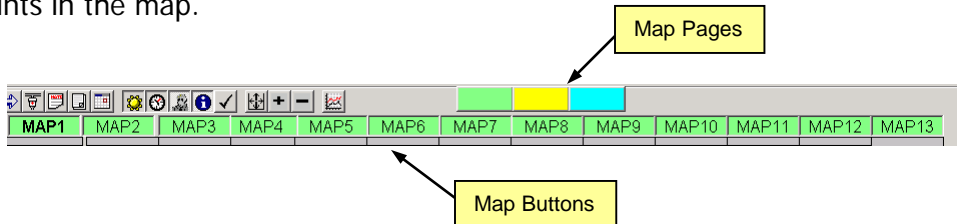


MediSmarts Software

The MediSmarts software has been developed, in close proximity, to end-users in over 100 sites around the world, to be the number one tool for the collection and display of radiological conditions within cyclotron sites as well as displaying traceable contamination levels in the effluent. The system includes report generation and archiving.

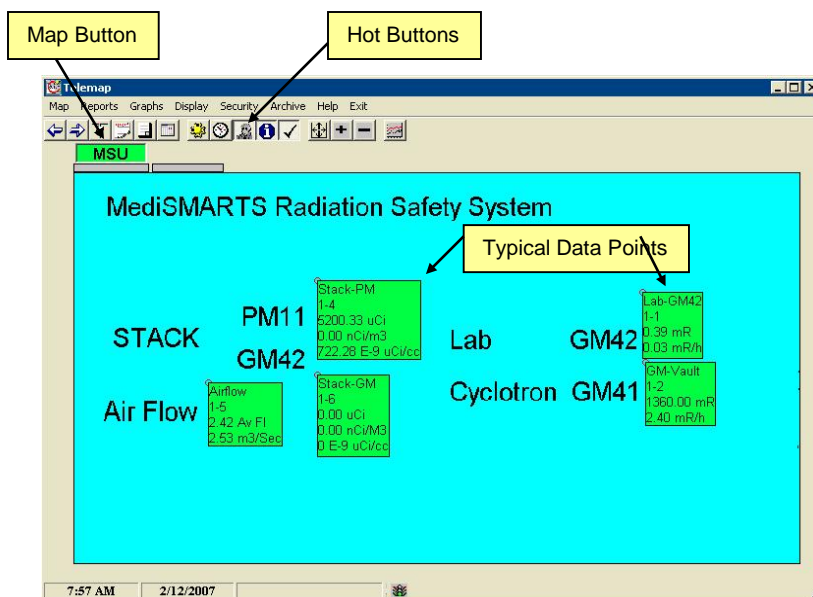
Each Map Page contains up to 32 maps. The background color of the map page reflects the worst case scenario of the 13 map buttons and each map button reflects the worst case scenario of the data points in the map.



The Main screen of MediSmarts displays points which are associated to Monitoring channels around the site. Each point displays the current radiation dose rate level and accumulated dose

Quick site reference - The point's background color reflects the relationship between the radiation level being measured and the user selectable threshold levels for alerts and alarms.

For points associated with measuring the released effluent, the user can immediately see the current concentrations of activity being released from the site.



MediSmarts is used as:

Area Monitoring System

Connected to a number of fixed detectors in the facility, the user receives online data and alarms.

- Cyclotron Vault
- Hot Cells
- Radiopharmacy
- Q.A. Dept.
- Control Room

Chemistry
2.3
0.10 mR
0.01 mR/h

Stack Monitoring System

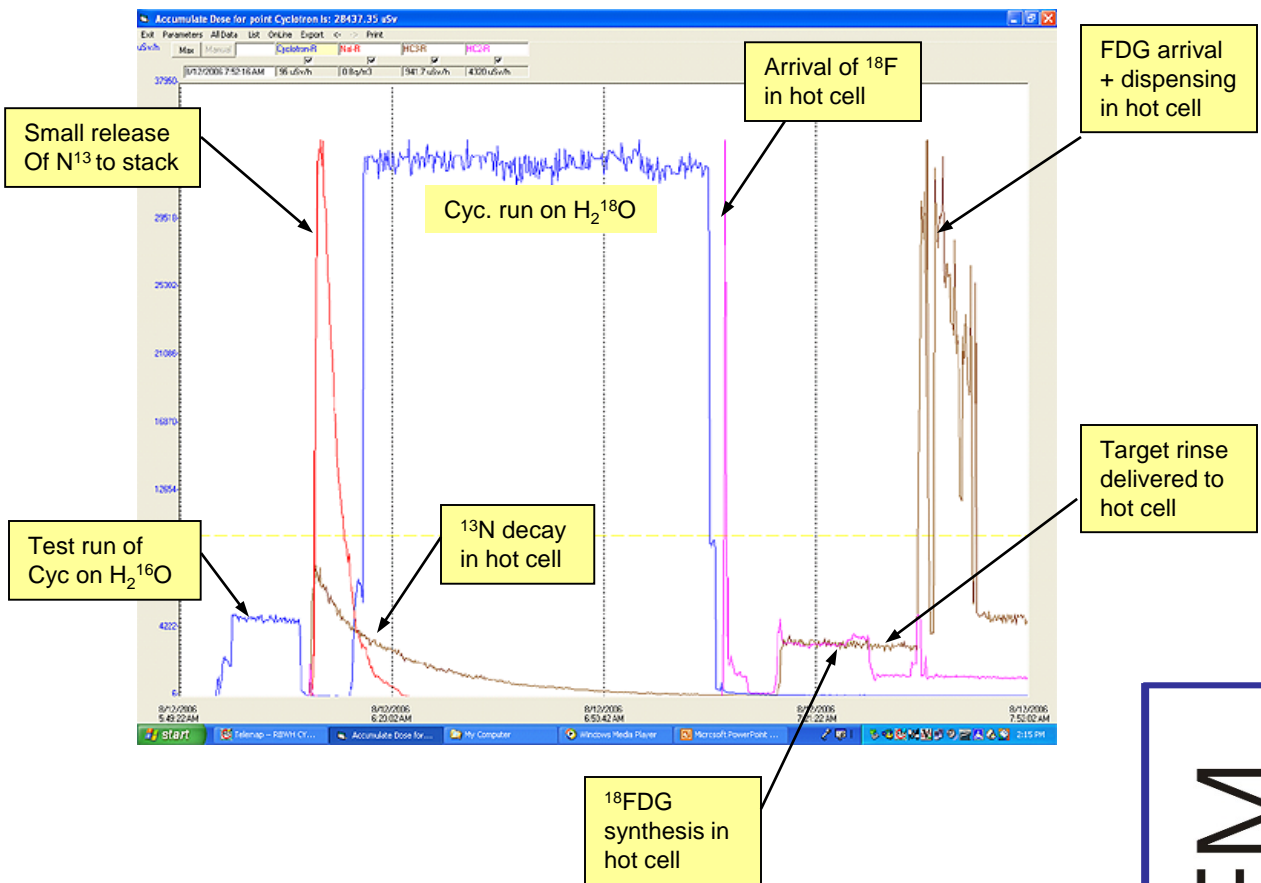
A set of monitoring channels consisting of a sensitive Na(Tl) detector and flowmeter supplies online activity and concentration data in units of $\mu\text{Ci}/\text{m}^3$ or Bq/cm^3

AirDuct
2.4
5280. uCi
254. nCi/m³
421 E-9 uCi/cc

Production Monitoring System

Process repeatability – Allows the cyclotron operator to check that the production process is repeating itself as per the last production batch.

Shown Below is a typical cyclotron site's activities shown in the multi-graph window.



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MediSmarts

The MediSmarts program collects data from MediComm Application and displays the radiation levels on the screen in predetermined points. The data is shown in points, whose color reflects the status of the radiation level against the preset threshold levels and Alarm status of each point. The data is refreshed every fixed interval according to user requirements.

The Hot button Toolbar

Ergonomically designed to supply the user with the most popular commands:



Previous/Next – Used to move between maps

Connect Server – Used to reconnect to Computer running the MediComm application

Current Alarms – Displays/Prints a list of current alarms

Historical Alarms – Displays/Prints a list of historical alarms.

Current Values – Displays/Prints a list of the current values

Show/Hide Dose, Dose Rate, Point Name, Point Number, Default Setting

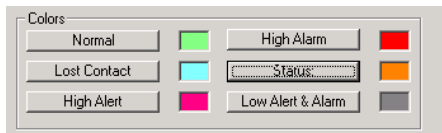
Display Keys – Map Zoom In, Zoom Out, Fit to Screen

Last Graph – Shows the last graph viewed

Color of the Point

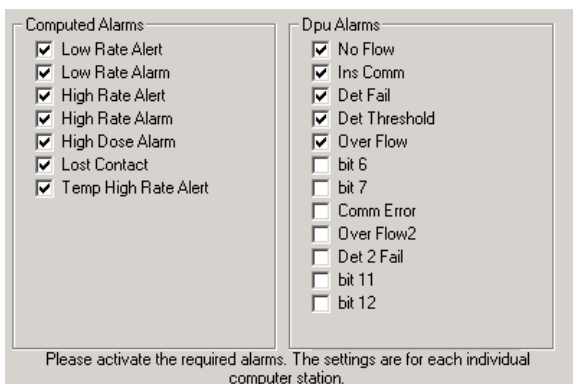
The color of the point depends on two parameters:

Threshold levels:



A user with the required administrator password can set the colors and define which Alerts/Alarms to activate.

Alert/Alarm Status:



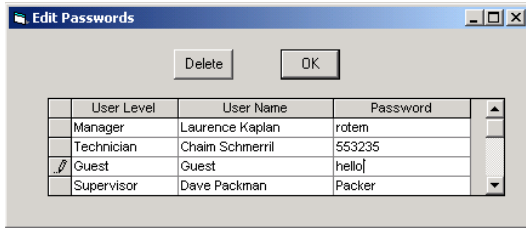
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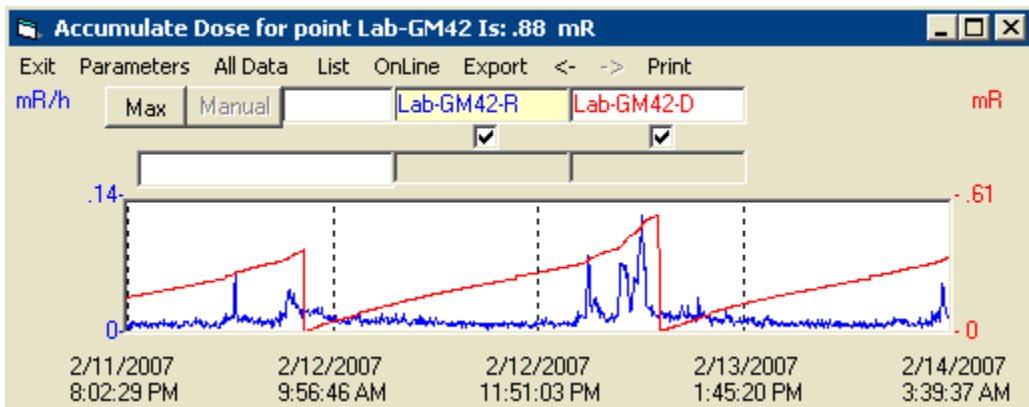
Password Controlled Access:

MediSmarts controls access to sensitive commands and applications which may cause damage, by utilizing a password regime. Supervisors can set up the various access levels:



Historical Graphs

MediSmarts is capable of instantly generating a graph of 100,000 points over a time period defined by the user. The Screen header displays the total accumulated dose for the displayed period (88 mR)



- Accumulated Dose and Dose Rate shown simultaneously
- Automatic dose rest every 24 hours
- Full zooming capabilities
- Export and printing capabilities
- Capability of displaying several graphs simultaneously (Production Monitoring)

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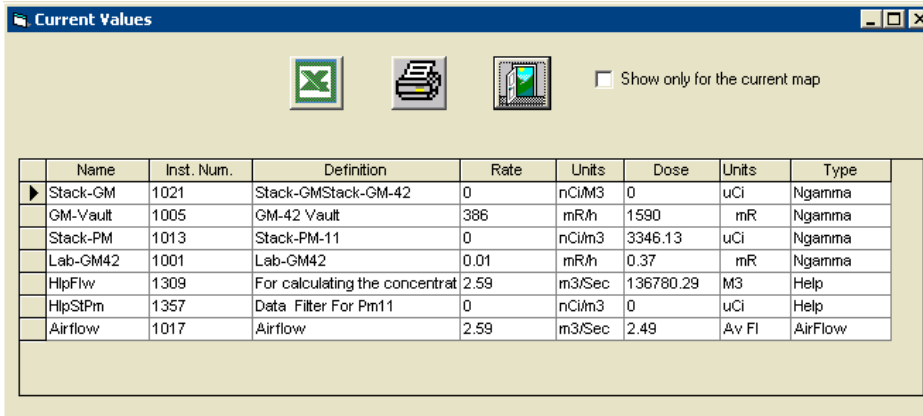
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Reports

MediSmarts has been developed specifically for Cyclotron Sites and therefore offers reports according to regulatory requirements. All reports can be exported to Excel.

Current Values Report

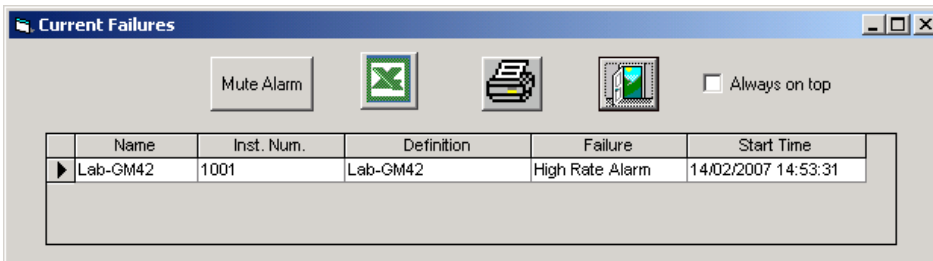
Shows the parameters of all the points currently placed on all the maps.



Name	Inst. Num.	Definition	Rate	Units	Dose	Units	Type
Stack-GM	1021	Stack-GMStack-GM-42	0	nCi/M3	0	uCi	Ngamma
GM-Vault	1005	GM-42 Vault	386	mR/h	1590	mR	Ngamma
Stack-PM	1013	Stack-PM-11	0	nCi/m3	3346.13	uCi	Ngamma
Lab-GM42	1001	Lab-GM42	0.01	mR/h	0.37	mR	Ngamma
HlpFlw	1309	For calculating the concentrat	2.59	m3/Sec	136780.29	M3	Help
HlpStPm	1357	Data Filter For Pm11	0	nCi/m3	0	uCi	Help
Airflow	1017	Airflow	2.59	m3/Sec	2.49	Av FI	AirFlow

Current Failures Report

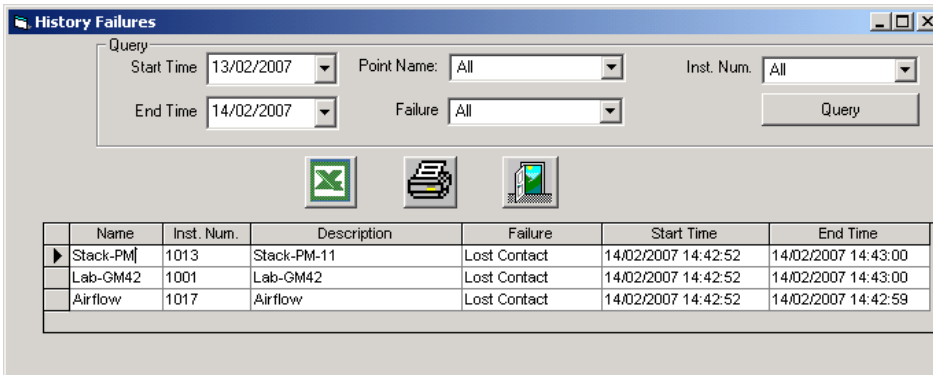
Shows the status of all points currently in the failure (alert, alarm, lost contact...) status



Name	Inst. Num.	Definition	Failure	Start Time
Lab-GM42	1001	Lab-GM42	High Rate Alarm	14/02/2007 14:53:31

History Failures Report

Shows a history off all points and their failure status



Name	Inst. Num.	Description	Failure	Start Time	End Time
Stack-PM	1013	Stack-PM-11	Lost Contact	14/02/2007 14:42:52	14/02/2007 14:43:00
Lab-GM42	1001	Lab-GM42	Lost Contact	14/02/2007 14:42:52	14/02/2007 14:43:00
Airflow	1017	Airflow	Lost Contact	14/02/2007 14:42:52	14/02/2007 14:42:59

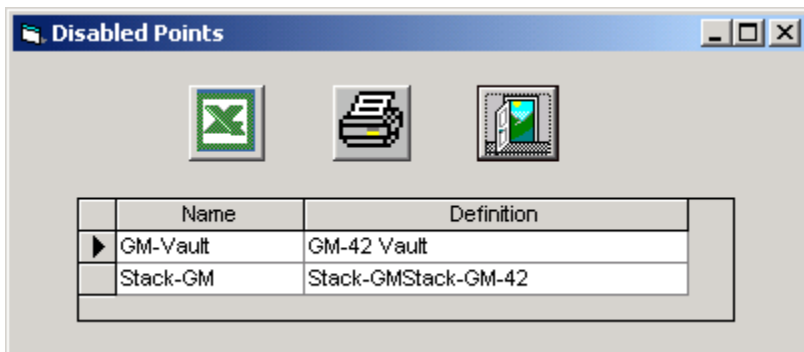
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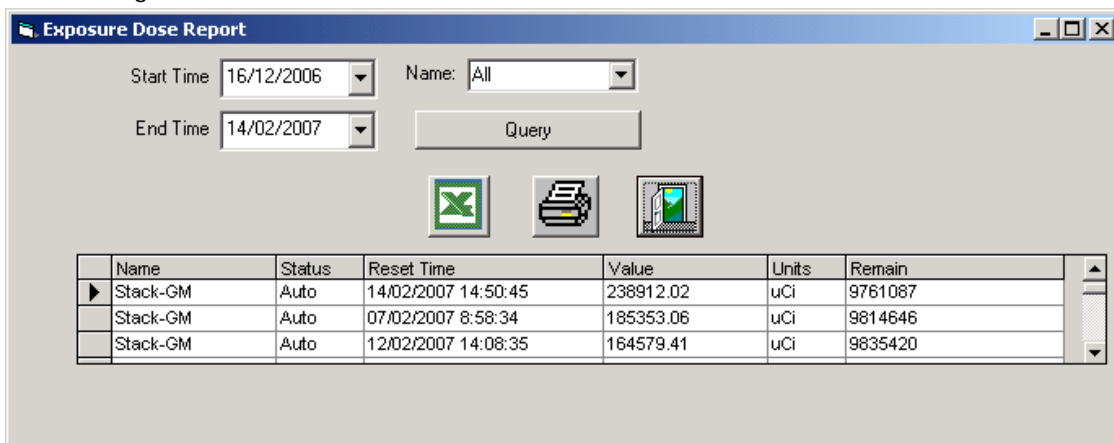
Disabled Points Report

In some cases the user may decide to temporarily disable a point for maintenance, this report shows which points are disabled.



Exposure Dose Report

Each monitoring is set to reset the accumulated dose at a set interval. At each reset MediSmarts saves the accumulated dose and is capable of displaying the amount of accumulated dose recorded against the dose threshold



Event Log Report

Displays all the relevant activities that took place in the site

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14/02/2007 15:11:57

Event Log

Time	Name	Description	Event
7/25/2004 01:22:13	Airflow	Airflow	Lost Contact Started
7/25/2004 01:22:13	Stack-GM	Stack-GM-42	Lost Contact Started
7/25/2004 01:22:14	Lab-GM42	Lab-GM42	Lost Contact Started
7/25/2004 01:22:14	Stack-PM	Stack-PM-11	Lost Contact Started
7/25/2004 01:22:14	GM-Vault	GM-42 Vault	Lost Contact Started

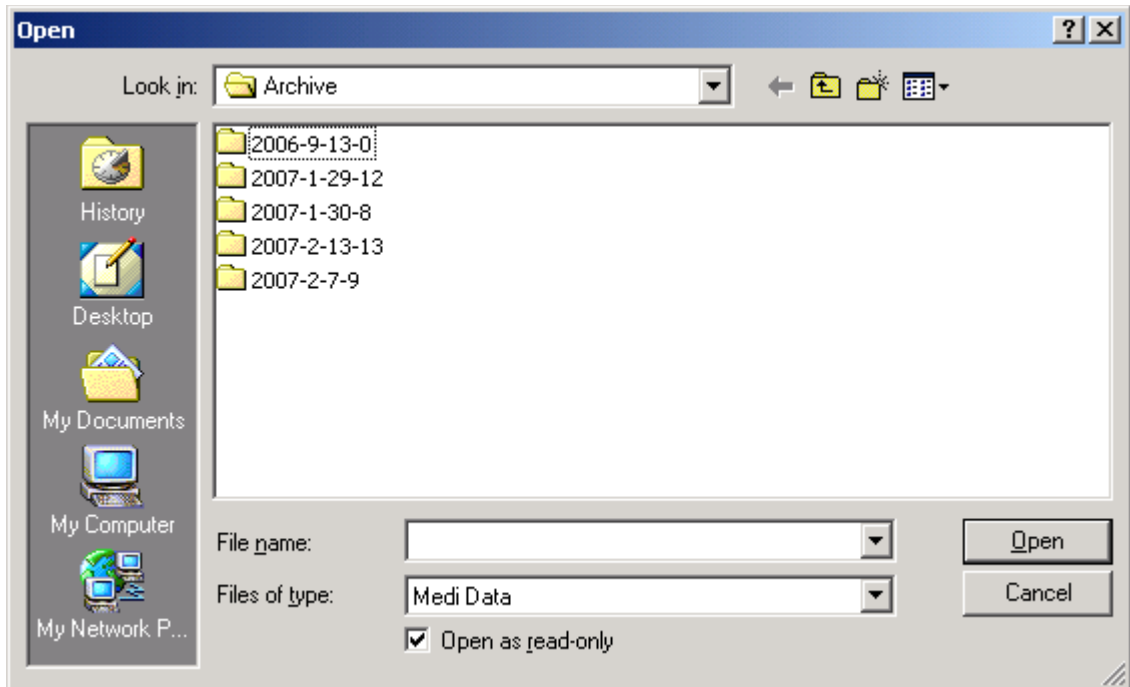
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Archiving

MediSmarts will archive the data every set interval. The data can be accessed at any time and the graphs of all the points during that period can be displayed. Each Archived file is time stamped for easy recognition.



TeleComm

The TeleComm program is responsible for collecting data from the network of monitoring channels in the site, via RS-485 hardware cable, and transmitting the data, via TCP/IP to MediSmarts monitors on the intranet or over the internet for remote site supervision.



MediWrite

The MediWrite program receives data from the MediComm program and saves the data used to create the historical graphs for MediSmarts.



Both programs are activated from within MediSmarts.

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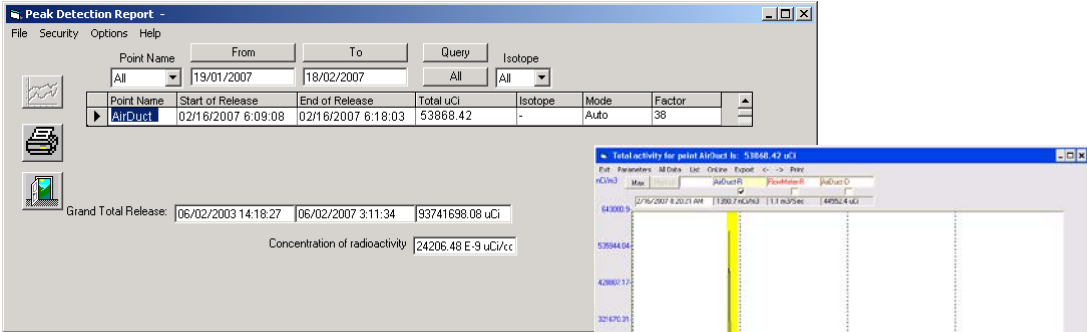
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Optional Software add-on's

Get Peak Software

Used to report on actual activity released from exhaust stack.

Using the built-in graphic interface, the user marks the release borders and MediSmarts calculates and reports on the released concentration.



Report allows for insertion of isotope name
For sorting and reporting purposes

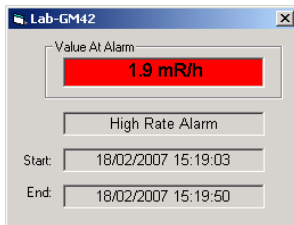
Background subtraction is built into the system

Network Version

Additional licenses for 5 remote stations per license can be purchased in order to allow remote monitoring of system either on-site or via the internet. Ideal for companies with a centralized reporting facility.

TelePop

A very small footprint on a remote computer which is enabled to display only the selected alerts/alarms. Ideal for a Supervisor on a remote machine



Clicking on the Display will mute the alarm
Can be set to disappear automatically when the alert/alarm situation reverts to normal

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