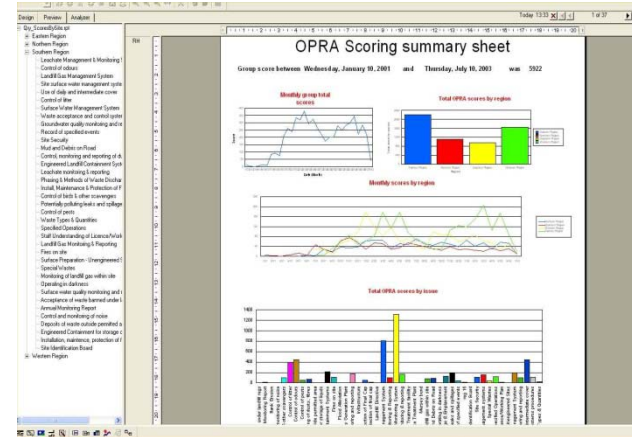
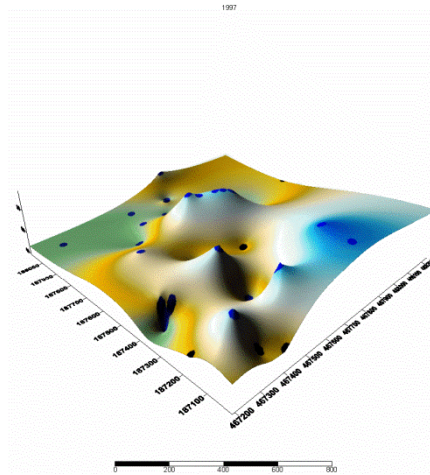
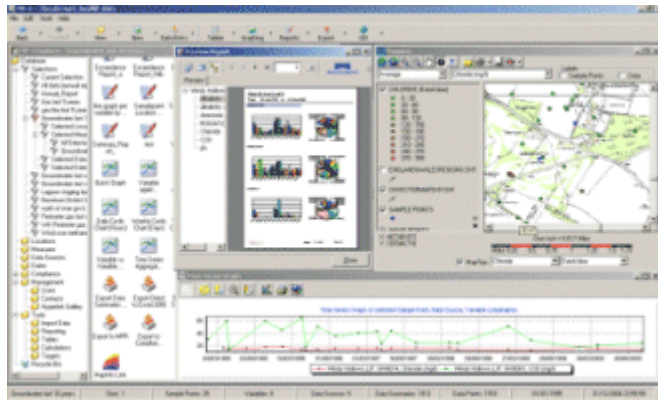




monitorpro

Monitoring data management systems





- Monitor-Pro is a networked (client/server) and browser based (.NET) monitoring data management system
- Developed by us, EHS Data Limited.
- Version 1.0 released in 1996, current version is Monitor-Pro 5 (MP-5)
- Used worldwide to manage many different (but often environmental) types of monitoring data



Which industries use Monitor-Pro?

- Mines and metals processing
- Landfill (UK industry standard - approx 1000 sites)
- Regulators (Environment agencies, Local Authorities)
- Installations UK, Australia, Argentina, Ireland, Denmark, Spain, China, Hong Kong, Thailand, Australia, New Zealand



Types of monitoring data that Monitor-Pro manages are not limited ...

Can be both sample based and continuous (high volume) data

Some examples are:

- Groundwater
- Surface Water
- Leachate
- Dust
- Noise
- Vibration
- Gas
- Weather
- Air quality (stack and ambient)
- Production data
- Occupational Health data
- Flow and meter readings (e.g. water, gas, electricity)
- Etc.

MP-5 can also manage key information from management data sets. Examples are:

- Carbon usage and sustainability data
- Tenement allocation data
- Incidents
- Audits
- Complaints, etc.



Quality

- ISO9000/TickIT certified in 2005
- MCERTS certified, first in its category
 - UK Environment Agency approved software specifically for managing monitoring data
 - This is preferred standard because it is focussed on quality procedures plus product capabilities



What MP-5 Does



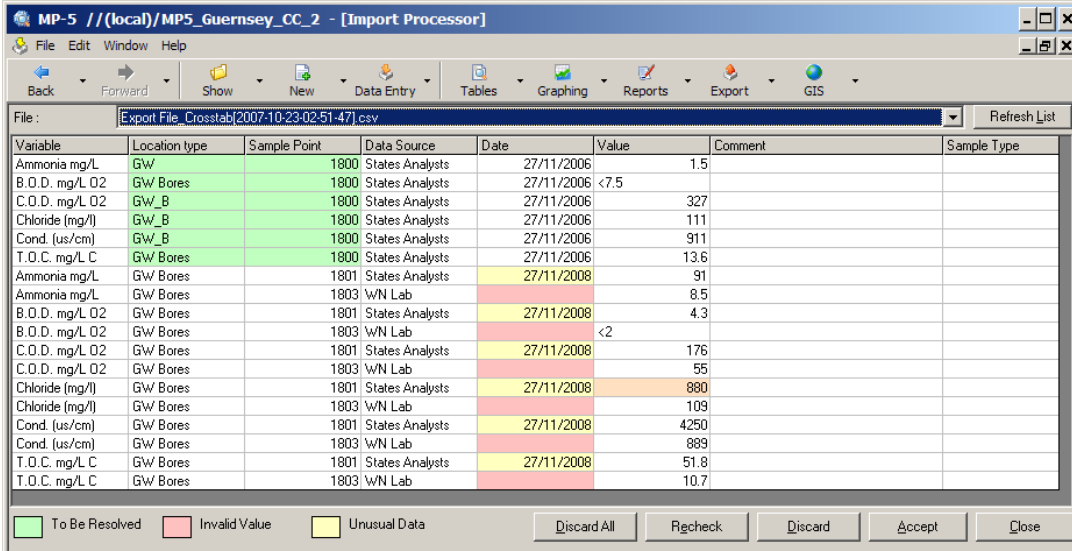
Provides Data Security

- Robust database, backed up regularly
- Secure logins
- Logins matched to user levels
- Audit trails of edited/deleted records



Validates data

- Consistency – typos notified
- Impossible readings
- Compliance breaches
- Invalid dates
- < Values



The screenshot shows the MP-5 Import Processor software interface. The window title is "MP-5 // (local)/MP5_Guernsey_CC_2 - [Import Processor]". The menu bar includes File, Edit, Window, and Help. The toolbar contains buttons for Back, Forward, Show, New, Data Entry, Tables, Graphing, Reports, Export, and GIS. The file name is "Export File_Crosstab[2007-10-23-02-51-47].csv". The main area displays a table with the following columns: Variable, Location type, Sample Point, Data Source, Date, Value, Comment, and Sample Type. The table contains 20 rows of data, with some rows highlighted in green (To Be Resolved), pink (Invalid Value), or yellow (Unusual Data). The status bar at the bottom shows three colored boxes: green for "To Be Resolved", pink for "Invalid Value", and yellow for "Unusual Data". There are also buttons for "Discard All", "Recheck", "Discard", "Accept", and "Close".

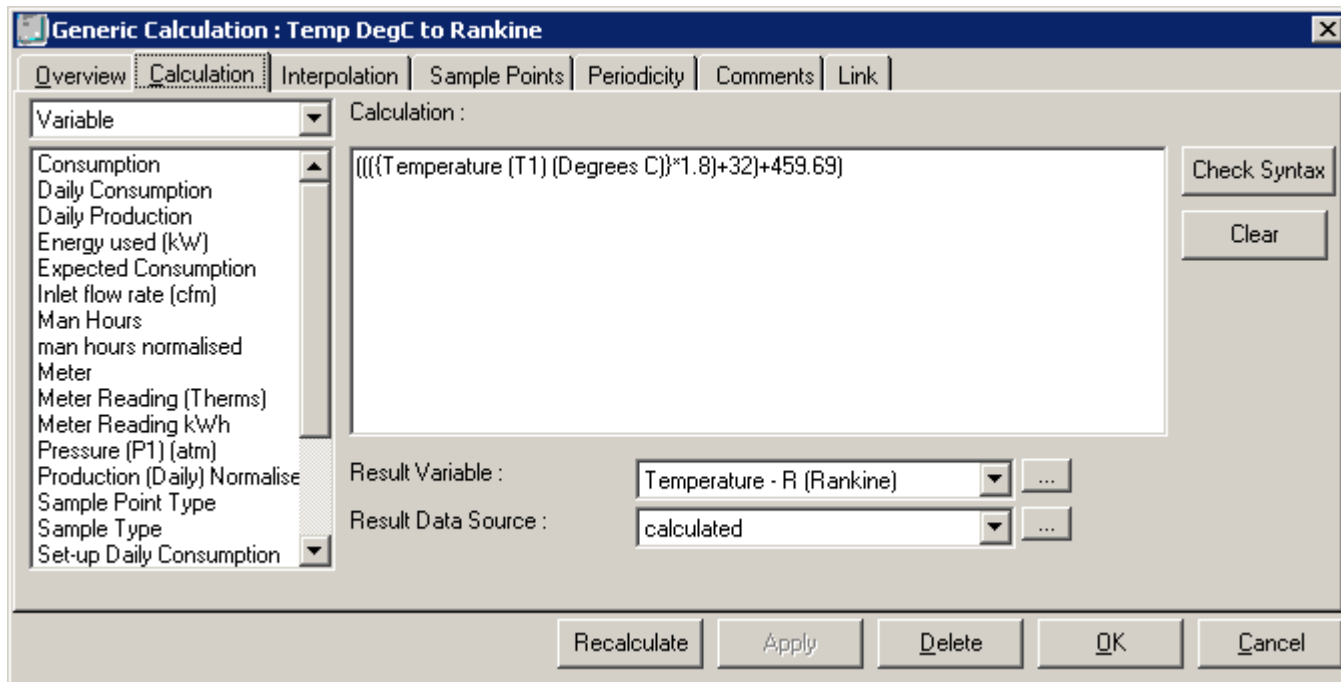
Variable	Location type	Sample Point	Data Source	Date	Value	Comment	Sample Type
Ammonia mg/L	GW	1800	States Analysts	27/11/2006	1.5		
B.O.D. mg/L O2	GW Bores	1800	States Analysts	27/11/2006	<7.5		
C.O.D. mg/L O2	GW_B	1800	States Analysts	27/11/2006	327		
Chloride (mg/l)	GW_B	1800	States Analysts	27/11/2006	111		
Cond. (us/cm)	GW_B	1800	States Analysts	27/11/2006	911		
T.O.C. mg/L C	GW Bores	1800	States Analysts	27/11/2006	13.6		
Ammonia mg/L	GW Bores	1801	States Analysts	27/11/2008	91		
Ammonia mg/L	GW Bores	1803	W/N Lab		8.5		
B.O.D. mg/L O2	GW Bores	1801	States Analysts	27/11/2008	4.3		
B.O.D. mg/L O2	GW Bores	1803	W/N Lab		<2		
C.O.D. mg/L O2	GW Bores	1801	States Analysts	27/11/2008	176		
C.O.D. mg/L O2	GW Bores	1803	W/N Lab		55		
Chloride (mg/l)	GW Bores	1801	States Analysts	27/11/2008	880		
Chloride (mg/l)	GW Bores	1803	W/N Lab		109		
Cond. (us/cm)	GW Bores	1801	States Analysts	27/11/2008	4250		
Cond. (us/cm)	GW Bores	1803	W/N Lab		893		
T.O.C. mg/L C	GW Bores	1801	States Analysts	27/11/2008	51.8		
T.O.C. mg/L C	GW Bores	1803	W/N Lab		10.7		

Pro-actively imports data and provides information to users

- Automated import of files
- Email Alerts notifying of import data events (failure, alarms, etc.)
- Scheduled reports or exports to email as pdf, Word, HTML or Excel
- Monitoring scheduler to track monitoring programmes and advise of missing samples and data



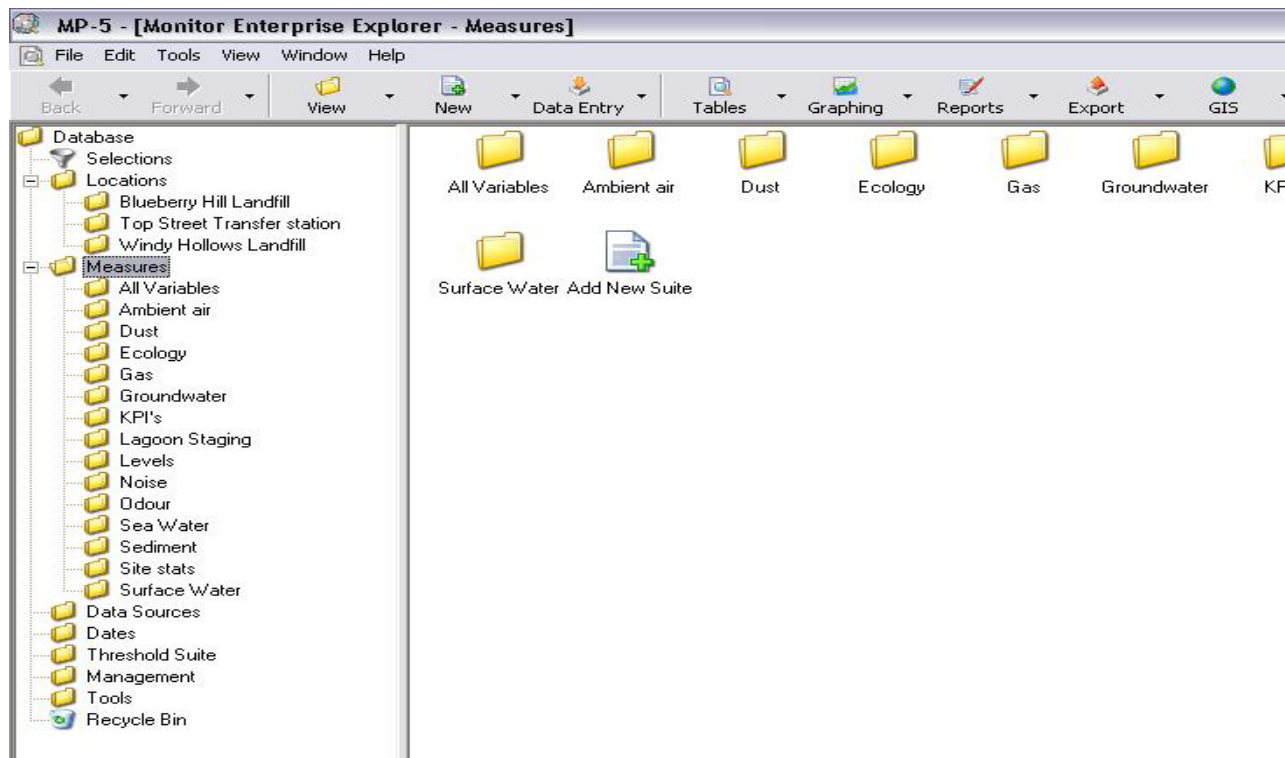
Performs user-defined calculations on data to automatically compute KPI's and other derived results





Helps retrieve data rapidly

MP-5 imitates Windows Explorer so is immediately familiar to many users





Provides easy to use data interpretation tools

The screenshot displays the MonitorPro software interface with several key components:

- MP-5 Explorer - Groundwater last 10 years:** A tree view on the left showing a database structure with folders for 'Database', 'Locations', 'Measures', 'Data Sources', 'Dates', 'Compliance Management', 'Users', 'Contacts', 'Hyperlink Gallery', 'Tools', and 'Recycle Bin'. Under 'Tools', there are icons for 'Import Data', 'Reporting', 'Tables', 'Calculations', 'Targets', and 'Recycle Bin'.
- Preview Report:** A central window titled 'Preview Report' showing a list of variables (Alkalinity, Ammonia, BOD(ATU), Chloride, COD, ph) and a preview of data visualizations including bar charts and pie charts.
- Mapping:** A window on the right displaying a GIS map of a site. It includes a legend for 'CHLORIDE (Data/Value)' with a color scale from 0-30 to 270-300. Other map options include 'ENGLAND&WALESREGIONS.DXF', 'DSVECTORMAPDXF.DXF', 'SAMPLE POINTS', and 'IMAGE POINTS'. A scale bar indicates 'One Inch = 0.617 Miles'.
- Time Series Graph:** A window at the bottom showing a line graph titled 'Time Series Graph of selected Sample Point, Data Source, Variable combination'. The x-axis represents dates from 04/03/1995 to 26/08/2000. The y-axis represents concentration levels from 0 to 60. Two data series are plotted: 'Windy Hollows L.F: GW0014, Chloride (mg/l)' (red line) and 'Windy Hollows L.F: GW0001, COD (mg/l)' (green line).

At the bottom of the interface, a status bar provides summary information: Groundwater last 10 years, Sites: 1, Sample Points: 25, Variables: 8, Data Sources: 5, Data Summaries: 1913, Data Points: 1918, 01/01/1995, 31/12/2004 23:59:59.

Data tables

Dates	GW0007	GW0008	GW0009	GW0010	GW0011	GW0012	GW0013	GW0014	GW0015	GW0016	GW0017	GW0018	GW0019	GW0020	GW0021A	GW0022A
18/04/1990				38.2												
24/07/1990				23												
24/09/1990				29												
18/12/1990				100												
18/03/1991				162	125	155	26	20	21	40	40	13				
11/06/1991				200			13	20	23	44		13				
20/06/1991				186												
17/08/1991				345	162	213	15.6	23	28	56	81	16.3				
12/05/1992				326	201	179	13	20	25	64	13	18				
08/06/1992				246	167											
10/11/1992				287	15	178		19	24	74	69	13	20			
13/01/1993				50	115	35	17	18	22	83	19	14	20			
06/04/1993				33	87	31	16	14	20	77	24	13				
07/07/1993				38	30	28	15	21	27	16	16	14	20	20		
05/10/1993				40	87	30	14	22	22	93	39	14	20	19		
04/01/1994				33	25	7	15	24	25	18	18	14	20	21		
11/04/1994				44												
12/04/1994							18		29			15				
13/04/1994					42			16		63	29					
14/04/1994				49	26	28		16	24	20	16		20			
04/07/1994				34	58	73		16	34	47	67		24			
19/10/1994									22							
20/10/1994				40	75	141	14	35		85	33	13	20			
19/01/1995				43	95	119										
24/01/1995									28	55	88		20			
05/04/1995							18	17				15				
12/04/1995				46	59	84			31.2	38	23					
19/04/1995													20			
01/05/1995				42.5	42					42.5		14.4				
02/05/1995							18	16.2	27		50					
20/07/1995																
26/07/1995				33	29	93		16	25	43	36		32	20		
21/08/1995																
06/09/1995																
25/10/1995				99	73	172	16	18	25	56	19	14	31			14
10/01/1996									25		26			24	22	
15/01/1996																14
18/01/1996				49	96	200		19		102			28			
22/04/1996				57	58	185	19	15	25	43	17	16	29	29		
07/05/1996												12.5				
08/05/1996				105	53		14.5	14	24.5	54	34					
08/07/1996								15	26							
11/07/1996				33	46	144				43	61		42	38		
01/10/1996					55	230	16	16	25			18	42	46		
02/10/1996				29						77	44					
21/01/1997				48	82	266		16	26	93			39			
22/01/1997										101						
06/02/1997																
08/03/1997																
21/04/1997				84	91	248	15	16	24	113	139	15	36			
08/05/1997																
13/05/1997				148	105					122		14				
14/05/1997							14.5	14.5	24		99					

Variables

- Alkalinity as CaCO3 (mg/l)
- Fluoride (mg/l)
- COD (mg/l)
- Conductivity (mS/Cm)
- Leachate level (m ADD)
- ph Value (PH units)

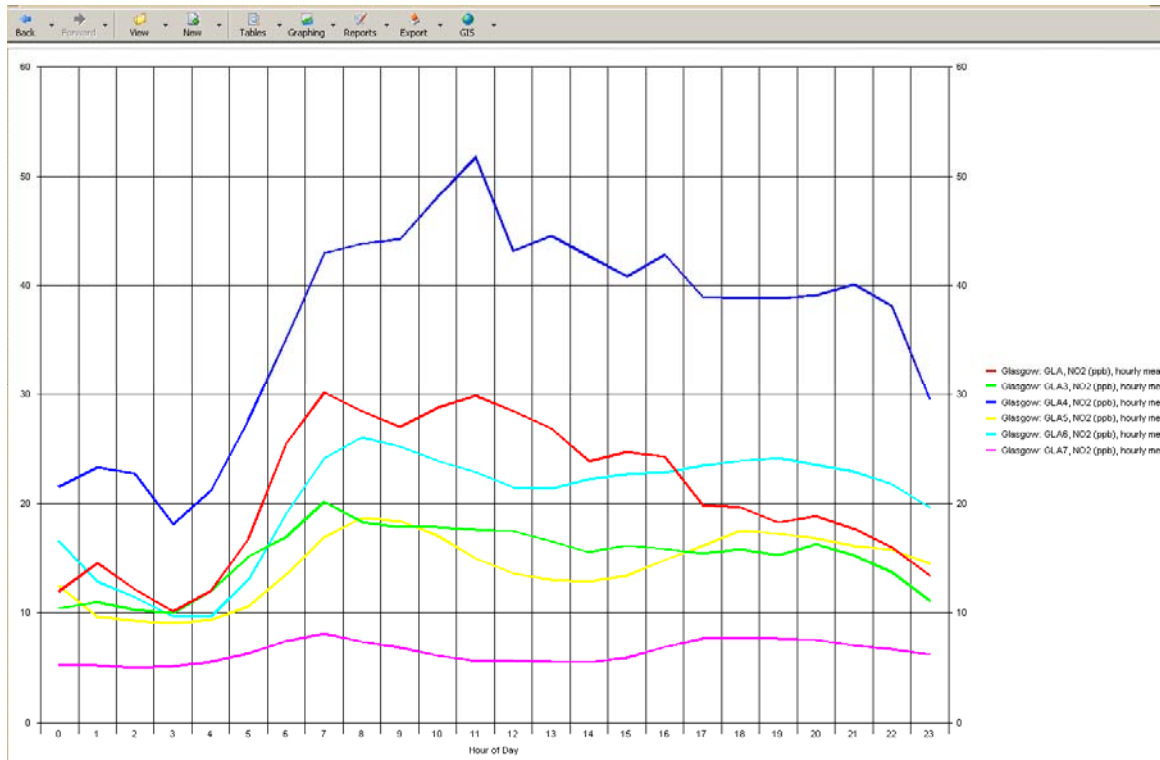
Summarising

- First
- Last
- Min
- Max
- Std. Dev.
- Variance
- Mean

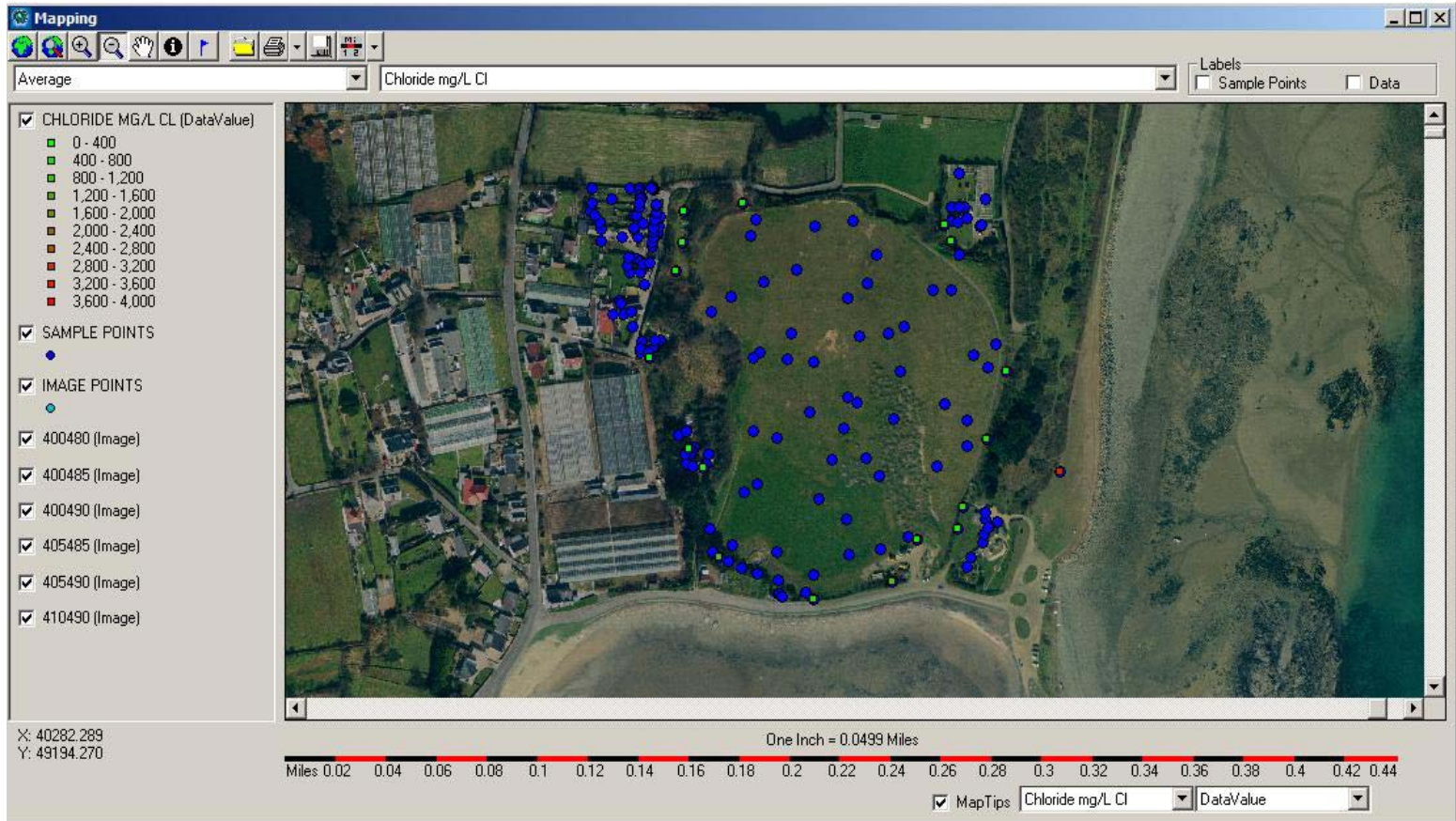
Existing Entry Threshold Violation Physical Max Physical Min

Field Log Transpose Check Thresholds Refresh Close

Graphing



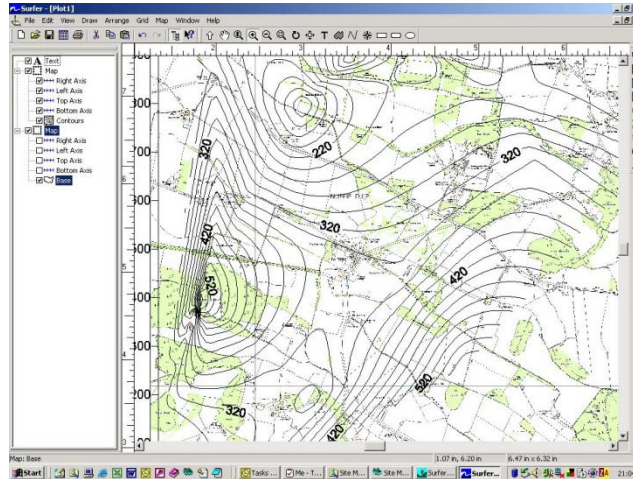
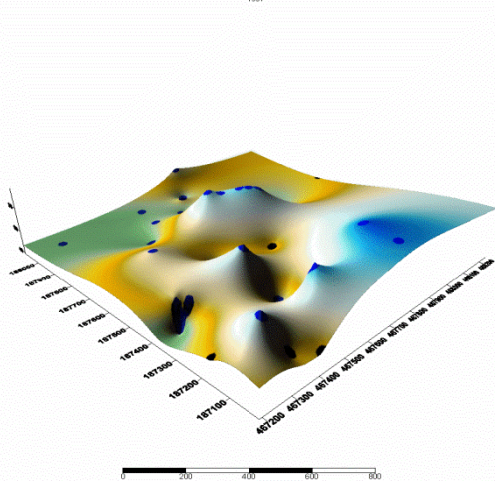
Mapping



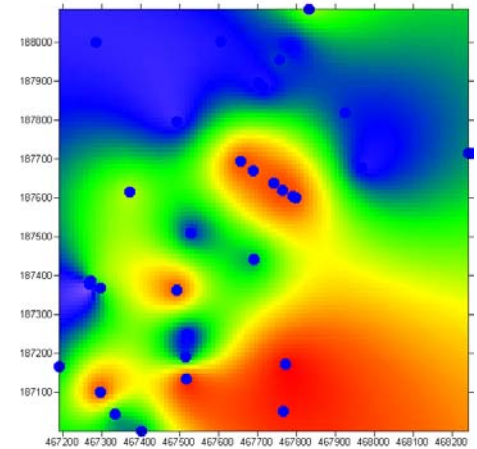


Contour plots

1997



1995



EHS Data Services

- MP-5 Support (telephone, email, remote assistance)
- Training
- Report design
- Database building
- Hosting services