

Equipment Monitoring Report
(January 2008 - December 2009)

IRM

Monitoring

An essential element in the management of an effective and efficient organisation is the on-going process of performance monitoring. Monitoring of equipment usage allows West Midlands Fire Service to evaluate both the frequency and purpose of specialist response equipment deployments as well as check if the business rules and operating systems are appropriate and effective. For example, is the target attendance time for this piece of equipment realistic and does it meet the requirements of our firefighters in the performance their duty?

The data used to monitor this equipment is drawn from our Oracle database and then analysed within Excel. This report concentrates on usage between January 2008 and December 2009. Clearly data is only available from the date of its introduction to West Midlands Fire Service so equipment that wasn't in use until after January 2009 will only generate descriptive data from the time of its introduction.

The items of equipment this report will discuss are:

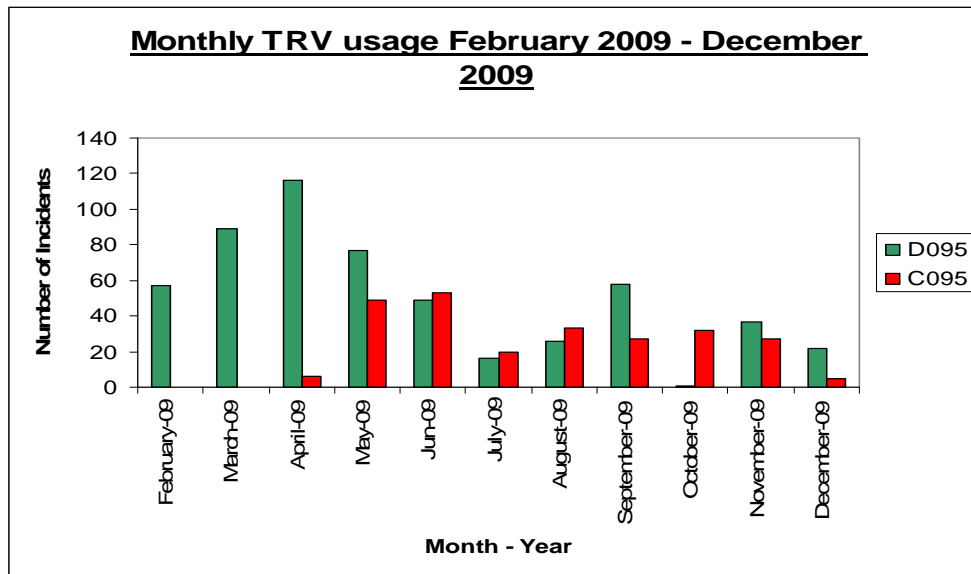
- Targeted Response Vehicles (smaller fire engines dedicated to dealing with low risk, minor fires)
- Detection, Identification and Monitoring (DIM) vehicle (to respond to hazardous materials incidents with specialist analytical equipment)
- Bobcat
- Cobra (high pressure water lance)
- High Volume Pump (HVP)
- Technical Rescue Team (rope rescue; urban search and rescue; heavy lifting equipment; water incident response etc)

Targeted Response Vehicles

West Midlands Fire Service has 2 Targeted Response Vehicles (TRVs) located at Hay Mills and Dudley Community Fire Stations. Dudley's TRV (D095) was introduced on the 2nd February 2009 whereas Hay Mills' TRV (C095) was launched on the 15th of April 2009. TRVs only respond to specific types of secondary incidents. A secondary fire is a fire that presents no risk to life or property and includes events such as fires in derelict buildings, abandoned vehicles, a tree, bins and outdoor fires. The benefit of using TRVs is that while they are dealing with low risk incidents, strategically placed fire engines with more personnel and more equipment are kept available to deal with higher risk incidents which may pose a threat to life or property.

Callsign	February-09	March-09	April-09	May-09	June-09	July-09	August-09	September-09	October-09	November-09	December-09	Grand Total
C095	0	0	6	49	53	20	33	27	33	27	5	253
D095	57	89	116	77	49	16	26	58	1	37	22	548
Grand Total	57	89	122	126	102	36	59	85	34	64	27	801

(Table 1)

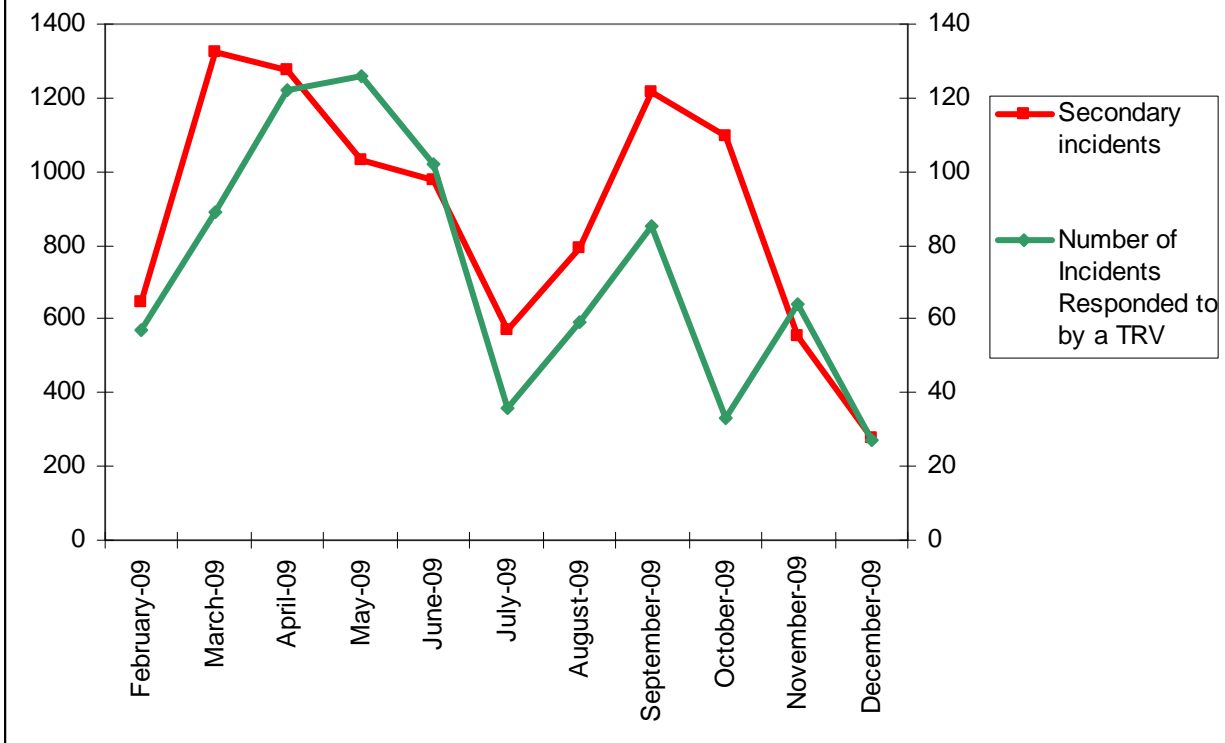


(Figure 1)

From their introduction, up to 31st December 2009 the TRVs had responded to 801 incidents. The majority of these were dealt with by D095 which responds to an average of nearly 50 calls per month, almost twice as many as C095's average during this period.

Table 1 shows that there is a variation from month to month in the number of incidents responded to by TRVs. D095 ranges from only 1 incident in October to 116 in April. C095 is more consistent so far, with a range of 5 in December to 53 in June.

**Total Number of Secondary Incidents Compared Against the
Number of Secondary Incidents Responded to by a TRV**



(Figure 2)

In order to monitor if the TRVs are being used to their full potential it is necessary to compare the incidents attended by them with the total number of secondary incidents throughout West Midlands.

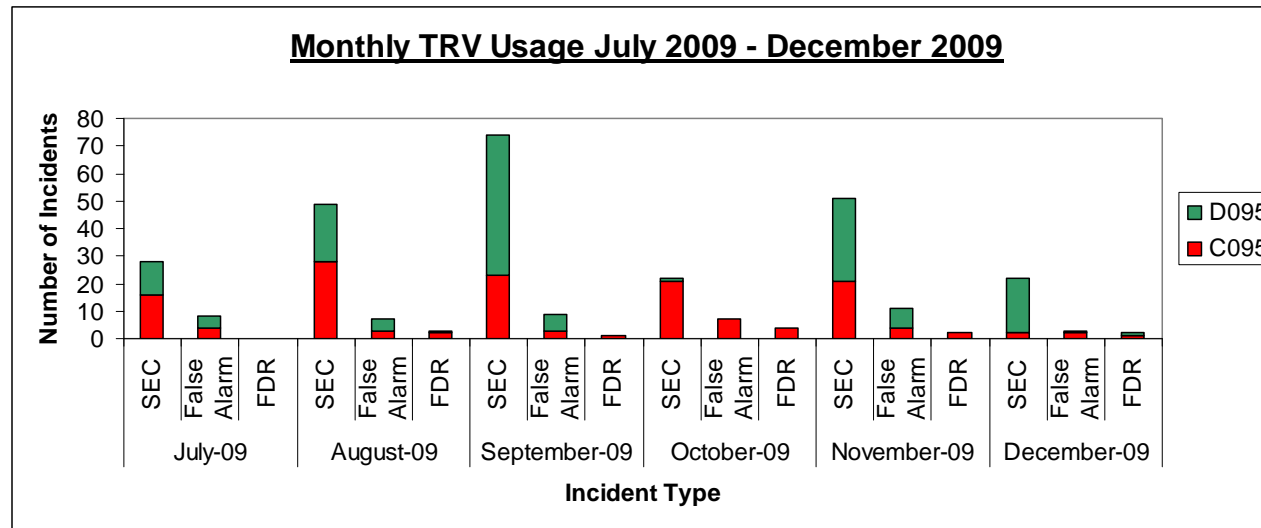
The graph shows that in most cases the number of incidents responded to by the TRVs is related to the seasonality we expect with secondary incidents. The only anomaly seems to be in the month of October.

This is because during the month of October D095 was 'Off the run' for most of the month; therefore C095 was the only available TRV.

Callsign	July-09			August-09			September-09			October-09			November-09			December-09		
	SEC	False Alarm	FDR	SEC	False Alarm	FDR	SEC	False Alarm	FDR	SEC	False Alarm	FDR	SEC	False Alarm	FDR	SEC	False Alarm	FDR
C095	16	4	0	28	3	2	23	3	1	21	7	4	21	4	2	2	2	1
D095	12	4	0	21	4	1	51	6	0	1	0	0	30	7	0	20	1	1
Grand Total	28	8	0	49	7	3	74	9	1	22	7	4	51	11	2	22	3	2

(Table 2)

Table 2 illustrates a breakdown of the types of incident the TRVs responded to during the last 6 months of 2009. As would be expected, over 80% (246 incidents) of all incidents responded to were secondary incidents. This equates to 5% of the total number of secondary incidents across the whole of West Midlands during the same time period (4504).



(Figure 3)

Detection, Identification, Monitoring

The Detection Identification and Monitoring support team (DIM) is a team of 12 people with specialist skills and equipment. The equipment the DIM team are able to use includes:

- Asbestos detection and evaluation
- Taking video footage (body worn camera & ISIS) – thermal imaging, video and high quality stills
- Identifying unknown substances – suspicious powders, spillages on the road etc
- Monitoring hazardous environments (toxic, radioactive, explosive etc)

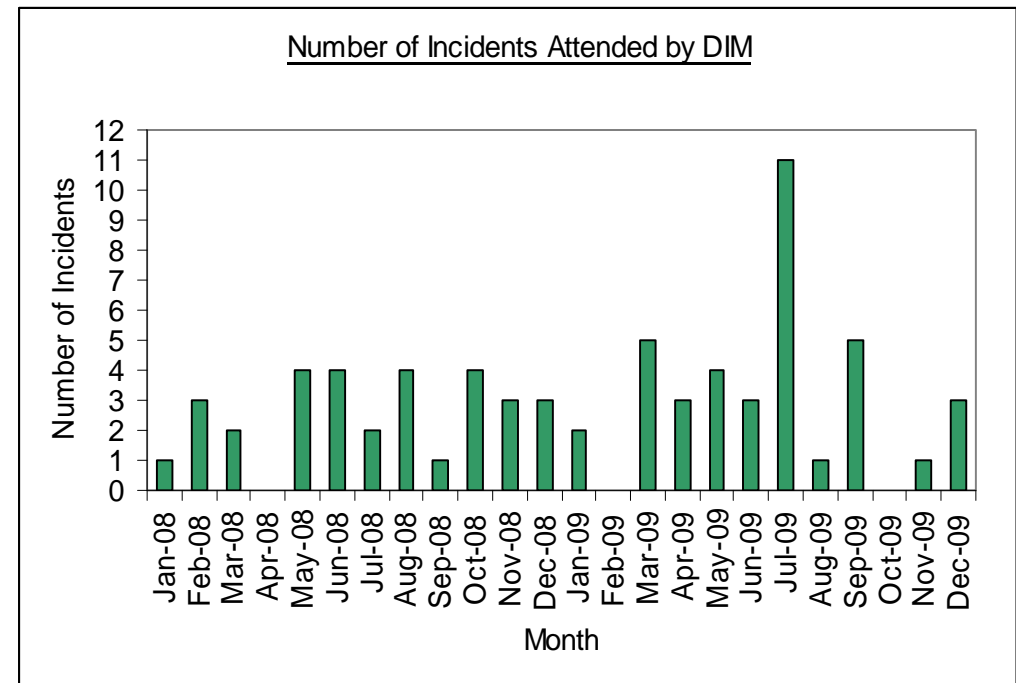


(Figure 4)

ISIS (Figure 4) is a high endurance, remotely operated aircraft suitable for taking aerial imagery in the form of video or high quality stills. The DIM team's specialist knowledge and equipment contribute to a safer working environment for West Midlands Fire Service personnel.

During 2008 and 2009 DIM responded to 69 incidents. The demand is variable, ranging from 0 in April 2008, February 2009 and October 2009 to 11 times in July 2009. The average number of incidents per month was approximately 3.

The DIM capabilities allowed these incidents to be dealt with quickly and effectively, reducing the impact upon local communities.

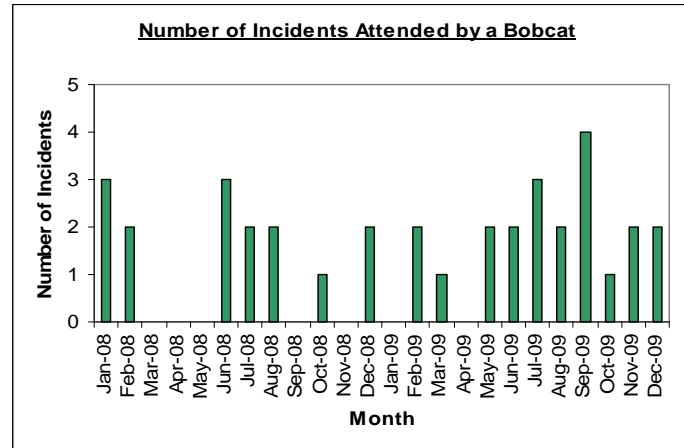


(Figure 5)

Bobcat

Month	Number of Incidents Attended by a Bobcat
Jan-08	3
Feb-08	2
Mar-08	0
Apr-08	0
May-08	0
Jun-08	3
Jul-08	2
Aug-08	2
Sep-08	0
Oct-08	1
Nov-08	0
Dec-08	2
Jan-09	0
Feb-09	2
Mar-09	1
Apr-09	0
May-09	2
Jun-09	2
Jul-09	3
Aug-09	2
Sep-09	4
Oct-09	1
Nov-09	2
Dec-09	2
Total	36

(Table 3)



(Figure 6)



(Figure 7)

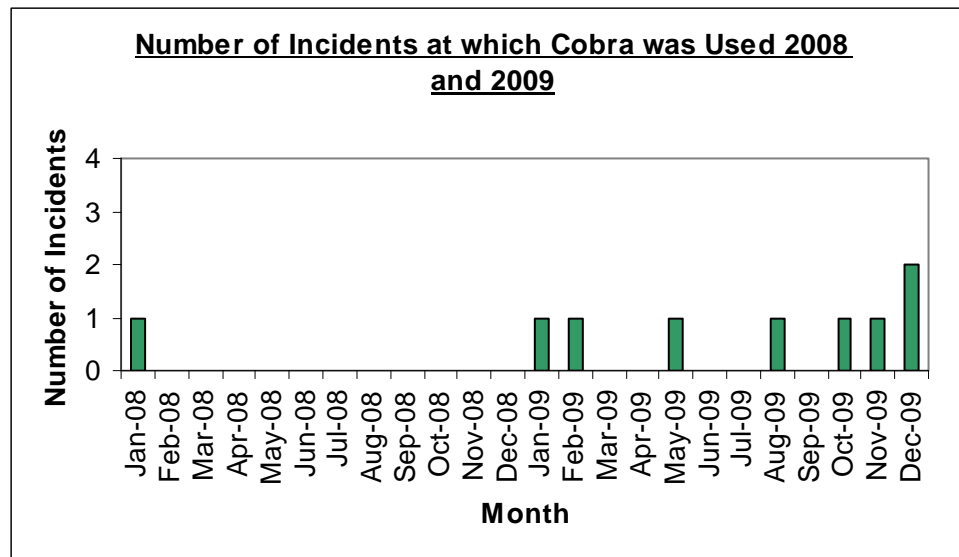
Bobcats are small vehicles, used to remove debris to either access a congested area or to allow damping down after a fire. They are based at Smethwick Community Fire Station. Bobcats are transported to incidents by a Prime Mover which is a flat bed lorry designed to carry various pieces of West Midlands Fire Service specialist equipment or vehicles.

During January 2008 and April 2009 the bobcats' usage was variable including a 3 month period between March and May 2008 with no usage. Since May 2009 however the bobcats have been used more frequently each month.

Firefighters at Smethwick have received specialist training to operate the Bobcat, but when it is not in use, they revert to normal firefighting and prevention duties.

Cobra

Cobra is a piece of fire fighting equipment which is a water cutting and fire fighting system. Cobra can cut through metal, concrete, wood and glass. West Midlands Fire Service has 1 Cobra system which is located at Highgate Community Fire Station.



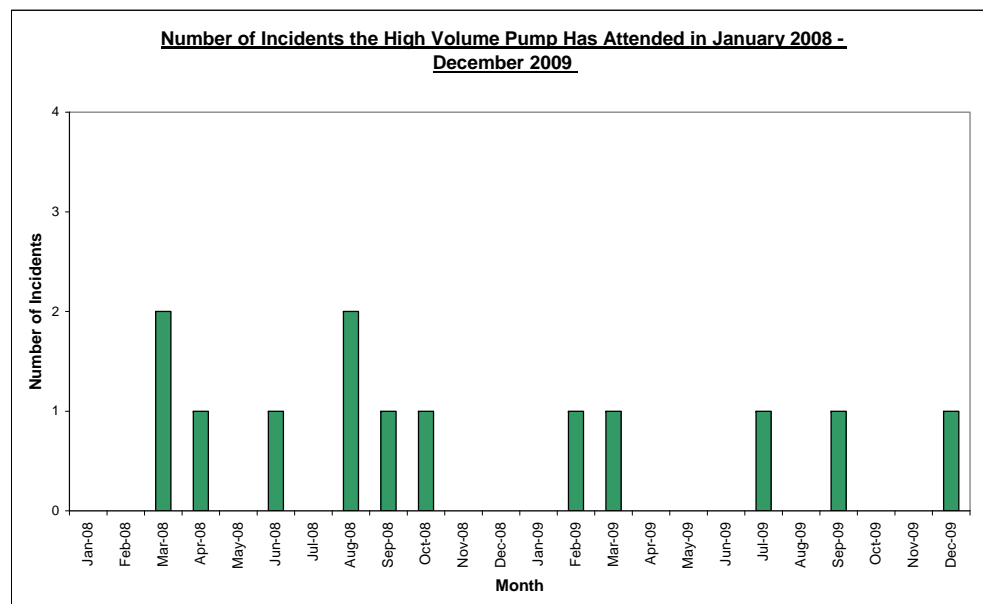
(Figure 8)

Cobra has been used inconsistently during 2008 and 2009. In February 2008 and December 2008, Cobra was not used; however since January 2009 it has been deployed more frequently. In most instances Cobra is used during large scale fires such as those involving factories or warehouses.

Month	Number of Incidents Attended by Cobra
Jan-08	1
Feb-08	0
Mar-08	0
Apr-08	0
May-08	0
Jun-08	0
Jul-08	0
Aug-08	0
Sep-08	0
Oct-08	0
Nov-08	0
Dec-08	0
Jan-09	1
Feb-09	1
Mar-09	0
Apr-09	0
May-09	1
Jun-09	0
Jul-09	0
Aug-09	1
Sep-09	0
Oct-09	1
Nov-09	1
Dec-09	2
Total	9

(Table 4)

High Volume Pump



(Figure 9)

The High Volume Pump (HVP) was provided as part of the New Dimension project by the Communities and Local Government department (previously Office of the Deputy Prime Minister, ODPM) to the UK Fire and Rescue Services. The HVP has enhanced West Midlands Fire Service’s capability to move large quantities of water. This can be either used for extracting or delivering water to an incident and is therefore used for both flooding incidents and fires that require vast quantities of water.

Month	Number of Incidents Attended by HVP
Jan-08	0
Feb-08	0
Mar-08	2
Apr-08	1
May-08	0
Jun-08	1
Jul-08	0
Aug-08	2
Sep-08	1
Oct-08	1
Nov-08	0
Dec-08	0
Jan-09	0
Feb-09	1
Mar-09	1
Apr-09	0
May-09	0
Jun-09	0
Jul-09	1
Aug-09	0
Sep-09	1
Oct-09	0
Nov-09	0
Dec-09	1
Total	13

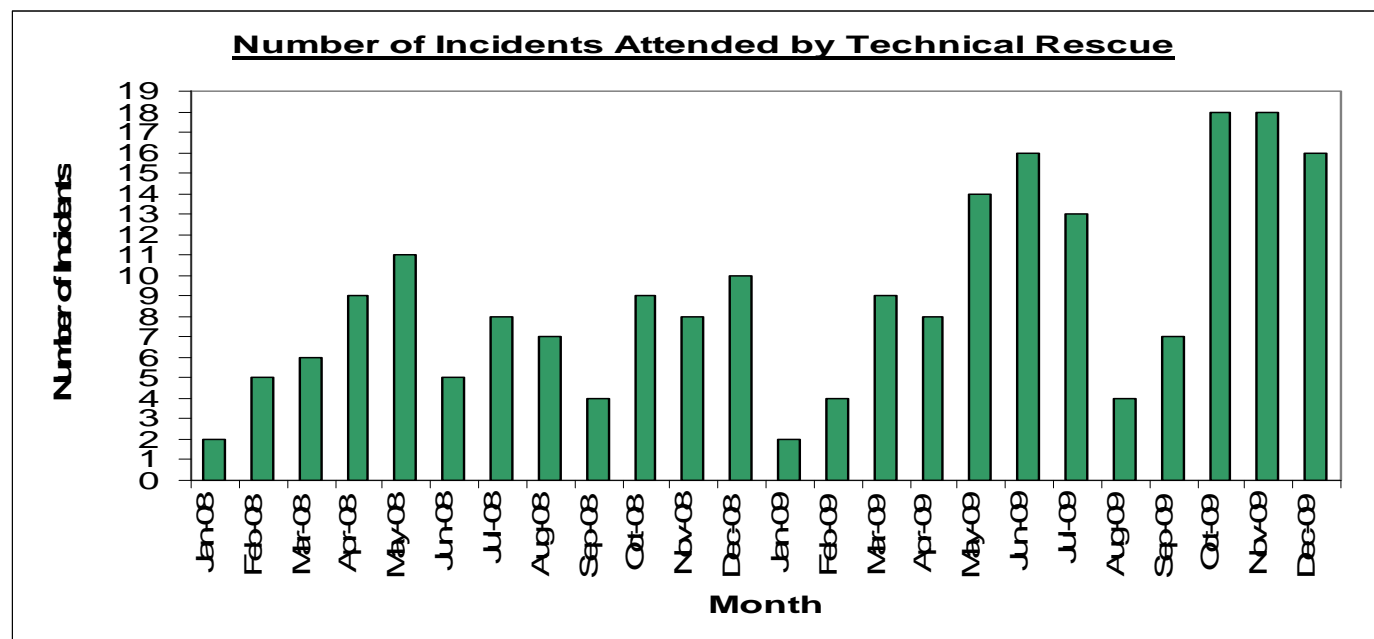
(Table 5)

The HVP has been used intermittently during 2008 and 2009. Since February 2008 the HVP has been mobilised to reduce the number of fire engines tied up for providing water at an incident; this reduces WMFS’ carbon footprint by sending 1 vehicle as opposed to many more fire engines.

Technical Rescue

Month	Number of Incidents Attended by Technical Rescue
Jan-08	2
Feb-08	5
Mar-08	6
Apr-08	9
May-08	11
Jun-08	5
Jul-08	8
Aug-08	7
Sep-08	4
Oct-08	9
Nov-08	8
Dec-08	10
Jan-09	2
Feb-09	4
Mar-09	9
Apr-09	8
May-09	14
Jun-09	16
Jul-09	13
Aug-09	4
Sep-09	7
Oct-09	18
Nov-09	18
Dec-09	16
Total	213

(Table 6)



(Figure 10)

Technical Rescue is a specialist team within West Midlands Fire Service. Their particular training and skills enable them to assist people using rope rescue, water rescue and heavy rescue equipment as well as urban search and rescue- (for people trapped in collapsed structures).

During 2008 and 2009 Technical Rescue was deployed and used on 213 occasions which is on average approximately 9 deployments per month. There seems to be a similar seasonal trend in Technical Rescue deployments with more occurring in the winter months of October, November and December and less in the early months of the year January and February.