supports 60 or 126 addressable points
- Points can be any combination of Addressable Sensors or Modules
- Supports Ionization Sensors, Photoelectric Sensors, Variable Heat Sensors and Multi–Sensor (Heat/Photo)
- Equipped with a 2 line by 20 character backlit LCD display, numerical keypad and an integrated UDACT/ Digital Communicator
- Digital Communicator can be configured for DACT or UDACT mode of operation
- Configurable via the front panel, PC Configurator, or remote dial up through the built-in modem
- Sensors can be configured as Alarm, Verified Alarm, Latching or Non-Latching Supervisory, Monitor and Trouble-Only
- Modules can be configured as Alarm, Latching Supervisory, Non-Latching Supervisory, Water Flow, Monitor, Trouble, Fire Drill Switch, Signal Silence Switch, Aux Disconnect Switch and Buzzer Silence Switch
- Base panel is equipped with Four Class "B" (Style "B") indicating circuits which may be configured as Class "A" (Style "Z") using a Class "A" signal converter module
- Indicating Circuits may be configured as Silenceable or Non-Silenceable for both signals and strobes
- Built-in sync protocols for the following strobe manufacturers: Mircom, Amseco, System Sensor, Gentex, Faraday and Wheelock
- Relay contacts for Common Alarm, Auxiliary/Alarm (Disconnectable), Common Supervisory and Common Trouble
- Configurable Signal Silence Inhibit, Auto Signal Silence and One-Man Walk Test
- Subsequent Alarm, Supervisory, and Trouble operation
- RS-485 Interface for Remote LED and LCD Annunciators,
- Interface for a Remote Trouble Indicator (RTI-1)
- Two event history logs comprised of a 200 event alarm log for alarm related events and a 200 event general log for all other events
- 5.5 Amp Power Supply
- Optional modules for additional internal relay circuits and City Tie/Polarity Reversal
- Optional trim rings for semi-flush mounting



NOT TO BE USED FOR INSTALLATION PURPOSES

### **Optional Adder Modules**



OCAC-304 Four Indicating Circuit Class "A" Converter Module The OCAC-304 converts four Class "B" (Style "Y") output circuits on the FX-350 to Class "A" (Style "Z") circuits. The OCAC-304 is equipped with wire leads to connect to the FX-350 main board.

### **Remote Annunciators**



## RAM-300LCDR Remote LCD Annunciator

The RAM-300LCDR provides LCD remote annunciation through a 2 line by 20 character LCD display. The RAM-300LCDR provides control switches for System Reset, Signal Silence, Fire Drill and Acknowledge as well as a numeric keypad to access the menu functions. The common control functions can be disabled on a per function basis. The RAM-300LCDR has LED indicators for A.C. On, Alarm, Supervisory, Trouble and CPU Fail. The RAM-300LCD comes complete with a red enclosure and a CAT-30 Lock and key.



### PR-300 Polarity Reversal/City Tie Module

The PR-300 provides outputs for city box and polarity reversal applications. As a city tie module the PR-300 provides an interface between the control panel indicating circuits and a master box. As a polarity reversal module the PR-300 provides an interface between the control panel and a reverse polarity receiver.



## RAM-1016/RAM-1032 Remote LED Annunciators

The RAM-1016 and RAM-1032 Remote LED Annunciator provide 16 or 32 points respectively of LED annunciation. Both models come standard with bi-coloured LEDs which are automatically configured for either Alarm (Red) or Supervisory (Amber). The annunciators have indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. In addition both models allow for the control switches to be disabled on a per function basis. Both models mount in a BB-1001R enclosure.



### RAM-208R/RAM-216R Remote LED Annunciators

The RAM-208R and RAM-216R provide 8 or 16 points respectively of LED annunciation. Both models feature bi-coloured LEDs which are auto-configurable for either Alarm (red) or Supervisory (amber). The LED annunciators have indicators for A.C. On, Common Trouble and Signal Silence and control switches for System Reset, Signal Silence, Lamp Test and Buzzer Silence. The RAM-208R and RAM-216R are equipped with a keyswitch which allows for enabling and disabling of the Common Control functions. Both models are available in a red finish and mount in a 4-gang electrical box.

### **Ordering Information**

FX-350 Series Intelligent Fire Alarm Control Panels         FX-350-60-DR       Single Loop 60 Point Intelligent Fire Alarm Control Panel with built-in UDACT/Digital Commu         FX-350-126-DR       Single Loop 126 Point Intelligent Fire Alarm Control Panel with built-in UDACT/Digital Commu         FA-300TRB       Black semi-flush trim ring for FX-350 Series enclosures         Optional Adder       Modules         OCAC-304       Four Indicating Circuit Class "A" Converter Module         PR-300       Polarity Reversal/City Tie Module	
FA-300TRB Black semi-flush trim ring for FX-350 Series enclosures Optional Adder Modules OCAC-304 Four Indicating Circuit Class "A" Converter Module	nicator
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PR-300 Polority David Science Would Find the Science Would P	
Remote Annunciators	
RAM-300LCDR Remote LCD Annunciator	
RAM-1016 16 Zone Remote LED Annunciator	
RAM-1032 32 Zone Remote LED Annunciator	
BB-1001R Enclosure for RAM-1016 & RAM-1032 Annunciators	i
RAM-208R 8 Zone Remote LED Annunciator	
RAM-216R 16 Zone Remote LED Annunciator	

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**Canada** 25 Interchange Way Vaughan, Ontario L4K 5W3 Telephone: (905) 660-4655 Fax: (905) 660-4113

U.S.A. 4575 Witmer Industrial Estates Niagara Falls, NY 14305 Toll Free: (888) 660-4655 Fax Toll Free: (888) 660-4113

Web page: http://www.mircom.com

Email: mail@mircom.com



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### BATTERIES

The rechargeable batteries are of sealed lead calcium maintenancefree construction with a fully gelled electrolyte in a polypropylene case. These batteries will not leak or spill even if left upside down for extended periods of time.

## **ELECTRICAL SPECIFICATIONS**

Nominal voltage	12 volts
Charging voltage	
Float	13.5 - 13.8 VDC
Cycle	14.4 - 14.8 VDC
Operating Temp. Range	
Discharge	$-76^{\circ}$ F to $+122^{\circ}$ F
	$(-60^{\circ} \text{C to} + 50^{\circ} \text{C})$
Charge	$-4^{\circ}$ F to $+122^{\circ}$ F
9	$(-20^{\circ} \text{C to} + 50^{\circ} \text{C})$

**Capacity Terminal Type** 

(20 hr. rate)

Model



PS12120



PS1270





PS12350, PS12550

PS12180

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## **BATTERY FEATURES**

- Long Life
- Completely Sealed
- Charge and Discharge in any Position
- Low Self Discharge
- Maintenance Free

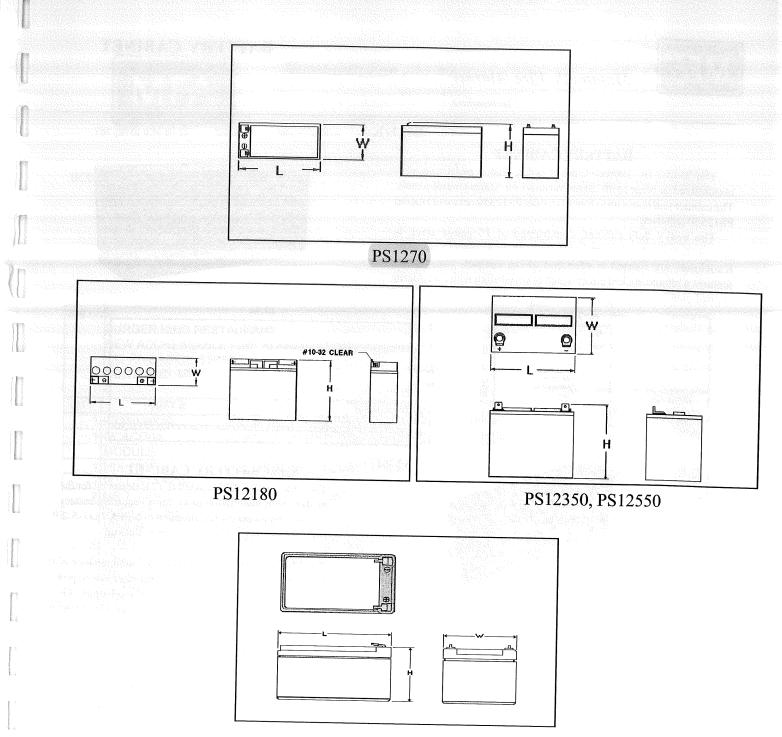
## **SPECIFICATIONS**

#### Dimensions

Weight

PS1270	7 AH	Faston tab ".187" series	5.11 cm L x 10.03 cm H x 6.6 cm W 5.95" L x 3.95" H x 2.6" W	5.75 lbs. (2.61 kg)
PS12120	12 AH	Faston tab ".250" series	12.48 mm L x 5.97 mm H x 4.72 mm W 5.94" L x 3.70" H x 3.98" W	9.33 lbs. (4.24 kg)
PS12180	18 AH	Terminal posts w/5 mm nut & bolt connectors	18.11 cm L x 16.69 cm H x 7.59 cm W 7.13" L x 6.57" H x 2.99" W	13.2 lbs. (5.99 kg)
PS12350	35 AH	" L" blade w/.6.4 mm hole	19.69 cm L x 18.54 cm H x 12.95 cm W 7.75" L x 7.3" H x 5.1" W	24lbs. (10.89kg)
PS12550	55 AH	"L" blade w/6.4 mm hole at negative, 8.9 mm sq. cutout at positive	26.04 cm L x 22.23 cm H x 17.27 cm W 10.25" L x 8.75" H x 6.8" W	39 lbs. (17.69 kg)

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PS12120

## **ORDERING INFORMATION**

Model	Description
PS1270	Sealed lead calcium battery, 7 AH
PS12120	Sealed lead calcium battery, 12 AH
PS12180	Sealed lead calcium battery, 18 AH
PS12350	Sealed lead calcium battery, 35 AH
PS12550	Sealed lead calcium battery, 55 AH

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## Mammoth Fire Alarms

Incorporated

Lowell, MA 01854-3126 Tel. (978) 934-9130 Sales 1-800-995-9808 Fax (978) 934-9131

STANDBY BATTERY CALCULATIONS

SOLD TO:

Created: Updated:

2/18/2009 9/14/2009

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## ALPHA INTELLIGENT ADDRESSABLE MANUAL STATIONS

## **MS-700IDU SERIES**



Intelligent Addressable **Dual Action Manual Station** 

**MS-701IDU** Intelligent Addressable Single Action Manual Station

### Description

Mircom's MS-700IDU Series provide manual fire reporting. These high quality, die-cast metal Intelligent Fire Alarm Manual Stations are available in either single or dual action configurations with a permanently attached addressable module.

The MS-700IDU Series stations are available as single or dual-action devices with key resets and a permanently attached addressable module . The addressable manual station has DIP switches which allow for address setting. Pulling the handle initiates the operation of the addressable module.

All models are available with CAT-30 keys and mount on a standard single gang backbox, Mircom model BB-700 interior surface metal backbox, or BB-700WP weather proof backbox.

#### Operation

The MS-701IDU Single Action Intelligent Manual Station is operated by pulling down the handle marked "PULL HANDLE" on the front of the station. The MS-710IDU Dual Action Intelligent Manual Station is operated by pushing the bar labelled "PUSH BAR" and then pulling down the handle marked "PULL HANDLE". The MS-700IDU Series Manual Stations are reset by opening the station with the key, placing the handle in the normal upright position and relocking the station.

#### Features

- Single or Dual Action
- Key resettable
- Permanently Attached Intelligent Addressable Module
- High-gloss red enamel finish
- Plastic breakrod
- Meets ADA 5 lb. maximum manual-force
- Mounts on standard single gang box, Mircom's BB-700 surface metal backbox or BB-700WP weather proof backbox

## Specifications

The manual station shall be Mircom's MS-700IDU Series. Operating instructions shall be in raised English lettering and the unit shall be constructed of high quality die-cast metal and finished in red enamel paint to provide quick identification. Pulling the handle shall initiate immediate operation of the intelligent addressable module.

All manual fire alarm stations shall be installed as per the specific requirements outlined in the UL codes, as well as all other applicable national or local codes. Final acceptance is subject to the local authority having jurisdiction.





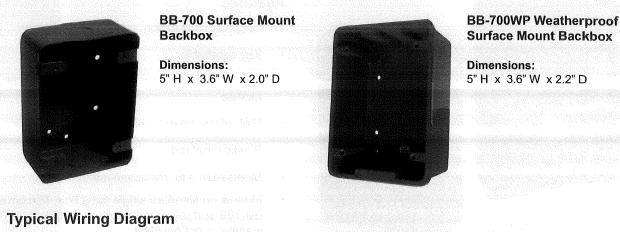
NOT TO BE USED FOR INSTALLATION PURPOSES.

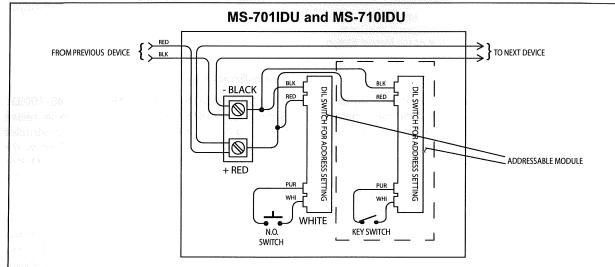
## Specifications

Switch Rating:

Manual Station Dimensions: Color: 1 Amp @ 30 VDC 0.1 Amp @ 125 VAC 4.9" H x 3.5" W x 2.0" D Red with raised white letters, white Manual bar with raised red letters.

### **Surface Mount Backboxes**





## **Ordering Information**

Model	Description		
MS-701IDU	Alpha Intelligent Addressable Key Resettable Single Action Manual Station		
MS-710IDU	J Alpha Intelligent Addressable Key Resettable Dual Action Manual Station		
BB-700 Series 700 Interior Surface Mount Backbox, Red Finish			
BB-700WP	Series 700 Weatherproof Surface Mount Backbox, Red Finish		

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Niagara Falls, NY 14305

Toll Free: (888) 660-4655

4575 Witmer Industrial Estates

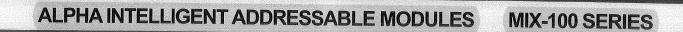
Fax Toll Free: (888) 660-4113

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<image>

MIX-100S

Millin, MIRCO

MIX-100X

## Description

Mircom's Alpha Series Intelligent Addressable Modules are designed to meet a wide range of applications. The monitor and control modules can be used to supervise and activate sounders, strobes, door closers, pull stations, waterflow switches, conventional smoke detectors and more. An eight position dip switch allows for the address setting of the device and the wiring class/style of the devices that are connected to the module. All modules mount in a standard 4" x 4" x 2 1/8" junction box.

## Intelligent Addressable Priority Monitor Module (MIX-100P)

The Intelligent Addressable Priority Monitor Module (MIX-100P) provides an address for a group of UL/ ULC Listed normally open (N.O.) initiating devices, such as heat detectors, beam smoke detectors, 4wire smoke detectors, waterflow switches, manual pull stations, etc. wired in a Class A (Style D) or Class B (Style B) initiating circuit. The MIX-100P is equipped with a priority interrupt to provide a fast response to emergency conditions. The MIX-100P has an activated red LED.

#### Features

- Designed to meet a wide range of applications
- For use with the FX-350 Series Fire Alarm Control Panels
- Fast response time
- Priority Interrupt feature on monitor modules
- Monitor modules can be wired as a Class A (Style D) or Class B (Style B)
- Each module can be addressed from 1 to 126
- Eight position dip switch for address setting
- Red light indicator
- Modules mount in standard 4" junction box

#### Intelligent Addressable Priority Mini-Monitor Module (MIX-101P)

The Intelligent Addressable Priority Mini Monitor Module provides an address for a group of UL/ULC Listed Normally Open (N.O.) initiating devices, such as heat detectors, projected beam smoke detectors, 4-wire smoke detectors, waterflow switches, manual pull stations, etc. wired in a Class A (Style D) or Class B (Style B) initiating circuit. The MIX-101P is equipped with a priority interrupt to provide a fast response to emergency conditions. The MIX-101P has an activated red LED.

## Intelligent Addressable Single Relay Output Module (55000-820)

The Intelligent Addressable Single Relay Output Module connects to the same loop as the initiating devices and provides one Form-C contact to control a variety of normally open or normally closed contact applications cuch as fan operation and door closures.



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## Intelligent Addressable Supervised Control Module (MIX-100S)

The MIX-100S Control module provides supervised monitoring of wiring to signal devices that require an external power supply to operate, such as horns, strobes, bells or speaker isolators. Conventional signals will require a 24 VDC power source and speakers will require an audio input. The red LED will illuminate when the module is activated. The module is capable of Class A (Style Z) or Class B (Style Y) supervision.

### **Specifications**

#### **General Specifications**

Operating Voltage	16-28 VDC			
Communication	Class A (Style D) or Class B (Style B) switch selectable			
Relative Humidity	0% to 95% (No condensation or icing)			

#### MIX-100P and MIX-101P

Current Consumption	600 μA 4 mA (LED on)				
Alarm Current					
Dimensions	MIX-100P	4.0" W x 4.0" H x 1.3" D			
	MIX-101P	3.0" W x 2.0" H x 0.75" D			
Malahá	MIX-100P	3.0 oz. (85.8g)			
Weight	MIX-101P	1.5 oz. (42.6g.)			

#### **MIX-100S**

Current Consumption	1 mA	an an the second se				
Source Power	Signals	24 VDC regulated				
Source Power	Speakers 70.7 V RMS					
Ratings	2A @ 30VI	DC, 0.6A @ 125VAC				
Dimensions	4.0" W x 4.	.0" H x 1.3" D				
Weight	3.0 oz. (85	.8g)				

#### Ordering Information

Model	Description
MIX-100P	Intelligent Addressable Priority Monitor Module
MIX-101P	Intelligent Addressable Priority Mini Monitor Module
MIX-100S	Intelligent Addressable Supervised Control Module
MIX-100X	Fault Isolator Module
55000-820	Intelligent Addressable Single Relay Output Module

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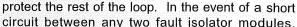
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circuit between any two fault isolator modules, both modules immediately switch to an open circuit condition and isolate any group of sensors between them. The remaining units on the circuit will continue to operate in a normal fashion (must be wired in Class 'A' or Style 6).

The MIX-100X Fault Isolator Module is used to

protect the system against wire-to-wire short circuits

on the analog loop. The modules should be spaced

between groups of sensors or modules in a loop to

Fault Isolator Module (MIX-100X)

Operating Temperature	0°F to +155°F (-20°C to +70°C)
Housing/Cover Plate Finish	White Polycarbonate

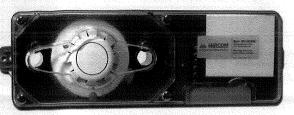
#### MIX-100X

<b>Current Consumption</b>	35µA at 24V	
Max. Line Current	1 Amp	
Line Resistance	0.2 ohm	
Dimensions	4.0" W x 4.0" H x 1.3" D	
Weight	3.0 oz. (85.8g)	

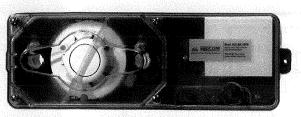
CAT. 5675 Rev. 0

# Hillin MIRCOM®

## ALPHA INTELLIGENT DUCT DETECTORS MIX-DH3000 SERIES



MIX-DH3000 Intelligent Ionization Duct Detector



MIX-DH3100R Intelligent Photoelectric Duct Detector with Relay

### Description

Mircom's MIX-DH3000 Series Intelligent Smoke Duct Detectors are the latest analog addressable innovation for early detection of smoke and products of combustion present in air moving through HVAC ducts in Commercial, Industrial, and Residential applications.

The Duct Detectors are designed to prevent the recirculation or spread of smoke by air handling systems, fans, and blowers. Complete systems may be shut down via the building's fire alarm control panel (FACP) in the event of smoke detection.

The MIX-DH3000 Series are Low-Flow Ionization and Photoelectric air duct smoke detectors that are capable of sensing smoke in air velocities from 100 to 4,000 feet per minute (0.5 to 20.32 m/sec). Low-flow technology can detect smoke at air speed velocities of 100 feet per minute or greater, while continuing the same reliable performance to 4,000 feet per minute.

The MIX-DH3000 Series are designed and built to meet all local code requirements, as well as the NFPA and ICC standards regarding HVAC supply and return duct smoke detectors. Output terminals are provided for a remote alarm indicator accessory.

#### Features

- Low-Flow Technology: Both Ionization and Photoelectric models listed for velocities between 100-4000 ft./min
- Both Ionization and Photoelectric models listed for high temperature applications
- Units supplied with slide-in MIX-ADD Address Card for easy device addressing
- Patent pending "No-Tools Required" front or rear loading and removing sampling/exhaust tubes
- Patent pending "Test Port Valve" allows for aerosol smoke testing without cover removal
- Clear cover fitted with four captive "No-Tools Required" thumbscrews
- Instantaneous cover removal trouble indication
- Vertical terminal block for easier
- Steady red LED on detector head indicates alarm
- More wiring space than competitive models
- Footprint allows easy retrofit in many applications without additional drilling
- Duct wall gaskets on back of enclosure are preinstalled
- External mounting tabs do not require cover removal to install
- Colored cover gasket indicates proper cover seal
- Large terminal connection screws
- Alpha Series interchangeable "plug-in" UL268 photoelectric or ionization heads
- Advanced detector head design yields internal dust filtering
- No additional screens or filters to clean
- Compatible with FX-350 Fire Alarm Control Panels
- Complete wiring details permanently attached to unit

#### MIX-DH3000R/MIX-DH3100R (with relay)

- Operating voltages: 24VAC or 24VDC
- In-line terminal block for easier wiring
- · Remote accessories available
- · Includes green pilot and red alarm visual indicators
- One set of 15A form "C" alarm contacts

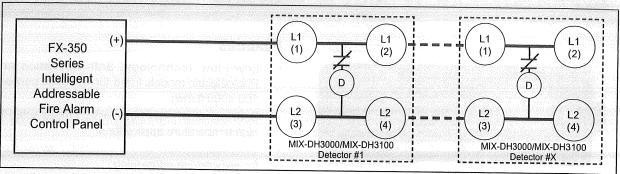


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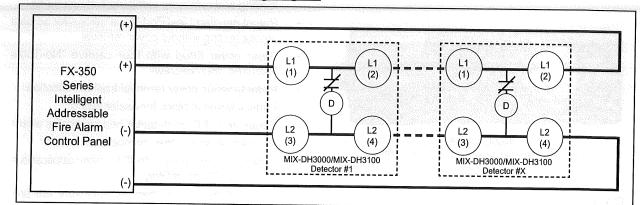
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### MIX-DH3000/MIX-DH3100 Specifications

## MIX-DH3000/MIX-DH3100 Class "B" Wiring Diagram

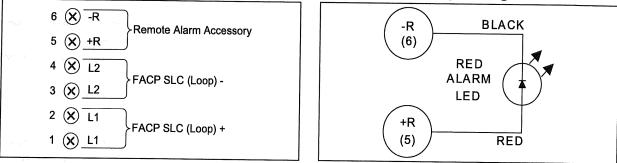


## MIX-DH3000/MIX-DH3100 Class "A" Wiring Diagram



### **Terminal Connections**

## **Remote Accessory Wiring**



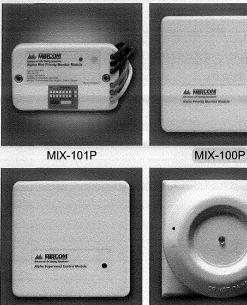
## **Engineer Specifications**

- Air duct smoke detectors shall be Mircom MIX-DH3000 Series. For ionization detectors the model number is MIX-DH3000. For photoelectric detectors the model number is MIX-DH3100. The detectors shall be listed by Underwriters Laboratories per UL 268A.
- The detectors shall operate at air velocities from 100 feet per minute to 4,000 feet per minute and at temperatures of no greater than 140°F (60°C).
- · Visual indication of alarm and power must be provided on the detector.
- · Air handling unit shut down shall be accommodated via the associated FACP.
- Detector head shall not require additional filters or screens which must be maintained.
- The housing shall contain a detector base which will accept photoelectric or ionization detector heads as well as a means of detector addressing.
- Terminal connections shall be of the screw type, a minimum of #6 screw (#12 to #22 AWG compatible). Terminals shall be provided for remote alarm indication. All wiring must comply with local codes and regulations.
- A method of testing the alarm function with a magnet must be provided.
- A method of smoke testing the detector without removing the cover must be provided.
- All unit, remote accessory, and common function connection designations must be permanently affixed to the unit.
- · Cover and sampling/exhaust tube installation or removal must not require the use of tools.
- Sample and exhaust tubes shall be capable of removal/installation from the front and/or rear of the detector for inspection/ maintenance.





## **MIX-100 SERIES**



**MIX-100S** 



**MIX-100X** 

#### Description

Mircom's Alpha Series Intelligent Addressable Modules are designed to meet a wide range of applications. The monitor and control modules can be used to supervise and activate sounders, strobes, door closers, pull stations, waterflow switches, conventional smoke detectors and more. An eight position dip switch allows for the address setting of the device and the wiring class/style of the devices that are connected to the module. All modules mount in a standard 4" x 4" x 2 1/8" junction box.

#### Intelligent Addressable Priority Monitor Module (MIX-100P)

The Intelligent Addressable Priority Monitor Module (MIX-100P) provides an address for a group of UL/ ULC Listed normally open (N.O.) initiating devices, such as heat detectors, beam smoke detectors, 4wire smoke detectors, waterflow switches, manual pull stations, etc. wired in a Class A (Style D) or Class B (Style B) initiating circuit. The MIX-100P is equipped with a priority interrupt to provide a fast response to emergency conditions. The MIX-100P has an activated red LED.

#### **Features**

- Designed to meet a wide range of applications
- For use with the FX-350 Series Fire Alarm Control Panels
- Fast response time
- Priority Interrupt feature on monitor modules
- Monitor modules can be wired as a Class A (Style D) or Class B (Style B)
- Each module can be addressed from 1 to 126
- Eight position dip switch for address setting
- **Red light indicator**
- Modules mount in standard 4" junction box

#### Intelligent Addressable Priority Mini-Monitor Module (MIX-101P)

The Intelligent Addressable Priority Mini Monitor Module provides an address for a group of UL/ULC Listed Normally Open (N.O.) initiating devices, such as heat detectors, projected beam smoke detectors, 4-wire smoke detectors, waterflow switches, manual pull stations, etc. wired in a Class A (Style D) or Class B (Style B) initiating circuit. The MIX-101P is equipped with a priority interrupt to provide a fast response to emergency conditions. The MIX-101P has an activated red LED.

#### Intelligent Addressable Single Relay Output Module (55000-820)

The Intelligent Addressable Single Relay Output Module connects to the same loop as the initiating devices and provides one Form-C contact to control a variety of normally open or normally closed contact applications cuch as fan operation and door closures.



**CATALOG NUMBER** 

NOT TO BE USED FOR INSTALLATION PURPOSES.



## ALPHA INTELLIGENT ADDRESSABLE MODULES

## **MIX-100 SERIES**





**MIX-101P** 





MIX-100S

MIX-100X

## Description

Mircom's Alpha Series Intelligent Addressable Modules are designed to meet a wide range of applications. The monitor and control modules can be used to supervise and activate sounders, strobes, door closers, pull stations, waterflow switches, conventional smoke detectors and more. An eight position dip switch allows for the address setting of the device and the wiring class/style of the devices that are connected to the module. All modules mount in a standard 4" x 4" x 2 1/8" junction box.

## Intelligent Addressable Priority Monitor Module (MIX-100P)

The Intelligent Addressable Priority Monitor Module (MIX-100P) provides an address for a group of UL/ ULC Listed normally open (N.O.) initiating devices, such as heat detectors, beam smoke detectors, 4wire smoke detectors, waterflow switches, manual pull stations, etc. wired in a Class A (Style D) or Class B (Style B) initiating circuit. The MIX-100P is equipped with a priority interrupt to provide a fast response to emergency conditions. The MIX-100P has an activated red LED.

#### Features

- Designed to meet a wide range of applications
- For use with the FX-350 Series Fire Alarm Control Panels
- Fast response time
- Priority Interrupt feature on monitor modules
- Monitor modules can be wired as a Class A (Style D) or Class B (Style B)
- Each module can be addressed from 1 to 126
- Eight position dip switch for address setting
- Red light indicator
- Modules mount in standard 4" junction box

#### Intelligent Addressable Priority Mini-Monitor Module (MIX-101P)

The Intelligent Addressable Priority Mini Monitor Module provides an address for a group of UL/ULC Listed Normally Open (N.O.) initiating devices, such as heat detectors, projected beam smoke detectors, 4-wire smoke detectors, waterflow switches, manual pull stations, etc. wired in a Class A (Style D) or Class B (Style B) initiating circuit. The MIX-101P is equipped with a priority interrupt to provide a fast response to emergency conditions. The MIX-101P has an activated red LED.

## Intelligent Addressable Single Relay Output Module (55000-820)

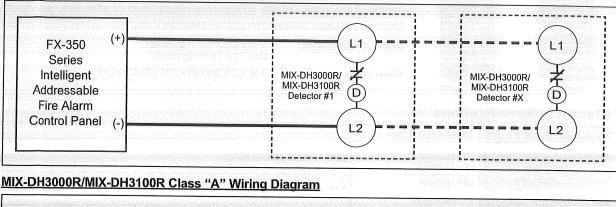
The Intelligent Addressable Single Relay Output Module connects to the same loop as the initiating devices and provides one Form-C contact to control a variety of normally open or normally closed contact applications cuch as fan operation and door closures.

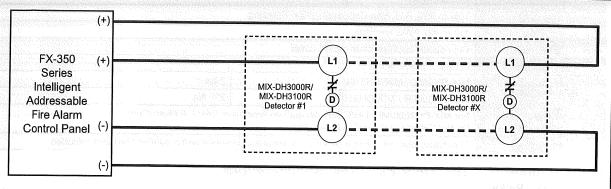


CATALOG NUMBER

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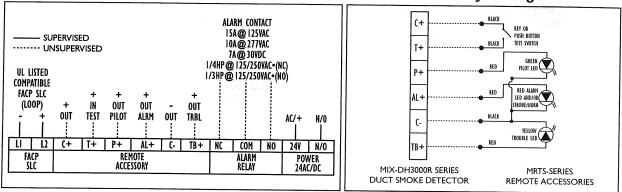
## MIX-DH3000R/MIX-DH3100R Specifications MIX-DH3000R/MIX-DH3100R Class "B" Wiring Diagram





**Terminal Connections** 

**Remote Accessory Wiring** 

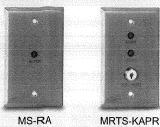


## **Engineer Specifications**

- Air duct smoke detectors shall be Mircom MIX-DH3000 Series. For ionization detectors the model number is MIX-3000R. For
  photoelectric detectors the model number is MIX-3100R. The detectors shall be listed by Underwriters Laboratories per UL 268A.
- The detectors shall operate at air velocities from 100 feet per minute to 4,000 feet per minute and at temperatures of no greater than 140°F (60°C).
- · Visual indication of alarm and power must be provided on the detector front.
- A manual relay/test switch located on the front of the device shall be provided.
- Detector head shall not require additional filters or screens which must be maintained, and shall include both a standby and alarm visual indication.
- The housing shall contain a detector base which will accept photoelectric or ionization detector heads as well as a means of detector addressing.
- Terminal connections shall be of the screw type, a minimum of #6 screw (#12 to #22 AWG compatible). Terminals shall be provided for remote alarm indication. All wiring must comply with local codes and regulations.
- A method of smoke testing the detector without removing the cover must be provided.
- All unit, remote accessory, and common function connection designations must be permanently affixed to the unit.
- · Cover and sampling/exhaust tube installation or removal must not require the use of tools.
- Sample and exhaust tubes shall be capable of removal/installation from the front and/or rear of the detector for inspection/ maintenance.



### **Remote Accessories**



The MS-RA and MRTS-KAPR remote accessories are designed to be used with Mircom's Duct Smoke Detectors to provide visual indication as well as remote test/reset functions. These devices are constructed of attractive, yet durable brushed stainless steel and mount on a standard single gang electrical backbox.

Power Requirements:

Dimensions:

Alarm LED 15mA @ 24VDC Pilot LED 15mA @ 24VDC 4 ½" (114.3mm)H x 2 ¾"(69.85mm)W

#### **Electrical Specifications**

Air Velocity	100 to 4,000 ft./min.							
	MIX-DH3000		0000)					
Ambient	MIX-DH300R	32°F to 150°F (0°C to	66°C)					
Temperature	MIX-DH3100							
	MIX-DH3100R	32°F to 140°F (0°C to 60°C)						
Humidity	10% to 95% R.H. No	n-Condensing/Non-Freezing						
Wiring	#12 to #22 AWG term	ninals			A construction			
Material	Grey plastic backbox	,clear plastic cover						
Dimensions	L-13½" X H-4½" X D-	-21⁄4"			(			
Max Net Weight	MIX-DH3000 / MIX-D	DH3100	2 lbs.					
Max. Net Weight	MIX-DH3000R / MIX-	-DH3100R	21/4 lbs.					
Radioactive Element	For MIX-DH3000/MIX Do Not Expose to Co	K-DH3000R (Ionization) Ame Prosive Atmospheres	ricium 241; 0.9 Micro-Curie	Alexandra Alexandra Changai - M				
Hardware	7" exhaust tube, sam	pling tube end cap, mounting	template and mounting hardw	are included				

#### MIX-DH3000R/MIX-DH3100R Electrical Specifications Relay Contact Ratings

	Resistive Load	Inductive Load
Alarm Contacts	1 set form "C" rated at 15 Amps @125VAC 10 Amps @ 277VAC 7 Amps @ 30VDC	1⁄4 HP @ 125/250VAC (NC) 1⁄4 HP @ 125/250VAC (NO)

#### **Control Board Power Requirements (without accessories)**

Standby 24VAC	105 mA	A 1=	24VAC	195 mA
24VDC	26 mA	Alarm	24VDC	54 mA

#### **Ordering Information**

Model	Description
MIX-DH3000	Alpha Intelligent Ionization Low-Flow Duct Smoke Detector
MIX-DH3000R	Alpha Intelligent Ionization Low-Flow Duct Smoke Detector with relay
MIX-DH3100	Alpha Intelligent Photoelectric Low-Flow Duct Smoke Detector
MIX-DH3100R	Alpha Intelligent Photoelectric Low-Flow Duct Smoke Detector with relay
MSTN-1.0	Sampling tube for 12" or less duct width
MSTN-2.5	Sampling tube for 6" to 2.5' duct width
MSTN-5.0	Sampling tube for 2.5' to 5.0' duct width
MSTN-10.0	Sampling tube for 5.0' to 10.0' duct width
MRTS-KAPR	Remote Alarm LED (Red), Pilot LED (Green) and Key-Operated Test/Reset Switch on a Single Gang Plate
MS-RA	Remote Alarm LED (Red) on a Single Gang Stainless Steel Plate

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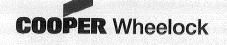
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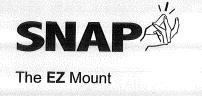
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## Series ZRS Strobes, ZNS Horn Strobes and Series ZNH Horns



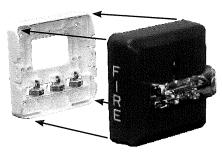




#### **Description:**

The Wheelock Series Z notification appliances feature an easy snap on base that is designed to simplify the installation and testing of horns, strobes, and horn/strobes. The separate Series Z snap on base can be pre-wired so circuit wiring can be fully tested before the appliance is installed and before the walls are covered. Once all surrounding work is complete, the appliance can be simply installed by snaping it on the base. Shorting contacts in the base, which provide continuity for circuit testing, are permanently opened when the appliance is installed so any subsequent removal of the appliance will indicate a trouble condition on that circuit at the control panel when circuit supervision is enabled. The same base is used for all Series Z horns, strobes and horn/strobes to provide consistent installation and easy replacement of appliances if required. A locking screw is also included for the appliance to provide extra secure installation.

The Wheelock Series Z appliances incorporate the same dependable circuitry and high efficiency optics that are used in Wheelock RSS strobes, NS horn/strobes and NH horns and have the same high performance ratings. The Series Z appliances are compatible with all UL listed "Regulated" panels and all panels that are compatibility listed with Wheelock RSS, NS and NH appliances.



ZNS, ZNH and ZRS appliances go onto the base plate in a SNAP.



#### Features:

- Approvals include: UL Standard 1971, UL Standard 464, New York City (MEA), California State Fire Marshal (CSFM), Factory Mutual (FM) and Chicago (BFP). See approvals by model number in Specifications and Ordering Information
- ADA/NFPA/UFC/ANSI and OSHA 29, Part 1910, 165
   compliant
- EZ Mount SNAP design, with separate base plate, provides ability to pre-wire the base and test the circuit wiring before the walls are covered
- The base plate is protected by a disposable cover and the appliances can quickly snap onto the base after the walls are painted.
- Patented EZ Mount Universal Mounting Plate uses single plate for ceiling and wall mount installations
- Wall Mount models feature field selectable candela settings of 15/30/75/110cd and 135/185cd
- Ceiling Mount models feature field selectable candela settings of 15/30/75/95cd and 115/177cd
- Strobes can be synchronized using the Wheelock sync modules or power supplies with built-in sync protocol
- 12 and 24 VDC models with UL "Regulated Voltage" using filtered DC or unfiltered VRMS input voltage
- Strobes produce 1 flash per second over the "Regulated Voltage" range (ZNS, ZRS models)
- Selectable Continuous Horn or Temporal (Code-3) Tones with selectable 90 or 95 dBA setting (ZNH, ZNS models)
- Selectable 12 or 24VDC in 1 appliance (ZNH model)

NOTE: All CAUTIONS and WARNINGS are identified by the symbol A. All warnings are printed in bold capital letters.

WARNING: PLEASE READ THESE SPECIFICATIONS AND ASSOCIATED INSTALLATION INSTRUCTIONS CAREFULLY BEFORE USING, SPECIFYING OR APPLYING THIS PRODUCT. VISIT WWW.COOPERWHEELOCK.COM OR CONTACT COOPER WHEELOCK FOR THE CURRENT INSTALLATION INSTRUCTIONS. FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIONS, CAUTIONS OR WARNINGS COULD RESULT IN IMPROPER APPLICATION, INSTALLATION AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

#### General Notes:

- Strobes are designed to flash at 1 flash per second minimum over their "Regulated Voltage Range".
- All candela ratings represent minimum effective strobe intensity based on UL Standard 1971.
- Series ZNS Strobe products are listed under UL Standards 1971 and 464 for indoor use with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 93% (± 2%).
- Series ZNH horns are listed under UL Standard 464 for audible signal appliances (Indoor use only).
- \* "Regulated Voltage Range" is the newest terminology used by UL to identify the voltage range. Prior to this change UL used the terminology "Listed Voltage Range".

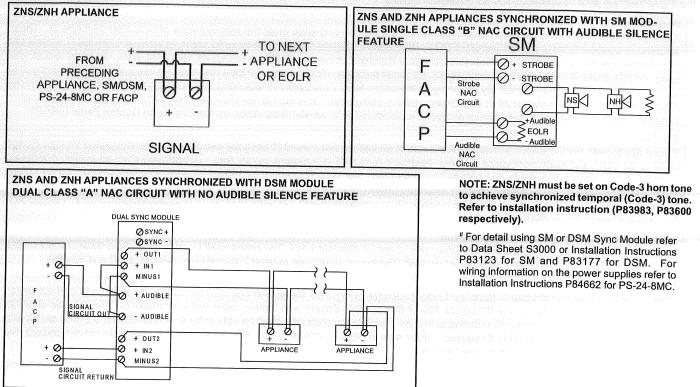
Table 1: Series	SZNS Ratin	gs Per UL Sta	ndard 1971	Table 2: Series ZNS/ZNH Horn dBA Ratings								
Model	Input	Regulated Voltage	Strobe Candela	Volume	<ul> <li>Designed and exception of the set</li> </ul>	erant dBA er UL 464	Anechoic dBA @ 10 ft					
	Range VDC/FWR	(CD)	(CD) Description		12 VDC	24 VDC	12 VDC	24 VDC				
ZNS-MCW	24	16.0 - 33.0	15/30/75/110	Continuous	High	83	87	89	95			
ZNS-MCWH	24	16.0 - 33.0	135/185	Horn	Low	76	81	84	90			
ZNS-MCC	24	16.0 - 33.0	15/30/75/95	Code 3	High	79	82	89	95			
ZNS-MCCH	24	16.0 - 33.0	115/177	Horn	Low	72	76	84	90			

Series ZNS/ZNH 24 VDC		Audible		Wal	l Mount	Strobe	Models		C	Ceiling	Mour	t Strol	be Mod	els
		ZNH-12/24	ZNS-MCW				ZNS-M	ZNS-MCWH		ZNS-	мсс	in partin Alexan	ZNS-MCCH	
		@24VDC	15cd	30cd	75cd	110cd	135cd	185cd	15cd	30cd	75cd	95cd	115cd	177cd
High (95) dBA	24VDC	0.044	0.074	0.107	0.184	0.244	0.350	0.477	0.082	0.124	0.209	0.275	0.350	0.477
Low (90) dBA	24VDC	0.018	0.066	0.101	0.177	0.232	0.306	0.429	0.071	0.114	0.201	0.261	0.306	0.429
		Audible									1		<u> </u>	
Series ZNS 12VD0		ZNH-12/24												
		@12V												
High (89) dBA	12 VDC	0.021												
_ow (84) dBA	12VDC	0.012												

Table 4: Seri	es ZRS /	Average	RMS C	urrent*								
ZRS 24VDC Models	ZRS - Wall Mount						ZRS - Ceiling Mount					
	MCW			мсwн		MCC				МССН		
	15cd	30cd	75cd	110cd	135cd	185cd	15cd	30cd	75cd	95cd	115cd	177cd
24 vdc	0.060	0.092	0.165	0.220	0.300	0.420	0.065	0.105	0.189	0.249	0.300	0.420

\* RMS current ratings are per UL average RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33v for 24v units). For strobes the UL max current is usually at the minimum listed voltage (16v for 24v units). For audibles the max current is usually at the maximum listed voltage (33v for 24v units). For unfiltered FWR ratings, see installation instructions.

#### Wiring Diagrams<sup>#</sup>



## SPECIFICATION & ORDERING INFORMATION

Model Number	Order Code	Strobe	Sync w/ SM, DSM or	24	12	Mounting		Agency Approvals					
	Code	Candela	PS-24-8MC	VDC	VDC	Options#	UL	MEA	CSFM	FM	BFP		
ZNS-MCW-FR	0304	15/30/75/110	x	X	-	B, D, E, F	x	*	x	*	*		
ZNS-MCW-FW	0305	15/30/75/110	X	X	-	B, D, E, F	X	*	x	*	*		
ZNS-MCWH-FR	0306	135/185	X	X	-	B, D, E, F	x	*	X	*	*		
ZNS-MCWH-FW	0307	135/185	X	Х	-	B, D, E, F	X	*	X	*	*		
ZNH-R	0300	-	X	Х	х	B, D, E, F	x	*	X	*	*		
ZNH-W	0301	-	Х	Х	x	B, D, E, F	x	*	X	*	*		
ZNS-MCC-FR	0310	15/30/75/95	Х	Х	-	B, D, E, F	x	*	X	*	*		
ZNS-MCC-FW	0311	15/30/75/95	х	х	-	B, D, E, F	x	*	x	*	*		
ZNS-MCCH-FR	0312	115/177	х	х	-	B, D, E, F	x	*	x	*	*		
ZNS-MCCH-FW	0313	115/177	х	х	-	B, D, E, F	x	*	- <u>x</u>	*	*		
ZRS-MCW-FR	4085	15/30/75/110	х	x		B, D, E, F	x	*	X	*	*		
ZRS-MCW-FW	0302	15/30/75/110	x	x	-	B, D, E, F	X	*	x	*	*		
ZRS-MCWH-FR	5242	135/185	х	x	-	B, D, E, F	x	*	X	*	*		
ZRS-MCWH-FW	0303	135/185	х	x		B, D, E, F	X	*	x	*	*		
ZRS-MCC-FW	0309	15/30/75/95	х	X	- +	B, D, E, F	x	*	X	*	*		
ZRS-MCC-FR	0308	15/30/75/95	х	x	-	B, D, E, F	X	*	x	*	*		
ZRS-MCCH-FR	5240	115/177	x	X	-	B, D, E, F	x	*	x	*	*		
ZRS-MCCH-FW	0314	115/177	x	x	-	B, D, E, F	x	*	x	*	*		

#The ZRS, ZNS and ZNH will mount to single-gang, double-gang, 4" octal, 4" square and 3-1/2" octal back boxes.

NOTE: Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Wheelock Inc. standard terms and conditions.

\*Pending

#### ARCHITECTS AND ENGINEERS SPECIFICATIONS

#### General

Audible/visual notification appliances shall be listed for indoor use and shall meet the requirements of FCC Part 15 Class B. These appliances shall be listed under UL Standard 1971, (Standard for Safety Signaling Devices for Hearing Impaired) and UL Standard 464 (Fire Protective Signaling). The appliances shall use a Patented Universal EZMount backplate that shall allow mounting to a single-gang, double-gang, 4-inch square, 4" octal, or a 3-1/2" octal backbox. Two wire appliance wiring shall be capable of directly connecting to the mounting back plate. Continuity checking of the entire NAC circuit prior to attaching any audible/visual notification appliances shall be allowed. A dust cover shall fit and protect the mounting plate. The dust cover shall be easily removed when the appliance is installed over the backplate. Removal of an appliance shall result in an alarm condition by the Fire Alarm Control Panel (FACP).

#### Strobes

Strobe appliances shall produce a minimum flash rate of 60 flashes per minute (1 flash per second) over the Regulated Voltage Range of 16 to 33 VDC and shall incorporate a Xenon flashtube enclosed in a rugged Lexan lens. The strobes shall be available with two or four field selectable settings in one unit and shall be rated, per UL 1971, for up to 185 cd for wall mounting and 177 cd for ceiling mounting. The strobes shall operate over an extended temperature range of 32°F to 120°F (0°C to 49°C) and be listed for maximum humidity of 95% RH. Strobe inputs shall be polarized for compatibility with standard reverse polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP).

#### **Audibles and Audible/Strobe Combinations**

Horns and horn/strobes shall be listed for Indoor use under UL Standard 464. The horns shall be able to produce a continuous output or a temporal code-3 output that can be synchronized. The horns shall have at least 2 sound level settings of 90 and 95 dBA.

#### Synchronization Modules

When synchronization of strobes or temporal Code-3 audibles is required, the appliances shall be compatible with the Wheelock Series SM and DSM Sync Modules or the Wheelock PS-24-8MC Power Supply with built-in, patented sync protocol. The strobes shall not drift out of synchronization at any time during operation. Audibles and strobes shall be able to be synchronized on a 2-wire circuit with the capability to silence the audible if required. If the sync module or power supply fails to operate (i.e., contacts remain closed), the strobes shall revert to a non-synchronized flashrate



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WE ENCOURAGE AND SUPPORT NICET CERTIFICATION 3 YEAR WARRANTY Made in USA

Z1000 ZNS/ZNH ZRS 12/06



## 490S-1280 MICRO IV<sup>TM</sup>



Incorporated

The MICRO IV<sup>™</sup> strobe family is an enhanced version of the MICROSTROBE featuring a power supply which can operate from a very wide input voltage range of 12 thru 80 VDC or 16 thru 24 VAC. The supply has a regulated output so that the lamp brightness and flash remain constant when operated over the rated input voltage range. The power supply is potted in polyurethane for the ultimate in protection from moisture and vibration. The enclosure is all LEXAN<sup>®</sup>, and the plug-in lamp is field replaceable. All units are polarity protected and have built-in filters to protect against radio interference and spike voltages.

## **ORDERING INFORMATION**

Please specify lens color and model number desired. Colors available: AMBER, BLUE, CLEAR, GREEN, or RED

Model No. 490S/1280-xxx	<b>Description</b> 1/2" Female Pipe Thread Mount	Voltage 12 thru 80 VDC
	Throug mount	

xxx = COLOR

Description

**Mounting Kit** 

FMSL/4RA

ACCESSORY Model No.

FMSL/4RA

## SPECIFICATION

Lamp Type 5001 Xenon Strobe Lamp

Lens Type 470S-L-xxx (Please Specify Color)

Voltage and Amperage

Draws 0.4A 12-80VDC avg. @ 12VDC tapering to 0.05A avg. @ 80VDC

**Power Supply Output 2.7Watts** 1.75 Joules per Flash

Flash Rate

60 to 80 Flashes per Minute

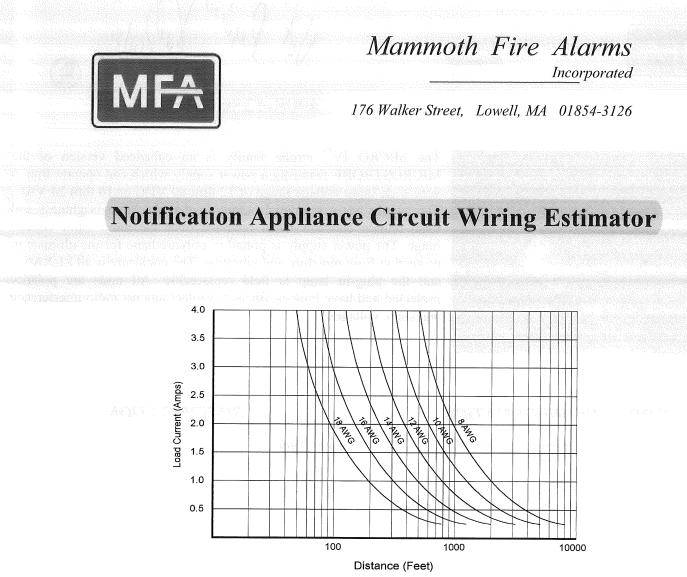
Intensity

CLEAR	50	Candela eff.
AMBER	40	Candela eff.
BLUE	20	Candela eff.
RED	10	Candela eff.
GREEN	20	Candela eff.

#### Size and Weight

<u>5" Tall</u> x <u>3" Dia.</u>	<u>0.6 lbs.</u>
(127 mm) (76 mm)	(0.27 kg)

Specifications are provided for information only and are believed to be accurate. However, no responsibility is assumed by Mammoth Fire Alarms, Inc. for their use. Specifications subject to change without notice. © 1999 All Rights Reserved



Maximum Line Loss = 10%

To determine the required wire size for each notification appliance circuit, use the above chart and the following steps.

- Compute the notification appliance current. (Number of devices multiplied by the device current = amperes)
- Compute the distance in feet from the panel to the last notification appliance.
- Locate total appliance load (amperes) on the vertical axis of the chart; locate wire distance (in feet) on the horizontal axis; find the point where they intersect.
- Read wire size in AWG on the curved line to the right of the point of intersection.

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## Mammoth Fire Alarms

Incorporated

176 Walker Street

Lowell, MA 01854

## POLICIES

### WARRANTY:

Mammoth Fire Alarms, Inc. warranties all equipment supplied by it to be free from defects for one year from the date of shipment. Mammoth Fire Alarms, Inc. will repair or replace, at its option, any equipment which it determines to be defective. Said equipment will be returned to the purchaser. Mammoth Fire Alarms, Inc. shall not be obligated to repair or replace equipment which has been repaired by others, abused, improperly installed, altered or otherwise misused or damaged in any way, including damage caused by any Acts of God. Mammoth Fire Alarms, Inc. will not be responsible for any on-site dismantling, reassembling or reinstallation charges or costs.

#### **TROUBLESHOOTING/SERVICE:**

All field troubleshooting/service performed by Mammoth Fire Alarms, Inc. personnel will be billed per hour portal to portal, plus all costs for parts. All defective equipment that is under warranty will be replaced or repaired, at the option of Mammoth Fire Alarms, Inc., provided the equipment was not damaged during installation, damaged because of poor or improper installation, or damaged by any Acts of God. <u>No troubleshooting will be performed, either over the telephone or in the field, if the customer's account is not current.</u>

## **RETURNS FOR CREDIT:**

Authorizations for merchandise to be returned for credit must be previously authorized and cannot exceed 60 days from the date of original MFA invoice. Merchandise authorized for return must be sent PREPAID and insured, within 30 days of the date of the authorization (date on this fax). When merchandise is returned for credit and is returned for other than Mammoth Fire Alarms, Inc. shipping error, a 20% charge will be made to cover handling, inspection and testing. Non-stocking items will be assessed a 50% restocking charge. For credit to be issued, the item(s) must be in the original factory packaging. Custom and special ordered items will not be accepted for credit. Items damaged in transit will be deducted from the credit. Acceptance of goods returned for credit shall be at the sole discretion of Mammoth Fire Alarms, Inc. Supplying an RA number is not a guarantee of issuance of credit.

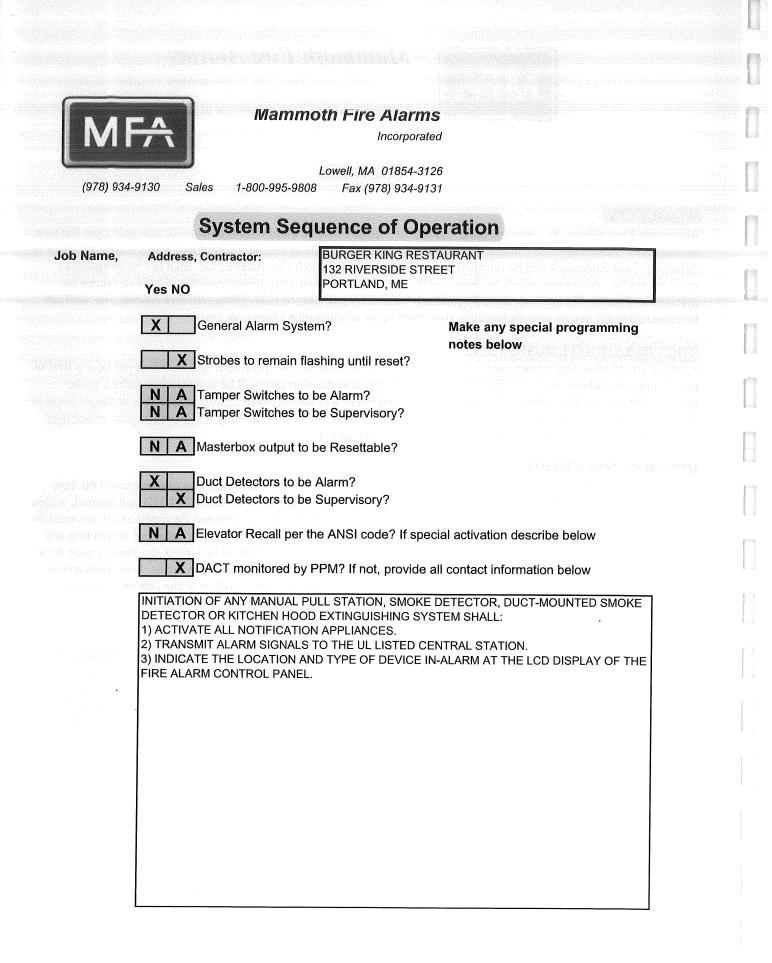
## **RETURN FOR REPAIR OR REPLACEMENT:**

Mammoth Fire Alarms, Inc requires prior approval of return of equipment for repair. The information required for equipment to be returned for repair is the product model # and the problem that exists with the unit. Confirmation will be faxed to you and then the return may be made. If the item(s) is under warranty, (One year from the date of shipment) it will be repaired or replaced at our option. All items shipped to Mammoth Fire Alarms, Inc. must be shipped PREPAID. If the item(s) is out of warranty, but repairable, it will be repaired at a cost not to exceed 50% of the cost of a new unit.

## **MATERIALS DAMAGED UPON RECEIPT:**

Any materials physically damaged upon receipt must remain at the original place of delivery and in the original packaging. If the packaging is visibly damaged, the delivery driver should be instructed to make note of it prior to signing for the delivery. Mammoth Fire Alarms, Inc. shipping manager must then be contacted to arrange a replacement and an on-site evaluation of the damaged equipment. Mammoth Fire Alarms, Inc. cannot warranty any damaged equipment that has been removed from its original delivery location or does not contain the original packaging.

"Servicing the installer before and after the installation" <u>www.mammothfire.com</u>





## **Property Protection Monitoring** 1 76 Walker Street

Lowell, MA 01854





#### **CONNECTICUT**

- GE Capital
- Groton Submarine Base
- Shaws Supermarkets
- SVG Lithography

#### MAINE

- Bangor International Airport
- Biddeford Middle School
- Husson College
- Marshfield High School
- Shaws Supermarket
- · Seal Rock Healthcare
- TD Banknorth
- · United Rentals

#### MASSACHUSETTS

- Boston University
- · Brandeis University
- Cotuit Center For The Arts

Aiphone Air Products Controls Altronix Bosch CCTV **Cooper Notification** 

## MASSACHUSETTS (cont.)

Federal Express

Network solutions by radio

- · Hanscom Air Force Base
- · Harvard University
- Heritage Assisted Living
- · Hess Gas Station
- · John Smith Soccer Centers
- NFPA Headquarters
- · Putnam Investment
- R.K. Plaza
- · South Shore Hospital
- Tufts University
- United Parcel Service
- · World Trade Center

#### NEW HAMPSHIRE

- Boston University
- Colby Sawyer College
- Dartmouth College
- · Haverwood Retirement Community

## TECHNICAL ASSISTANCE

Mammoth Fire Alarms provides our customers with convenient technical assistance. By calling 800-995-9808. our customers can reach our technicians from the job-site.

- On-site service is available, for those situations where problems can not be resolved over the phone.
- Full parts inventory and state-of-the-art test equipment are carried in the service vehicles by all of our field technicians.
- Service technicians are provided with continuing technical training on all of our products. In addition, we have considerable electrical field experience.
- We also offer numerous seminars on technical topics. on-site, to train customers. At our state of the art education center.

The entire Mammoth Fire Alarms team is committed to providing and maintaining the most dependable life safety systems.

## Partial Installation List

#### NEW HAMPSHIRE (cont.)

- Jac Pac Foods
- J. Jill Group
- LRG Healthcare
- Pease International Trade Port
- Quail Hollow Retirement Community

## RHODE ISLAND

· State House

- Amtrol • Brown University
- · Hess Gas Stations
- Rhode Island School of Design

#### VERMONT

· Ben & Jerry's

## Partial <u>Manufacturers List</u> King Fisher

Mircom

Panasonic

Protectowire

Napco

Safety Technologies Sapling Clock Systems Securitron Space Age Electronics Vision Systems (Vesda) Fike

Gamewell/FCI



Evax Systems

Gentex

Keltron

Mammoth Fire Alarms

Incorporated

Corporate headquarters:

176 Walker Street, Lowell, MA 01854-3126 Tel. (978) 934-9130 Sales • 1-800-995-9808 • Fax (978) 934-9131 www.mammothfire.com

- Narragansett Electric
- · Roger Williams College
- Stanley Bostich
- U.S. Naval Station

• Mt. Snow-Grand Summit Hotel • University of Vermont • VT Law School

• Motel 6

- · Veterans Admin Hospital
- VT State House

VERMONT (cont.)

Bombardier Capital

Brattleboro Retreat

· Jay Peak Resort

Killington Ski Resort

• Middlebury College

Burlington International Airport

• Killington-Grand Summit Hotel

Immigration & NATL Service Center

- Wake Robin CCRC
- · Wyndham Hotels

"WAVES" Systems



**Property Protection Monitoring** 176 Walker Street Lowell, MA 01854





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- Roger Williams College

#### · Stanley Bostich

• U.S. Naval Station

- **VERMONT**

VERMONT (cont.)

- Bombardier Capital
- Brattleboro Retreat
- Burlington International Airport
- Immigration & NATL Service Center
- Jay Peak Resort
- · Killington Ski Resort
- Killington-Grand Summit Hotel
- Middlebury College
- Motel 6
- Mt. Snow-Grand Summit Hotel
- University of Vermont
- VT Law School
- Veterans Admin Hospital
- VT State House
- Wake Robin CCRC
- Wyndham Hotels

King Fisher Mircom Napco

Panasonic

Protectowire

- · Ben & Jerry's

**UST Closure Assessment** 

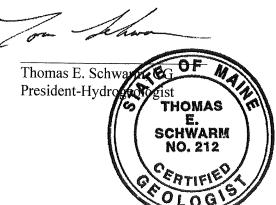
Prepared for: Webber Energy Fuels – Gasoline PO Box 929 Bangor, ME 04402

Prepared by: Acadia Environmental Technology 48 Free Street Portland, ME 04101

For submittal to: UST Program Administrator Maine DEP 17 State House Station Augusta, ME 04333-0017

Facility Name: Exit 8 Exxon Address: 132 Riverside Street, Portland, Maine Owner: Webber Energy Fuels - Gasoline Contact Person: James Sullivan UST Facility Number: 6158 Date of Site Assessment: November 13-14, 2008 Date of Report: December 29, 2008 Evidence of a Release Found: Yes – P-955-08

Jace A. Pearson Geologist



DP. Y

ACADIA ENVIRONMENTAL TECHNOLOGY

December 29, 2008

Mr. James Sullivan Webber Energy Fuels - Gasoline PO Box 929 Bangor, ME 04402

Re: UST Closure Assessment, Exit 8 Exxon 132 Riverside Street, Portland, Maine

Dear Mr. Sullivan:

Acadia Environmental Technology prepared this underground storage tank (UST) closure assessment for the Exit 8 Exxon at 132 Riverside Street in Portland, Maine.

An original and three copies of the report are enclosed. The original is for you to keep. One copy should be forwarded to the UST Program Administrator at the Bureau of Remediation and Waste Management (BRWM) of the Maine Department of Environmental Protection (DEP), one to be forwarded to Stephen Brezinski at the Portland DEP office and one to be forwarded to the city manager of Portland.

UST Program Administrator BRWM-Maine DEP 17 State House Station Augusta, ME 04333-0017

Joseph Gray City of Portland 389 Congress St. Portland, ME 04101

Stephen Brezinski Maine DEP 312 Canco Road Portland, ME 04103

If you have any questions or comments, please call us. Acadia Environmental Technology appreciates working with you on this project.

Sincerely,

Geologist

Thomas E. Schwarm, CG President Hydrogeologist

#### **TABLE OF CONTENTS**

#### 1. General Information

- A. Facility
- B. Tax Map
- C. Locus
- D. Site Plan

#### 2. History

- A. Site History
- B. Tank History
- C. Inventory Reconciliation
- D. Precision Tests
- E. Leak Detection Devices
- F. Past Leaks
- G. Previous Site Assessments

#### 3. Geography (in case of release)

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- B. Water Supplies
- C. Sensitive Receptors
- 4. UST and Piping Inspection
- 5. Geology
- 6. Soil Sampling Methods and Results
- 7. DEP Notification
- 8. Remedial Actions
- 9. Conclusion

Appendix A: Figures and Photographs

Appendix B: DEP Documents (soil recycling documentation, notice of intents to remove, registration)

#### UST SITE ASSESSMENT

This assessment is intended to meet the requirements of 006-096 DEP Chapter 691 Appendix P. The purpose of this underground storage tank (UST) closure assessment is to evaluate soils in the area of the underground oil storage facility piping and to determine if there is evidence of an oil release requiring notification of the Commissioner. Evidence of a release must be reported within 24 hours. The hotline number is 1-800-482-0777.

This UST closure assessment and report has been completed in accordance with DEP Regulations, Chapter 691, Appendix P, effective September 16, 1991, as amended April 3, 2007. No other warranty, expressed or implied, is made. This report includes information provided by others, and from public records. Acadia Environmental Technology cannot guarantee that this information is accurate. Should any additional information subsequently become available, Acadia Environmental Technology requests the opportunity to review new data and modify, if appropriate, the assessments, findings, and conclusions given in this report.

#### 1. General Information:

- A. Facility name: Exit 8 Exxon Address: 132 Riverside Street, Portland, Maine Owner: Webber Energy Fuels - Gasoline Operator: Same
- B. Tax map: 267 Lot #: A7
- C. USGS site location map, Figure 1, Appendix A Longitude and Latitude: W70°19'45" N43°40'50"
- D. Site plan attached Appendix A.

#### 2. History

A. Site History

Current facility owner: Webber Energy Fuels - Gasoline

Address: PO Box 929 Bangor, Maine 04402

Current property owner: Webber Energy Fuels - Gasoline

Former Exit 8 Exxon 132 Riverside Street, Portland, Maine Page 1

Acadia Environmental Technology

Current operator: Same

How long owned: Since 1971

Previous owner(s): Sun Oil Company.

B.

	Table	I: 7	<b>Fank</b>	History
--	-------	------	-------------	---------

Tank Number	Size & Construction	Fuel Type	Installation Date	Years In Use	Date Removed
1-1	6,000 gallon	Regular Gasoline	2-1-71	24	8-1-94
2-1	6,000 gallon	Leaded Gasoline	2-1-71	24	8-1-94
3-1	6,000 gallon	Premium Gasoline	2-1-71	24	8-1-94
4-1	10,000 gallon	Diesel	2-1-81	20	11-1-90
5-1	1,000 gallon	No. 2 Fuel Oil	2-1-71	24	9-1-94
6-1	1,000 gallon	Used Oil	2-1-71	24	9-1-94
7-1	8,000 gallon	Regular Gasoline	11-1-94	14	11-14-2008
7-2	4,000 gallon	Premium Gasoline	11-1-94	14	11-14-2008
7-3	3,000 gallon	Plus Gasoline	11-1-94	14	11-14-2008
8-1	10,000 gallon	Diesel	11-1-94	14	11-14-2008

C. Summary of inventory reconciliation: Records on file at Webber offices in Bangor and submitted to State as required. No losses reported to Acadia.

D. Precision tests performed to date: None reported to Acadia.

- E. Leak detection devices: Continuous electric monitoring, USTs and piping sumps
- F. Past evidences of a release: 1994 UST closure DEP Spill No.P-540-1994
- G. Summary and Results of Previous Site Assessments:

#### UST Closure Assessment, 1994

On August 29, 1994 three 6,000 gallon gasoline USTs, one 1,000 gallon fuel oil UST, and one 1,000 gallon used oil UST were removed from the site. Small holes were observed in gasoline tanks 1-1 and 3-1 and in the fuel oil UST (5-1). Tank gauging data indicated that approximately 400 gallons of gasoline had been lost from tank 3-1. A one inch layer of gasoline was observed on the groundwater surface in the excavation of tank 3-1. MEDEP was onsite to observe soil removal. Soil was removed to the water table in the gasoline tank area and was confined to the west by the site building, to the south by the dispenser canopy, to the north by underground electrical, and to the east by site curbing. Soil was removed to a depth of approximately three feet in the dispenser pad area. No soil was removed from the fuel oil UST excavation to avoid compromising the integrity of the building. Approximately 789 tons of soil were removed by Webber and

Former Exit 8 Exxon 132 Riverside Street, Portland, Maine Page 2

recycled by Commercial Recycling Systems in Scarborough, Maine. Approximately 6,000 gallons of gasoline-impacted water were removed from the excavation and disposed of by Total Waste Management.

#### 3. Geography

- A. Surrounding land use: The site is located in a commercial area of Portland along the Portland-Westbrook city line. Properties in the immediate vicinity consist of auto dealerships, hotels, gasoline stations and restaurants.
- B. Site's water supply is: public water system

Surrounding properties' water supply is: public water system

Private water supply well within 300 feet: None observed

Public water supply wells within 2,000 feet: None observed

C. Sensitive receptors at or near the site: underground utilities, storm sewer, and surface water drainage ditch to Capisic Brook beyond the southeast corner of property and wetland area on southwest property margin.

#### 4. UST and Piping Inspection:

#### A.

#### Table II: Visual Inspection of UST and Piping

Tank	UST	Tank Piping	Tank Material	Tank	Piping
Number	Size & Product			Condition	Condition
8-1	10,000-gal Diesel	Yellow Enviroflex	Double Wall FRP	Good	Good
7-1	8000-gal Unleaded gasoline	Yellow Enviroflex	Jacketed steel/HDPR	Good	Good
7-2	4000-gal Premium unleaded gasoline	Yellow Enviroflex	Jacketed steel/HDPR	Good	Good
7-3	3,000-gal Unleaded Plus Gasoline	Yellow Enviroflex	Jacketed steel/HDPR	Good	Good

Good = no visual evidence of a leak, Fair = corroded, Poor = deep pits, holes, or leaks FRP = fiberglass reinforced plastic

B. Comments: Both of the USTs and associated equipment appeared in good condition with no evidence of cracks or pitting.

### Former Exit 8 Exxon 132 Riverside Street, Portland, Maine Page 3

#### 5. Geology:

*Fill Material:* Fill materials consisted of light brown fine to coarse sand with some peastone. These materials extended to a depth of approximately three feet beneath the dispenser islands and extended to below the water table in the UST area.

*Native Soils*: According to the 1997 Surficial Geology map of the Portand West Quadrangle, Open File 97-51, published by the Maine Geological Survey Division of the Maine Department of Conservation, soil at the site consists of silt, clay and minor sand of the Presumpscot Formation. An original soil horizon consisting of gray silty sand with abundant organic matter and roots was encountered below the fill in the dispenser area.

*Groundwater:* Groundwater was encountered at a depth of approximately 8 feet below grade. This depth roughly corresponds to the surface water elevation in the drainage ditch in the south east corner of the site and the wetlands to the south west.

*Bedrock*: According to the 2003 Bedrock Geology map of the Portand West Quadrangle, Open File 03-94, published by the Maine Geological Survey Division of the Maine Department of Conservation, bedrock at the site consists of fine-grained, medium gray migmatized and non-migmatized quartz-plagioclase-biotite gneiss and granofels with minor light medium gray calc-silicate gneiss or granofels of the Berwick Formation. Bedrock was not encountered during excavation.

# 6. Soil Sampling Methods and Results:

Soil samples were collected and analyzed for volatile organic compounds (VOCs) using a ThermoEnvironmental 580B photoionization detector (PID) with a 10.6 eV lamp. The instrument was calibrated on at the start of testing to a 100 parts per million (ppm) isobutylene standard with a response factor of 1.0. Samples concentrations were subsequently adjusted using the 2.1 set point for gasoline recommended by MEDEP on November 24, 2008. Soil samples were collected and analyzed by polyethylene bag headspace method according to DEP Chapter 691, Appendix Q methodology. Soil sample locations are shown on Figure 2, Appendix A. The soil types, sample depths, and VOC concentrations are listed in Table III:

Former Exit 8 Exxon 132 Riverside Street, Portland, Maine Page 4

Sample # Sample Soil Type Depth (ft)		PID (ppm)	
Blank	2	Brown, dry, fine-coarse sand; UST perimeter	6
1	2-3	Brown, dry, fine-coarse sand; under piping	38, 17, 6
2	2-3	Brown, dry, fine-coarse sand; under piping	14, 277
3	2-3	Brown, dry, fine-coarse sand; under piping	115, 6
4	2-3	Brown, dry, fine-coarse sand; under piping	2,2,2
5	3-4	Gray, dry, fine sand trace silt; under piping	214, 119, 279
6	3-4	Gray, dry, fine sand trace silt; under piping	197, <b>208</b> , 12
7	2-3	Brown, dry, fine-coarse sand & peastone	0, 0, 6
8	2-3	Brown, dry, fine-coarse sand & peastone	0, 4, 2
9	3-4	Dark Gray fine coarse sand, trace silt, organics	808, 1153, 1342
10	2-3	Brown, dry, medium sand; under piping	0
11	2-3	Brown, dry, medium sand; under piping	0
12	2-3	Brown, dry, medium sand; under piping	0
13	2-3	Brown, dry, medium sand; under piping	0
14	7-8	Brown, dry, medium sand	1, 1, 1
15	7-8	Brown, dry, medium sand	2, 3, 6
16	7-8	Brown, dry, medium sand	0
17	7-8	Brown, dry, medium sand	0
18	7-8	Grayish brown, damp, medium sand	0, 1, 0
19	8-9	Gray, wet, medium sand	6, 4
20	8-9	Gray, wet, medium sand	5,6
21	8-9	Brown, wet, medium sand	0, 1, 1
22	7-8	Brown, dry, medium sand	1, 1
23	7-8	Brown, dry, medium sand	37, 43, 39
24	7-8	Brown, dry, medium sand	1, 6, 3
25	7-8	Brown, dry, medium sand	1, 1, 1
26	7-8	Brown, dry, medium sand	1, 1, 1
27	7-8	Brown, dry, medium sand	2, 4, 1

Bold = Submitted for Laboratory Analysis for Gasoline Range Organics

Two soil samples from the dispenser area were submitted to Katahdin Analytical Services in Scarborough, Maine for analysis for gasoline range organics (GRO) by HETL Method 4.2.17. Results are provided in Table IV.

> Former Exit 8 Exxon 132 Riverside Street, Portland, Maine Page 5

Sample ID	PID Result (ppm)	GRO Result (mg/Kg)
S-6	208	18
S-9	1342	140

#### Table IV: Analytical Results

7. Department of Environmental Protection notification: Stephen Brezinski of MEDEP was notified prior to the start of the removal. Mr. Brezinski was on site to observe the removal of three dispenser sumps and associated piping on November 13, 2008. Additional MEDEP personnel Fred Lavallee, Rob Peale, Deb Stahl and Molly Zogby were present on site to conduct independent MEDEP field analysis of soil.

**8. Remedial Actions:** MEDEP assigned spill number P-955-08 for this closure. Mr. Brezinski issued a Baseline 2 cleanup goal of 500 ppm for soil and provided a virgin letter for the removal of impacted soil above the Baseline 2 goal. The site is in the process of being redeveloped. Excavation of soil will be required as part of construction activities. Acadia informed MEDEP that removal of soil will be initiated after an excavation plan for construction activities is prepared.

**9.** Conclusion: On November 13-14, 2008, Acadia conducted this closure assessment of one 15,000 gallon split compartment steel gasoline UST and one 10,000 gallon fiberglass diesel UST at the Exit 8 Exxon at 132 Riverside Street in Portland Maine. The USTs and piping were in good condition. No evidence of a release from the recent UST installation were observed; however impacted soil with VOC concentrations exceeding 500 ppm were detected beneath clean fill under the dispenser islands. This material is likely related to the 1994 release. MEDEP was notified and was present on site.

The site is in the process of being redeveloped. Excavation of soil will be required as part of construction activities. Acadia has been retained by Webber Energy Fuels-Gasoline to manage any impacted soil encountered during site redevelopment. Acadia will be preparing a soil removal summary report upon completion of soil excavation activities. MEDEP has issued a Baseline 2 clean-up goal for this site and any soil encountered above the goal will be excavated and subsequently recycled by Commercial Paving and Recycling Co. (CPRC) in Scarborough, Maine.

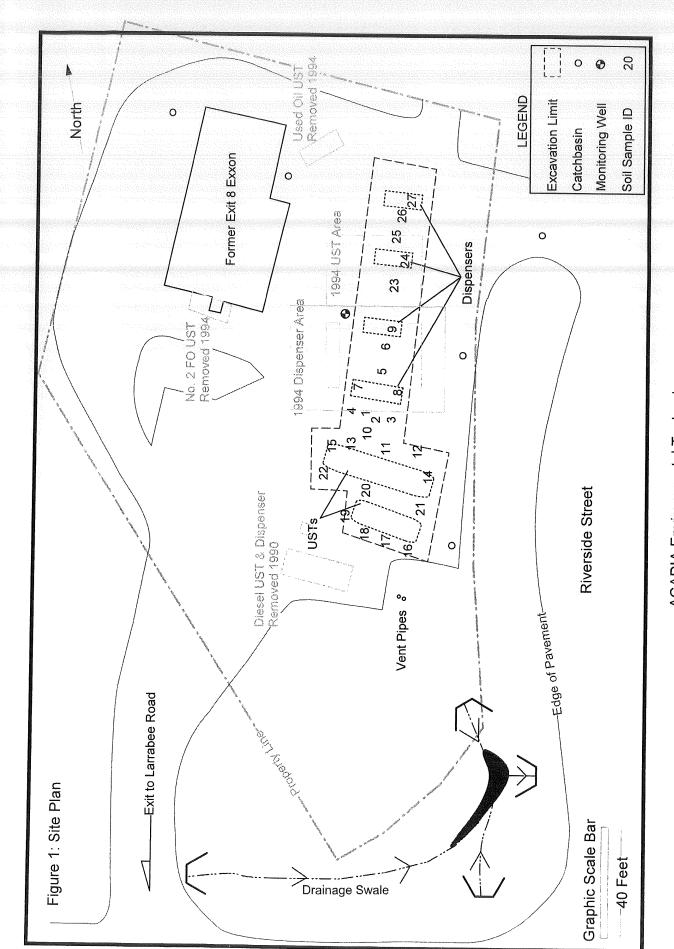
Former Exit 8 Exxon 132 Riverside Street, Portland, Maine Page 6

Appendix A

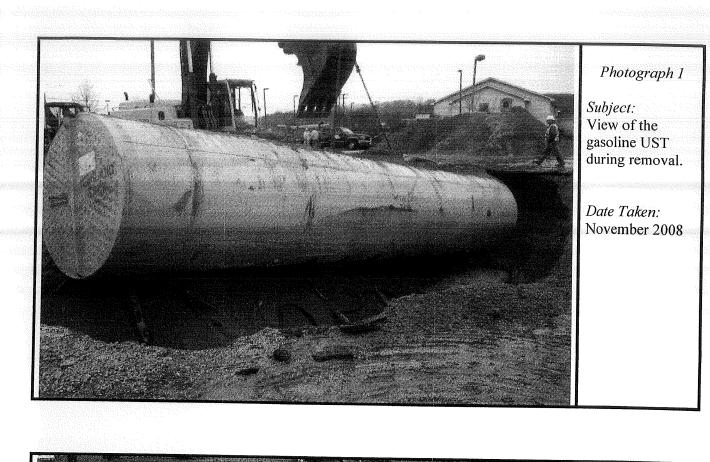
Figures and Photographs

Prepared for: Webber Energy Fuels – Gasoline PO Box 929 Bangor, ME 04402

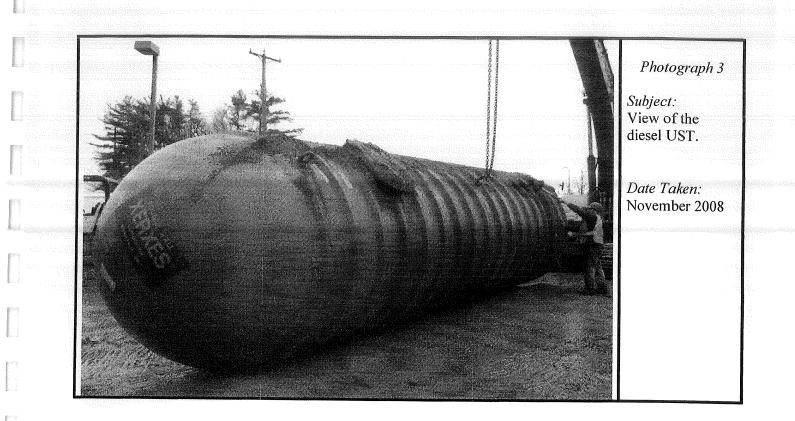
Prepared by: Acadia Environmental Technology 48 Free Street Portland, ME 04101

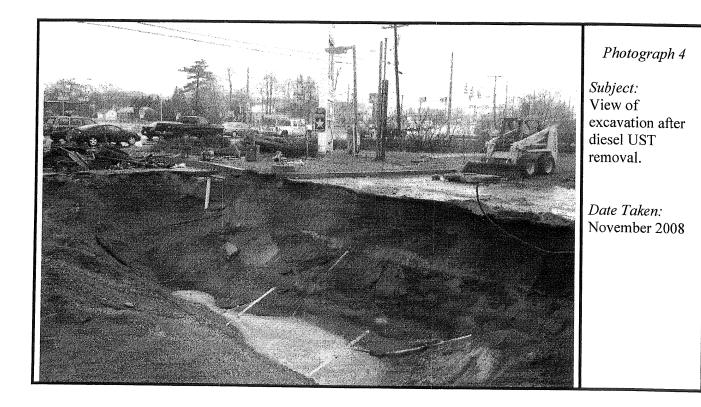


ACADIA Environmental Technology Former Exit 8 Exxon 132 Riverside Street, Portland, Maine









Appendix **B** 

DEP Documents Soil Recycling Documents

Prepared for: Webber Energy Fuels – Gasoline PO Box 929 Bangor, ME 04402

Prepared by: Acadia Environmental Technology 48 Free Street Portland, ME 04101

DEP HYDROCARBON SPILL DECISION TREE (February 1995) Investigator: 5 Brezinski		<u>P-955</u> 11/13/	State of the second second
Site Name, Address: <u>EXIT 8 EXXON</u> Town:	PORTLA		
Please circle your responses:		If "Yes"	<b>и</b> "N
1. Is a public water supply well located within 2000 feet of the leak or discharge site, or is the site located within well protection zones 1 or 2 of a public water supply well?	lhead	<u> </u>	Go T
2. Is the leak or discharge site located in or over a sand and gravel deposit?		2A	3
2A. Is the entire area, within a 2000 foot radius of the leak or discharge site, a non-attainment zone?		 2B	12
2B. Is there potential for vapor problems within buildings or for a confined space fire or explosion hazard?	•		
3. Was the release directly into bedrock or is the bedrock groundwater system contaminated?		13 9 ?	
4 Was the release directly into a glacial still down in			4
5. Was the release into a silt or clay deposit? (Sand & clay area)		9	15
		6	N/A
6. Is there at least 10 feet of silt and/or clay between the contaminated zone and underlying more permeable surficial c (such as glacial till or sand and gravel) or bedrock?	leposits	7	()
7. Are the area's gradients approximately horizontal (topographic gradient flat or groundwater gradient <1%)?		0	~
8. Does the seasonal low of the water table fall below the top of the underlying aquifer (sand and gravel deposit on but	tock)?	8 . 9	У.
If unknown, the answer is yes.		y	10
9. Is the area within 2000 feet downgradient or 1000 feet upgradient served by a public water supply?	(	Go	12
10. Is there potential for vapor problems within buildings or for a confined space explosion hazard?		13	
11. Is the entire area, within a 2000 foot radius of the leak or discharge site, a non-attainment zone?	•.	11A 7 (	
11A. Is the site now or in the past been in a predominantly industrial land use?			
Check clean-up goal decided upon:		14A	(14B
12. Stringent (ST) Clean-Up Goals Remove all free product. Remove a the			
fuel oil or kerosene, or 5 ppm total gasoline as determined by DEP-approved laboratory methods. Remediate gi than 50 ug/l total hydrocarbons (gasoline, kerosene, or fuel oil by DEP approved laboratory methods.	ig greater that	an 10 ppm t	otal
	or field tech	niques) 50	reater
MTBE, and 5 ug/l benzene by DEP or EPA approved methods.		inques), 50	ugn
13. <u>Intermediate (IN) Clean-Up Goals</u> Remove all free product. Remove or remediate contaminated soil contational fuel oil or kerosene, or 5 mg/kg total gasoline as determined by DEP operating the second solution.	ining greater	than 10 mo	/ko
total fuel oil or kerosene, or 5 mg/kg total gasoline as determined by DEP-approved laboratory methods or equiv techniques.	valent DEP-a	approved fie	ld
14A. Baseline-1 (BL1) Goals. Remove all free and that D			
14A. <u>Baseline-1 (BL1) Goals</u> Remove all free product. Remove or remediate soil saturated with gasoline, keros 14B. <u>Baseline-2 (BL2) Goals</u> Remove all free product. Remove or remediate contaminated soil to 500- beating oil or kerosene, each as measured by the DEP field headspace analysis or its Department	ene, or fuel o	oil	
heating oil or kerosene, each as measured by the DEP field hard	pm gasoline	& 200 AT	ppm
heating oil or kerosene, each as measured by the DEP field headspace analysis or its Department approved eq <u>Other</u> (Specify):Complete justification below.	uivalent fiel	d method.	••
ote: Where there is significant uncertainty regarding the identity of the product, the lower oil standards shall apply; and groundwater shall be analyzed for MTBE and benzene.			. *
groundwater shall be analyzed for MTBE and benzene.	l, in the strin	gent catego	ry,
USTIFICATION OF ALTERNATE CLEAN-UP GOAL:			
	,		
BS-2 consistent with P-540-1994	s in a	rea,	
-1			

NOTE: This form must be included in the case's Spill Report if completed by Division of Response Services staff. Other Bureau staff must include this documentation in the project file.

	OIL SPILL DEBRIS FORM
DATE: 11/13/08	DEP SPILL # _ P- 955-08
GENERATOR: Webber	Energy, PO Box 929, Bangor
TRANSPORTER: Dearborn	n Const. Co.
BILL TO: Webber Ene	orgy or subcontractors
<b>REFERENCE: SHIPMENT OF OIL S</b> On $11/13/08$ , S By	FILL DEBRIS ( C こ い ら た í authorized the clean up of oil spill debris at Representative)
	132 Riverside St., Portland (location)
which resulted from <u>dischar</u>	rges associated with motor fuel (description of incident)
This shipment consists of $200$	(two hundred) ton s antity) (units) (qualifier)
contaminated with <u>virgin</u>	(contaminant)
Solids consist of: (check as appropria	ite)
$\underline{}$ Sand, gravel or soil	Speedy-dri
Sorbent	Other (specify):
Facility is: (check one)	
	Asphalt Plant
	دیں۔۔۔۔۔ Land Spreading Site ۲۰۰۰ 883-3325
Signature – DEP Representative:	S Breyenske
Signature - Facility Representative: _	
Total Tonnage Received:	
Please mail this form after signature to	o <u>S Brezi'uski</u> at regional office below:
AUGUSTA BANGOR 17 STATE HOUSE STATION 106 HOGAN ROAD	PORTLAND 312 CANCO ROAD #6 PORTLAND, ME 04103 PRESQUE ISLE PORTLAND, ME 04103 PRESQUE ISLE, ME 04769-2094





November 23, 2008

Mr. Jace Pearson Acadia Environmental Technology 48 Free Street Portland, ME 04101

RE:	Katahdin Lab Number:	SB6633
	Project ID:	Riverside
	Project Manager:	Mrs. Andrea Colby
	Sample Receipt Date(s):	November 17, 2008

Dear Mr. Pearson:

Please find enclosed the following information:

- Report of Analysis (Analytical and/or Field)
- Quality Control Data Summary
- Chain of Custody (COC)
- Login Report \*

A copy of the Chain of Custody is included in the paginated report. The original COC is attached as an addendum to this report.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact the project manager listed above. This cover letter is an integral part of the ROA.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in an attached technical narrative or in the Report of Analysis.

We appreciate your continued use of our laboratory and look forward to working with you in the future. The following signature indicates technical review and acceptance of the data.

Sincerely,

KATAHDIN ANALYTICAL SERVICES

Nadeau

Authorized Signature

11/23/2008

Date

www.katahdinlab.com

Katahdin Analytical Services 0000001

# KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS

# (Refer to BOD Qualifiers Page for BOD footnotes)

- U Indicates the compound was analyzed for but not detected above the laboratory Practical Quantitation Limit.
- E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.
- J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Limit (PQL), but above the Method Detection Limit (MDL).
- I-7 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.
- A-4 Please refer to cover letter or narrative for further information.
- MCL Maximum Contaminant Level
- NL No limit
- NFL No Free Liquid Present
- FLP Free Liquid Present
- NOD No Odor Detected
- H1 Please note that the regulatory holding time for pH is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. pH for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.
- H2 Please note that the regulatory holding time for DO is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. DO for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.
- H3 Please note that the regulatory holding time for sulfite is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Sulfite for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.
- H4 Please note that the regulatory holding time for residual chlorine is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Residual chlorine for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

# KATAHDIN ANALYTICAL SERVICES Report of Analytical Results

Client: Acadia Environmenta Project: Riverside PO No: Sample Date: 11/14/08 Received Date: 11/17/08 Extraction Date: 11/18/08 Analysis Date: 18-NOV-2008 14:20 Report Date: 11/19/2008 Matrix: SOIL % Solids: 91.1

Lab ID: SB6633-1 Client ID: S-6 SDG: SB6633 Extracted by: EKC Extraction Method: SW846 5030B Analyst: EKC Analysis Method: MEDEP 4.2.17 Lab Prep Batch: WG58203 Units: mg/Kgdrywt

Compound		Flags	Results	DF		n i biz o noncoart.
Gasoline Ra	unge Organics	· · · · · · · · · · · · · · · · · · ·	10	DF	PQL	Adj.PQL
4-Bromofluc	robenzene		18 83%	1.0	2.5	3.2
		Page	01 of 01	4BK21	L66.d	

Katahdin Analytical Services SB6633 page 0000004 of 0000015





# **Report of Analytical Results**

Sample Descript	Client: Jace Pearson Acadia Environmental Technology 48 Free Street Portland,ME 04101		avironmental Technology Report Data treet Client PC					
	<u>tion_</u>			<u>Matri</u>	<u>x Date s</u>	Sampled_	Dat	e Received
S-6				SL	14-NO	V-08	17-N	IOV-08
Parameter	Result Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
`otal Solids	91. % 1	D2216	WG58245	19-NOV-08 09:00:00	ASTM D2216	18-NOV-08	JF	<u></u>
١								

# KATAHDIN ANALYTICAL SERVICES Report of Analytical Results

Client: Acadia Environmenta Project: Riverside PO No: Sample Date: 11/14/08 Received Date: 11/17/08 Extraction Date: 11/18/08 Analysis Date: 18-NOV-2008 14:59 Report Date: 11/19/2008 Matrix: SOIL % Solids: 91.2

Lab ID: SB6633-2 Client ID: S-9 SDG: SB6633 Extracted by: EKC Extraction Method: SW846 5030B Analyst: EKC Analysis Method: MEDEP 4.2.17 Lab Prep Batch: WG58203 Units: mg/Kgdrywt

PQL Adj.PQL

2.7

2.5

Compound	Flags Results	DF
Gasoline Range Organics	140	1.0
4-Bromofluorobenzene	86%	+.0
	008	

Page 01 of 01

4BK2167.d





# **Report of Analytical Results**

48 Free	Environmental Technol	ogy alatin and a second se			21-NOV-0	8 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Sample Descri	ption_			<u>Matrix</u>	<u>Date S</u>	Sampled	Dat	e Received
S-9				SL	14-NO	V-08		IOV-08
Parameter	Result Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	91. % 1	D2216	WG58245	19-NOV-08 09:00:00	ASTM D2216	18-NOV-08	JF	

## FORM 4 VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

Lab Name: KATAHDIN ANALYTICAL SERVICES Lak	Code: KAS	WG58203-BLANK
Project: RIVERSIDE	SDG No.: SB6633	
Lab File ID: 4BK2163	Lab Sample ID: WG	58203-1
Date Analyzed: 11/18/08	Time Analyzed: 12	24
GC Column: DBVRX ID: 0.45 (mm)	Heated Purge: (Y/	N) N
Instrument ID: GC04		

-

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZEI
02 03 04 05	WG58203-LCS WG58203-LCSD S-6 S-9	=   ==================================	========= 4BK2164 4BK2165 4BK2166 4BK2167	======== 11/18/08 11/18/08 11/18/08 11/18/08	====== 1302 1341 1420 1459
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COMMENTS:

page 1 of 1

FORM IVGRO

# KATAHDIN ANALYTICAL SERVICES Report of Analytical Results

Client: Project: Riverside PO No: Sample Date: Received Date: Extraction Date: 11/18/08 Analysis Date: 18-NOV-2008 12:24 Report Date: 11/19/2008 Matrix: SOIL % Solids: 100

Lab ID: WG58203-1 Client ID: WG58203-Blank SDG: SB6633 Extracted by: EKC Extraction Method: SW846 5030B Analyst: EKC Analysis Method: MEDEP 4.2.17 Lab Prep Batch: WG58203 Units: mg/Kgdrywt

Compound		Flags	Results	DF	POT.	Adj.PQL
Gasoline Ra	nge Organics	ס_	2.5	1.0	2.5	
4-Bromofluo:	robenzene		96%			4.5
		Page	01 of 01	4BK21	.63.d	

Katahdin Analytical Services SB6633 page 0000009 of 0000015

# KATAHDIN ANALYTICAL SERVICES LAB CONTROL SAMPLE

Client:	Lab ID: WG58203-2 & WG58203-3
Project: Riverside	Click and Click
PO No:	Client ID: WG58203-LCS & WG58203-LCSD
Sample Date:	SDG: SB6633
Received Date:	Extracted by: EKC
	Extraction Method: SW846 5030B
Extraction Date: 11/18/08	Analyst: EKC
Analysis Date: 11/18/08	
Report Date: 11/19/2008	Analysis Method: MEDEP 4.2.17
Matrix: SOIL	Lab Prep Batch: WG58203
	Units: mg/Kgdrywt

COMPOUND		LCS SPIKE	LCSD SPIKE	SAMPLE CONC.	LCS	LCSD	LCS	LCSD		%RPD	OC.	
Gasoline Range Orga	anics	25	25	NA	CONC.	CONC.	%REC. 100	%REC.	%RPD	LIMIT		
						- 1	±00	96	4	20	60-140	

page l of l

FORM III GRO-2

4BK2164.d & 4BK2165.d

Katahdin Analytical Services SB6633 page 0000010 of 0000015

ANALYTICAL	SERVICES	Qu Bla	Cert No E87604			
Total Solids						
<u>Samp Type</u> MBLANK	<u>QC Batch</u> WG58245	<u>Anal. Method</u> ASTM D2216	<u>Anal. Date</u> 19-NOV-08	<u>Prep. Date</u> 18-NOV-08	<u>Result</u> U1%	<u>PQL</u> 1 %

2.500.500



# Quality Control Report

Laboratory Control Sample Summary Report



# **Total Solids**

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance	
WG58245-2	LCS	WG58245	19-NOV-08	18-NOV-08	%	90	90.		Range	RPD
							50.	100	80-120	
	· · · ·									
	•									
	• .									

# Katahdin Analytical Services, Inc.

# Sample Receipt Condition Report

Client: ACA	dia	KAS PM: ATC	· /	Sampled By: clinit
Project:		KIMS Entry By:	D	Sampled By: <u>Client</u> Delivered By: <u>Client</u>
KAS Work Order#:	SB6433	KIMS Review By:	Are	Received By: DD
SDG #:	Cooler:	of		ime Rec.: 11-17-08 1420

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		V			
2. Chain of Custody present in cooler?					a se
3. Chain of Custody signed by client?		$\vdash$			
4. Chain of Custody matches samples?					
5. Temperature Blanks present?					Temp (°C): 🔍 \
6. Samples received at < 6 °C w/o freezing? Ice or ice packs present? Y or N					Cooler temp. (°C):
<ol> <li>Volatiles free of headspace?</li> <li>Aqueous: No bubble larger than a pea Soil/Sediment: Received in airtight container?</li> </ol>				<i>i</i> ⁄	(if no temp blank)
Received in methanol?					
Methanol covering soil?					
3. Trip Blank present in cooler?					1
9. Proper sample containers and yolume?	i				
0. Samples within hold time upon receipt?					
<ol> <li>Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH &lt;2 Sulfide - &gt;9 Cyanide – pH &gt;12</li> </ol>					,
2. Corrective Action Report Filed?				$\int$	
		1	8	$\checkmark$	

\* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin Analytical Services SB6633 page 0000013 of 0000015

ANALYTICAL SERVICES	Scarborough, ME 04074 Tel: (207) 874-2400 Fax: (207) 775-4029	<del>.  </del>		i tact //	1	PLI	EASE B RINT LI	OF CU EAR DC EGIBLY	MAINI A NI	n	Pag	je	. <b>o</b> f
Address A E	Winhmen			i de la	r A RI	n_	Phone	;# ]7}	カーム	3)	Fax # (	)	
Purchase Order #	reef-	City	Pr	Har	<u>d</u>		State	ME	-	Zip Co	ide d'u	1101	 dates
Bill (if different than above)	- MANOB	Proj. Name /		<u>UMA</u>	<u>BØE</u>	tay	x Ru	iensia	Katah	idin Quote		£	
Sampler (Print / Sign)	Page 1		$\overline{\mathcal{A}}$	Address									
LAB USE ONLY WORK O		Sould Sould	<u>l'éar</u>	500			ANALY		pies To:	NER TYI			
KATAHD	IN PROJECT NUMBER	SBlde	53		Filt.	Filt.		THRESE	RVATIV	ES		Filt	
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	ANK 🗇 INTACT			11									
Sample Description	Date / Time coll'd	Matrix	No. of	101	4 1 1								
5-1		C.1	Cntrs.		i								
5-9	11-14-08/	Soil	2										
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quished By: (Signature) Date	e / Time   Receive	ed By: (Sign	aturo	Delle	water -								
ellen t	1/22 a 180/	sila il	A	reino	luisned	By: (Sig	nature)	Date	/ Time	Recei	ved By: (	Signature	ə)
	/ Time Receive	d By (Signa	- • \	1				1		1			

ITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN

ORIGINAL

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ALYT	Contract (Development	Street and a second sec		

# Katahdin Analytical Services

Login Chain of Custody Report (Ino1)

Nov. 18, 2008 07:52 AM Page: 1 of 1

### Login Number: SB6633

Account: ACADIA001	Web	Login Information	
Acadia Environmental	Technology, Inc.	ANALYSIS INSTRUCTIONS	: GRO is preserved in MeOH
An a state the state of the sta		CHECK NO.	
Project:		CLIENT PO#	: 001-013
		COOLER TEMPERATURE	; <b>2.1</b>
Primary Report Address:		DELIVERY SERVICES	: Client
Jace Pearson		EDD FORMAT	KAS064-XLS
Acadia Environmental Technology	/	PM	
48 Free Street		PROJECT NAME	: Riverside
		QC LEVEL	: II
Portland,ME 04101		REGULATORY LIST	
Primary Invoice Address.	om	REPORT INSTRUCTIONS	: Email unprotected PDF & EDD, no hc.
Accounts Payable		SDG ID	:
Acadia Environmental Technology		SDG STATUS	i Pour y sugartentet della server y sumprime y y y
48 Free Street			

Portland,ME 04101

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### Report CC Addresses:

#### Invoice CC Addresses:

Laborator Sample ID		Collect Pr Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SB6633-1	S-6	14-NOV-08 00:00	17-NOV-08		21-NOV-08	21-NOV-08	
<i>Matrix</i> Solid Solid	Product S MEDEP4.2.17 S TS	Hold Date (shortest) 28-NOV-08 14-DEC-08	Bottle Type 100g Glass		Bottle Cou 1 1	int	Comments
SB6633-2	S-9	14-NOV-08 00:00	17-NOV-08		21-NOV-08	21-NOV-08	
<i>Matrix</i> Solid Solid	Product S MEDEP4.2.17 S TS	Hold Date (shortest) 28-NOV-08 14-DEC-08	Bottle Type 100g Glass		Bottle Cou 1 1	int	Comments

4

Total Samples: 2

Total Analyses:

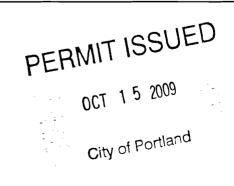
Cit	ty of Portland, Maine	e - Building or Use	Permit Applicatio	n Pe	rmit No:	Issue Date:	CBL:		
389 Congress Street, 04101 Tel: (207) 87			* *		09-1073		267 A0	07001	
Location of Construction:		Owner Name:	Owner Name:		Owner Address:		Phone:		
132 RIVERSIDE ST		WEBBER EN	WEBBER ENERGY GASOLINE		MAIN ST				
Business Name:		Contractor Name	Contractor Name:		actor Address:		Phone		
		Morrill Electri	Morrill Electric Company Inc		Haverhill Roa	d Amesbury	97838815	9783881522	
Less	see/Buyer's Name	Phone:	Phone:		Permit Type:			Zone:	
					Fire Alarm System			B-4	
Past	Use:	Proposed Use:		Permit Fee: Cost of Work: CEO District:			]		
Co	mmercial - "Burger King"		Commercial - "Burger King" -		\$120.00 \$10,000.00				
		Install Fire A	arm equipment	FIRE	DEPT:	Approved	PECTION:		
						Denied Use	Group: <b>B</b>	Type: FA	
					See Cond	R1-218	H-2183		
Prop	posed Project Description:				P	$\sim$			
Ins	tall Fire Alarm equipment			Signat	ture: (Kl	Sign	ature MD	10/5/09	
				PEDE	STRIAN ACTIV	TITIES DISTRICT		$-l\tilde{l}$	
				Action: Approved Approved w/Conditi		w/Conditions	Denied		
				Signa	ture:		Date:		
1	nit Taken By:	Date Applied For:		_	Zoning	Approval			
Lo	lobson	09/25/2009							
1.	This permit application d	loes not preclude the	Special Zone or Review		Zoning	g Appeal	Historic Pres	Historic Preservation	
Applicant(s) from meeting applicable S Federal Rules.		g applicable State and	Shoreland		Uariance	] Variance		t or Landmark	
2. Building permits do not include plumbing, septic or electrical work.		Wetland		Miscellaneous		Does Not Require Review			
<ol> <li>Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work</li> </ol>		Flood Zone		Conditional Use		Requires Review			
		Subdivision		Interpretation		Approved			
			Site Plan				Approved w/	Conditions	
			Man Minor MM		Denied		Denied		
PERMIT ISSUED				.W	Date:		Date:	_	
	<b>OCT</b>	1 5 2009		,	/				
		of Portland							

### CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE	tonon tonon	DATE	PHONE

City of Portland, Maine - Bui	ilding or Use Permit		Permit No:	Date Applied For:	CBL:	
389 Congress Street, 04101 Tel:	(207) 874-8703, Fax: (20	7) 874-871	6 09-1073	09/25/2009	267 A007001	
Location of Construction:	Owner Name:		Owner Address:		Phone:	
132 RIVERSIDE ST	WEBBER ENERGY GA	SOLINE	700 MAIN ST			
Business Name:	Contractor Name:		Contractor Address:		Phone	
	Morrill Electric Company	y Inc	142 Haverhill Road	I Amesbury	(978) 388-1522	
Lessee/Buyer's Name	Phone:		Permit Type:			
			Fire Alarm System	l		
Proposed Use:		Propos	ed Project Description:			
Commercial - "Burger King" - Instal	I Fire Alarm equipment	Instal	I Fire Alarm equipn	nent		
Dept: Zoning Status: Note: 1) SII conditions on the previous pe	Approved	Reviewer	: Marge Schmucka	Approval D	ate: 09/28/2009 Ok to Issue: ☑	
· · · · · · · · · · · · · · · · · · ·						
Dept: Building Status: Note:	Approved with Conditions	Reviewer	: Jeanine Bourke	Approval D	ate: 10/15/2009 Ok to Issue:	
1) Fire Alarm systems shall be insta	alled per Sec. 907 of the IBC	C 2003				
2) Equipment must be installed in c	ompliance per the manufact	urer's specifi	cations			
3) All penetratios through rated ass or UL 1479, per IBC 2003 Section	emblies must be protected by	•		stalled in accordance	e with ASTM 814	
Dept: Fire Status:	Approved with Conditions	Reviewer	: Capt Keith Gautre	eau Approval D	ate: 10/06/2009	
Note:					Ok to Issue:	
<ol> <li>Fire Alarm system shall be main If system is to be off line over 4 Dispatch notification required 87</li> </ol>	hours a fire watch shall be ir	n place.				
<ol> <li>Emergency lights and exit signs circuit.</li> </ol>	are required. Emergency lig	thts and exit	signs are required to	be labeled in relation	on to the panel and	
<ol> <li>The Fire alarm and Sprinkler systems shall be reviewed by a licensed contractor[s] for code compliance. Compliance letters are required.</li> </ol>						
4) Installation of a Fire Alarm system requires a Knox Box to be installed per city crdinance						
<ol> <li>System acceptance and commissioning must be co-ordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.</li> </ol>						
6) All fire alarm records required b "FIRE ALARM RECORDS".	y NFPA 72 should be stored	l in an appro <sup>v</sup>	ved cabinet located a	t the FACP and key	ed alike, labeled	



APPLICATION FOR THE INST	FALLATION OF		UIPMENT
STREET NAME: Riversile	2}-		
EXACT LOCATION: (within stru	cture) FACP	3 MinEntry	
TYPE OF OCCUPANCY:	envant		
BUILDING OWNER: Burger	-King From	nchize	
INSTALLING CONTRACTOR:			
CONTRACTOR ADDRESS: 14			
CONTRACTOR TELEPHONE #:	978 388	- 1522 (office)	978-360 5899 ((*)
CONTRACTOR LICENSE #:	J7400	89298	
THE FOLLOWING DOCUMEN	TS HAVE BEEN	PROVIDED WITH 7	THIS APPLICATION:
FLOOR PLANS: WIRING DIAGRAM: ANNUNCIATOR DETAILS: BID SPECIFICATIONS:	YES: _X	NO:	
WIRING DIAGRAM:	YES: X	NO:	
ANNUNCIATOR DETAILS:	YES: NIA	NO:	
<b>BID SPECIFICATIONS</b> :	YES: NA	NO:	
EOUIPMENT DATA SHEETS:	YES: X	NO:	
BATTERY CALCULATIONS:	YES: <u> </u>	NO:	
BATTERY CALCULATIONS: SEQUENCE OF OPERATIONS:	YES: <u>X</u>	NO:	
THIS IS A NEW APPLICATION:	YES: <u>'</u> X	NO:	
THIS IS AN AMENDMENT TO A	AN EXISTING PH	ERMIT: YES:	NO:
INSERT LANGUAGE RE INSUR	ANCE AND INC	DEMNITY	
PRIOR TO THIS OFFICE ISSUIN			<i>,</i>

ACCEPTING ANY FIRE ALARM SYSTEM, A COMPLETED "FIRE ALARM ACCEPTANCE REPORT" MUST BE RETURNED TO THIS OFFICE, SIGNED BY THE INSTALLING CONTRACTOR. THESE FORMS ARE AVAILABLE AT THE FIRE PREVENTION BUREAU 380 CONGRESS ST.

date: <u>9-16-89</u> PERMIT APPLICANT SIGNATURE:

**GENERAL REQUIREMENTS** 

**SECTION 1.0**