PORTABLE TRITIUM MONITOR
Model # VAP-X-(H3)

FEATURES:

•USER SETTABLE UNITS - PicoCi/ml or Bq/m^3 etc.
•WIDE RANGE - DIGITAL ACCURACY
•PROGRAMMABLE DIGITAL READOUT
•SENSITIVE FOR OCCUPATIONAL EXPOSURE
•DYNAMIC BACKGROUND COMPENSATION
•BATTERY OPERATION OR AC OPERATION
•BUILT-IN HIGH LEVEL ALARM
•BUILT-IN LOW FLOW ALARM
•BUILT-IN RS-232 COMPUTER INTERFACE

DESCRIPTION: Technical Associates VAP-X-(H3) Tritium Monitor is a sensitive, rugged, portable instrument for detection and measurement of airborne tritium. Its' subtractive balanced chamber electrometer circuit decreases background effects to negligible levels and its deionized and filtered intake reduces to negligible levels spurious effects from smoke, dust and existing ionization in the air. It is line operated and it maybe left on permanently without fear of ``running out of battery''. Optional inlet and outlet hoses allow monitoring interiors of fume hoods, exhaust stacks, etc. The PTG-9 will measure airborne tritium as free hydrogen or as volatile chemicals in concentrations as low as 1 x 10^{-5} uCi/cc of air. (370 KBq/m^3)

All instruments are calibrated at the factory. Calibration check may be performed in the field with a microCurie level Beta or Gamma source. Background chamber may be disconnected to check linearity of response on a gamma calibration range. User friendly calibration controls are provided.

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SPECIFICATIONS:

•**Ranges:** Compact, easy to read digital LCD readout. 1 x 10^{-6} to 1.0 uc/ml (37 KBq/ml to 3.7 x 10^{10} Bq/ml.)

•**Background:** Essentially eliminated by subtractive balanced chambers.

•**Smoke, Dust and Ion Elimination:** Filter and deionizer reduce effects to negligible level.

•**Circuit:** Electrometer circuit amplifies net difference between 0.7 liter tritium internal chamber and a sealed background chamber of similar configuration.

•**Alarms:** Low Air Flow, Alarm High Level Alarm: Red Lamp and Audio Alarm.

•**Controls:** Power, Pump On/Off, Battery Check, Set (calibration aid), Zero Adjust, Meter Programming (Two buttons).

•**Calibration:** Can calibrate internally with tritium gas, or on a calibration course, or (at a single point) with optional beta or gamma source. .

•**Computer Port:** RS-232 serial port is built in (fully addressable).

•**Portability:** PTG-9 is provided with carrying handle.

•**Case:** Deep drawn aluminum case, with handle and gasketed lid, easily cleanable anodized finish.

•**Dimensions**

       Instrument Case (Including handle): 7"W x 11"L x 7" Tall.

       Front Panel: 11" Long x 7" Wide.

•**Battery:** 9V rechargeable sealed. **Battery Life:** 20 hours between charges. Battery charger is built-in.

•**Weight:** 12 lbs. Shipping weight 15 lbs (Including batteries and charger)

PORTABLE TRITIUM MONITOR
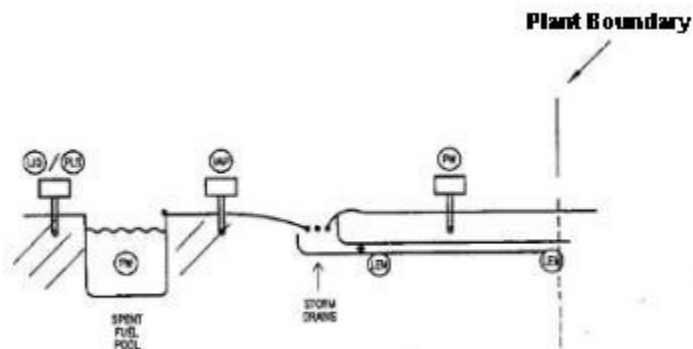## Model # VAP-X-(H3)

Uses:

•   Pin-points the source of a leak

•   Map of underground plume

•   Locate edge of plume

•   Locate problem areas

Advantages:

•   Allows user to chase down source

•   Optional SR-90 detection or detection for other nuclides

Situation:

Sometimes you need to extract vapor from the soil at a series of points in order to track down a radiation leak or map a spreading plume. There may be some useful existing holes or wells but you need data from additional points at different depths. Model VAP-X-(H3) is designed specially to help you accomplish this task.

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System Includes:

TASK	TOOL	MODEL	INCLUDED
MAKE HOLE	cone penetrometer	CP-VAP	optional
	coring tool	CT-VAP	optional
	auger-drill	AD-VAP	optional
VAPOR COLLECTION			
Push Tube Hollow push-tube with closed-end and side-hole air-intakes		PUSH-1	YES
Vapor Build-up Chamber		VAP-BUC	optional
PUMP	Air Pump	built-in	YES
FILTER	Coarse filter in push-tube fine filter at detector inlet	built-in	YES
Particulate filter		built-in	YES
MEASUREMENT DEVICE			
Tritium	Tritium concentration meter	PTG-9PM	YES
REJECTION FEATURES			
Gamma Background	Dual chamber design	built-in	YES
Radon Rejection		MOD-400PM	recommended
DETECTION OF OTHER NUCLIDES			
SR-90, Cs-137, etc.		Mini-Air-Vap	Submit list of nuclides of concern
DATA TRANSMISSION			
A-Serial	Serial RS-232	RS-232	Choose A, B,
B-Ethernet-wired	Ethernet wired	EW	and/or C when
C-Ethernet-wireless	Ethernet wireless	EW-LS	ordering

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Task	TOOL	MODEL	INCLUDED
DATA STORAGE			
Hardware and software	Palm data logger	P-LOG	optional
Software and cable	Store data to your laptop	WIN-W	optional
DATA NETWORK			
	Universal, easy ORO Network	ORONET	YES
	for all kinds of sensors	Overdrive	YES