From: Donald Gilroy [dgilroy@cebridge.net]

Sent: Wednesday, February 01, 2006 11:13 PM

To: zzMSHA-Standards - Comments to Fed Reg Group

Subject: comments to requestion

To whom this may concern.

Relevant to underground mine rescue equipment and technology.

This is presentation of technology the we have to offer in the communications side of mine rescue and personnel locating

Donald Gilroy

Hannah Engineering

1-304-636-7777

MSHA Docket No.
AB44-Comm-12

Elkins, WV

- **Mine Safety Systems**
- **Minesuite**

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P.O Box 2058 Elkins, WV, 26241

MSHA Docket No.
AB44-Comm-11

Presenting

- Dewayne Hannah, P.E.
- President & Sr. Engineer

- Donald Gilroy
- Senior IT Specialist

Mine Safety Systems

- Communications
- Gas Monitoring
- Proximity Protection
- Vehicle Alert / Collision Awareness
- Real Time Data Reporting
- Equipment And Personal Tracking
- Preventive Maintenance Equipment lockout

Communications

- Wi-Fi
- Hard Wired Phone
- Leaky Feeder System
- Redundancy
- Data Logger

Digital Video For visual monitoring of critical operations and areas

➢ Voice over IP For voice communication over Internet Protocol networks

5GHz Structured Mesh™

WI-FI Wireless Mesh Network

features
5GHz Structured Mesh™ backhaul
Self-Healing, Self-Forming
Session-persistent roaming
Integrated 802.11 a/b/g access
AES-CCMP encrypted backhaul
WPA (Personal and Enterprise) security
Multiple-SSIDs with 802.1q VLAN support
Independent Security profile per SSID
Remote Management and Monitoring
Power over Ethernet
NEMA rated outdoor enclosure

Self-Forming – Plug and Play

No tedious point-and-configure procedure needed. Units automatically form the network upon power up. Network can be extended simply by powering up more units.

WI-FI Transmitter

Machine Positioning without GPS

Solar Power Backup power

FlexAlert features –

· **Low Cost**

Mines of ALL sizes can afford it

· **Positive Action**

One alarm, warns ALL personnel

· **Easy to install**

Only requires 50 to 150 meter surface loop

· **Safe**

Low power 50 to 450 watts, dependant on size of mine

· **Miniature receiver**

Surface mount components enable installation inside most cap lamp batteries.

· **Two Visual Warnings**

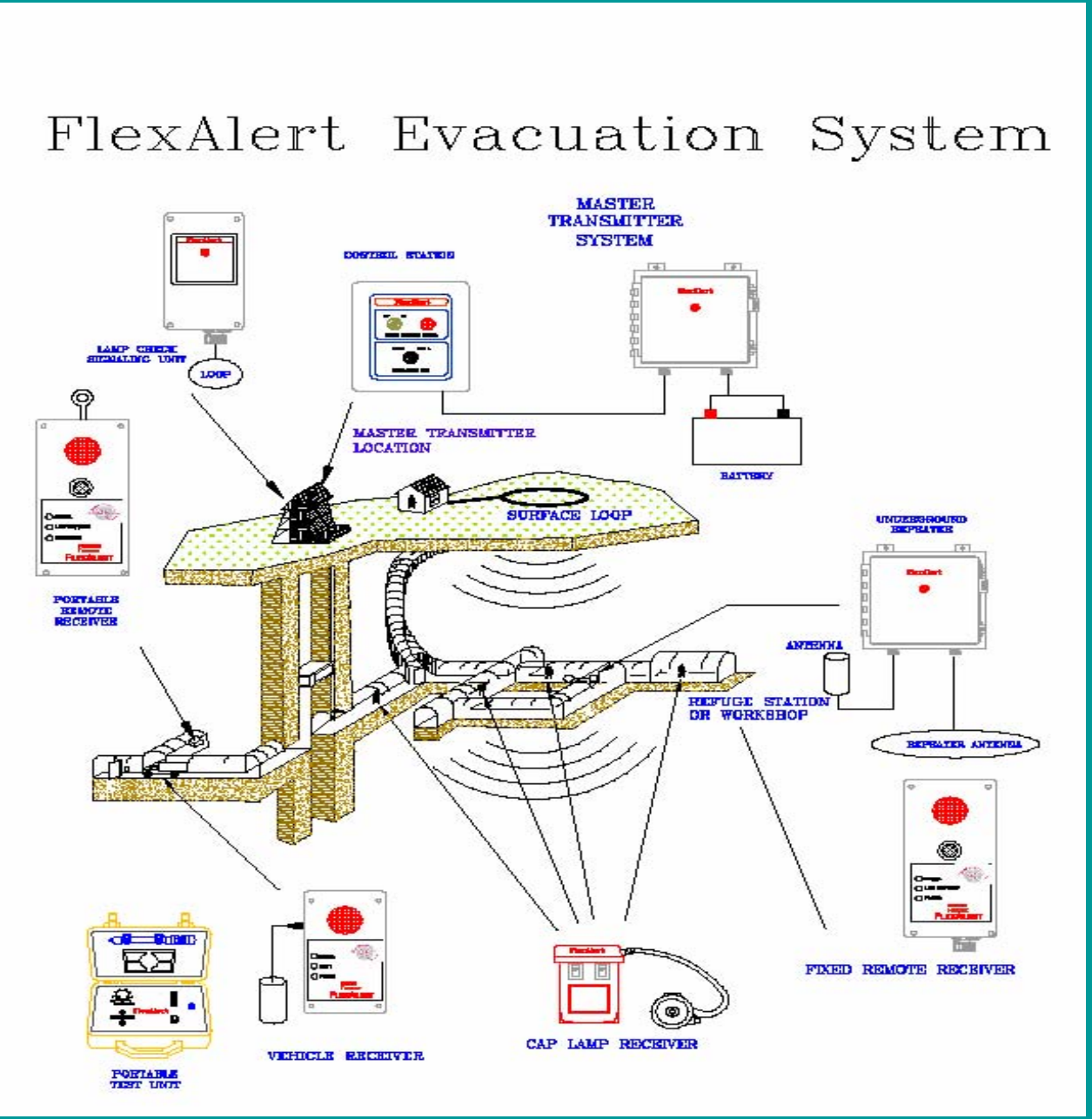
Cap lamp 'flashes' indicating evacuation. Plus a Hi Intensity LED as a back up

· **Three models**

Cap Lamp, Fixed (wall mounted) and Portable, loud sounding audio-visual
versions

· **Easy to operate**

· **Virtually maintenance free**



Swipe Card Electronic Tag Boards

The swipe card solution provides a flexible base for a variety of functions such as

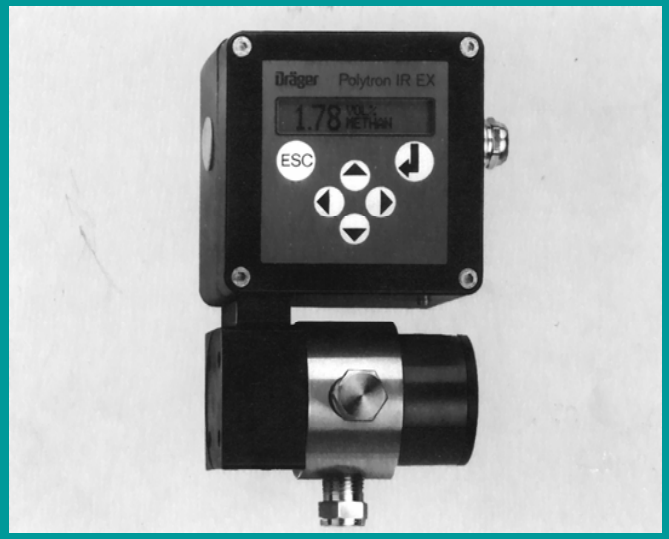
On-Site Fuel Dispensing and Control

Payroll

Site Access and Security

Electronic Tag Board

Gas Monitoring

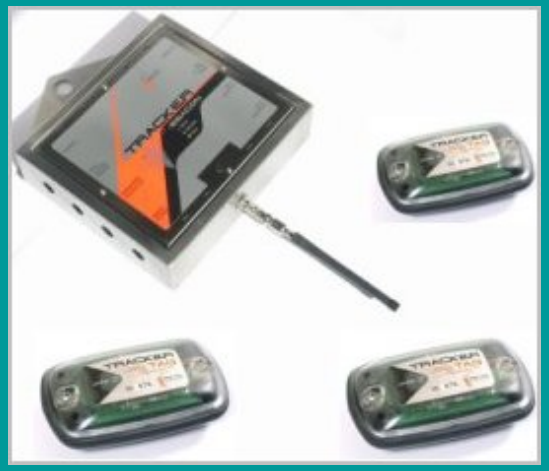


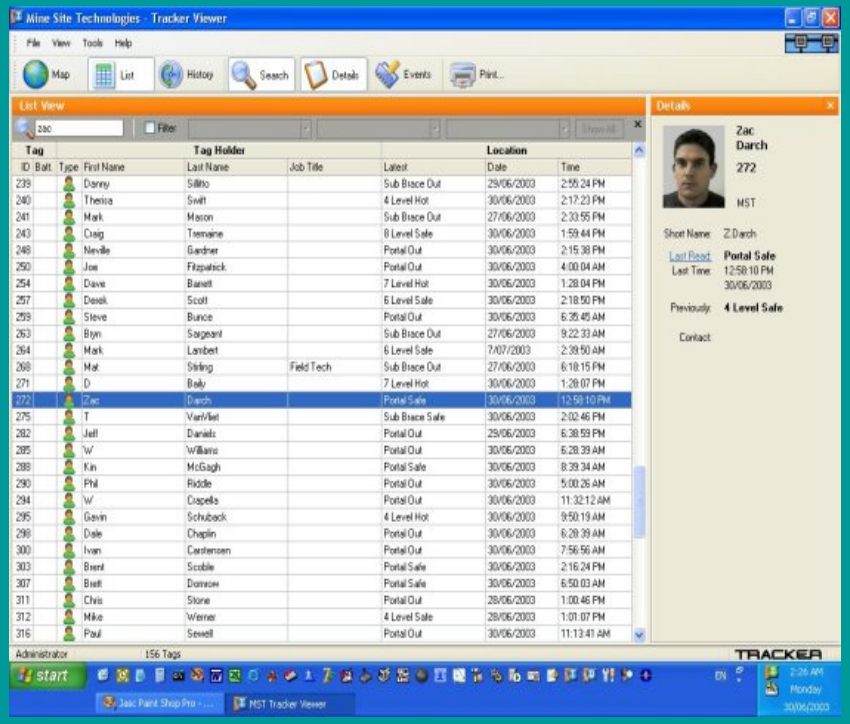
Transmitter IR Ex Inline
CH4

Transmitter IR CO2

O2 LS Measuring Head

Tracker Tagging System





Vehicle Alert System

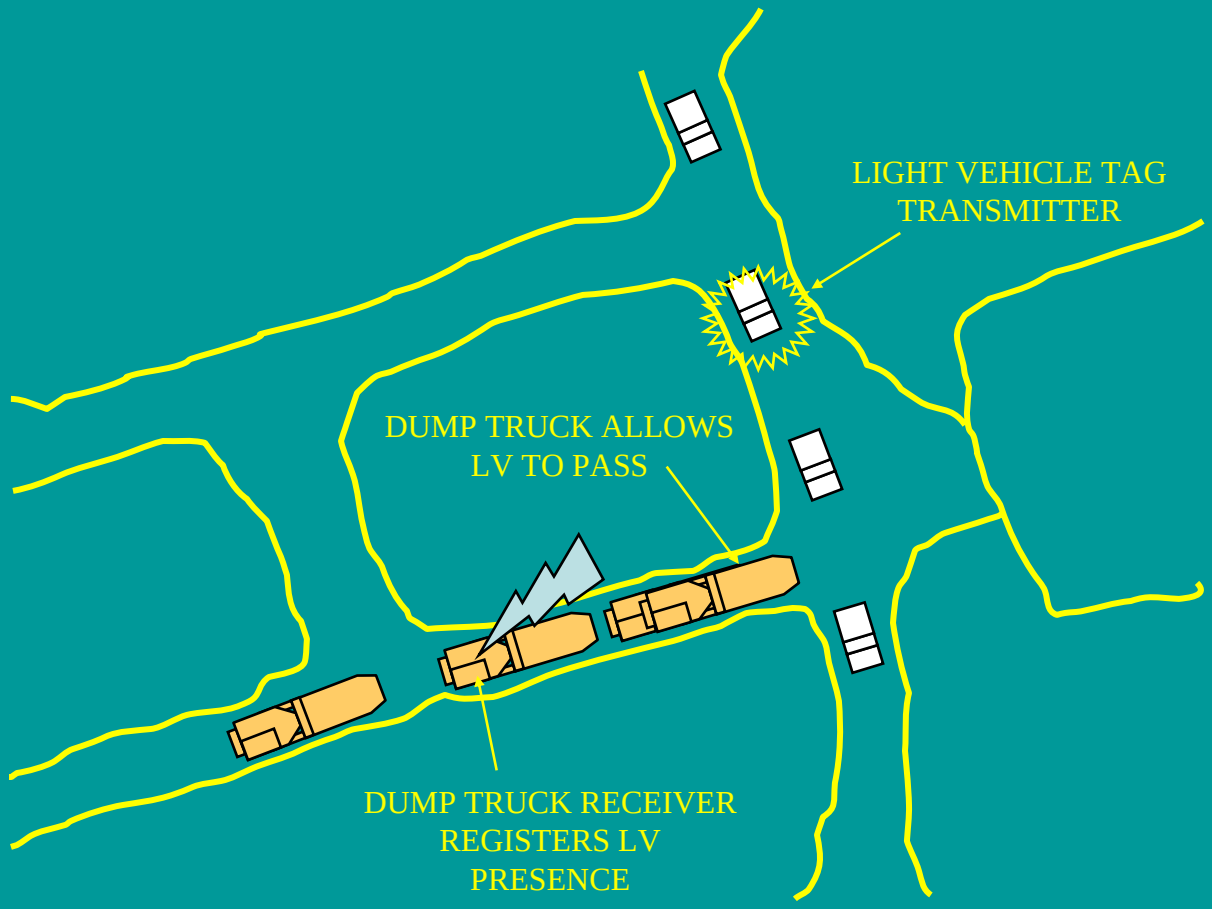
System consists of:

- **RF transmitter unit or active tags for smaller LV**
- **RF receiver or tag reader unit for larger Truck or LHD vehicle**
- **RF receiver or tag reader unit at 3 level and 21 fuel bay.**

The system works by:

- **The transmitter transmits encoded message to receiver if a LV is within defined distance containing vehicle number**
- **The receiver gives a warning alarm and displays and identified PV vehicle number on LCD display and stored in the system**
- **Alarm is acknowledged by large vehicle operator.**

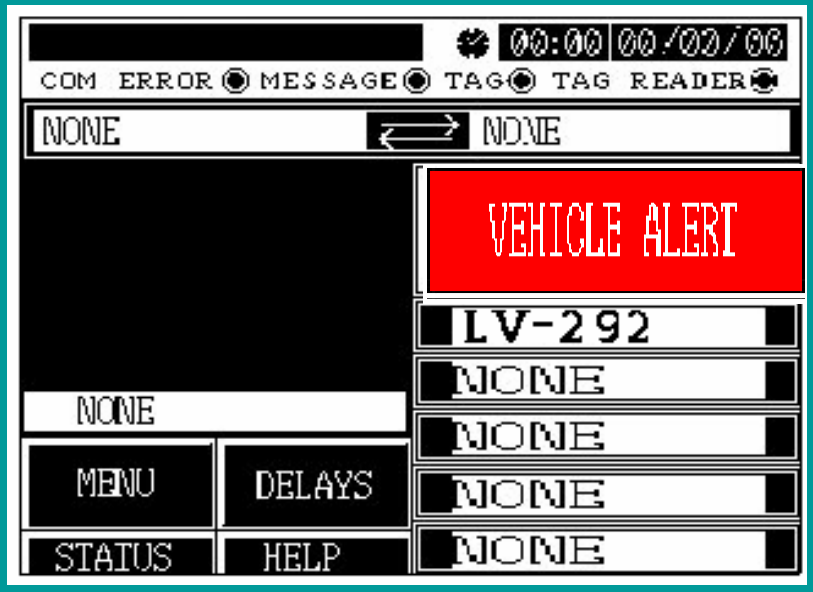
Vehicle Alert System

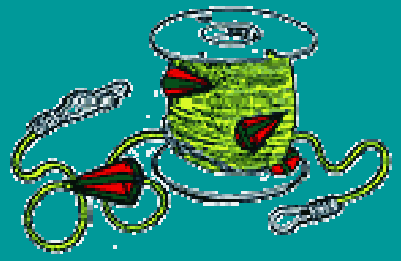


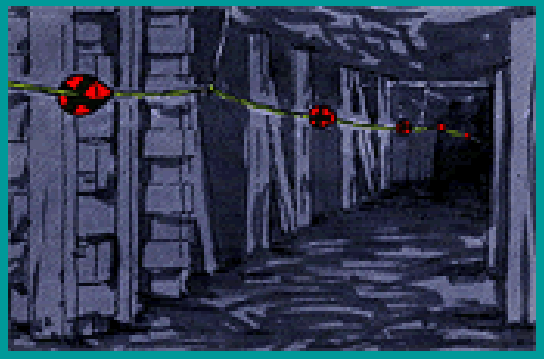
Vehicle Alert System

LHD’s / Trucks:

•RF receiver or tag reader unit for larger Truck /LHD vehicles







CAB Lifeline

The CAB Lifeline is an escape rope designed to help evacuate an underground mine in the event of a fire or explosion. Research by the U.S. Bureau of Mines has shown that the presence of a rope guide in dense smoke can improve the chances for a successful escape when a fire breaks out in an underground mine. The CAB Lifeline, with it's sturdy directional cones, will help lead employees to the slope and shaft rather than getting lost or confused in an actual emergency situation. Each spool contains 300 metres of 6mm yellow polypropylene with directional indicators installed at 30 metre intervals. Corrosion resistant thimbles, oval sleeves and quick links are installed on each end for the quick and secure attachment of sections. Can be custom made to an individual mine specification.

CB945 **300 metres CAB Lifeline with reflectorised cones each 30 metres 10kg**

Minesuite Applications

Underground :

- Underground Fleet Management
- Anti Collision Systems
- Maintenance Management
- Equipment Tracking
- Product Quantity and Quality Tracking
- Fuel Monitoring systems
- Reporting
- Gas and Ventilation monitoring
- Personnel Tracking
- Redundant Communication Systems
- WI-FI, Hardwire, & Wireless

Minesuite Applications

Open Pit :

- Open Pit Fleet Management Systems
- High Precision GPS Bucket Guidance
- High Precision GPS Dozer Guidance
- High Precision GPS Drill Guidance
- Fuel Monitoring systems
- Down time delay recording
- Maintenance Management
- Equipment and Personnel Tracking
- Stockpile Management

Minesuite Applications

Process Plants :

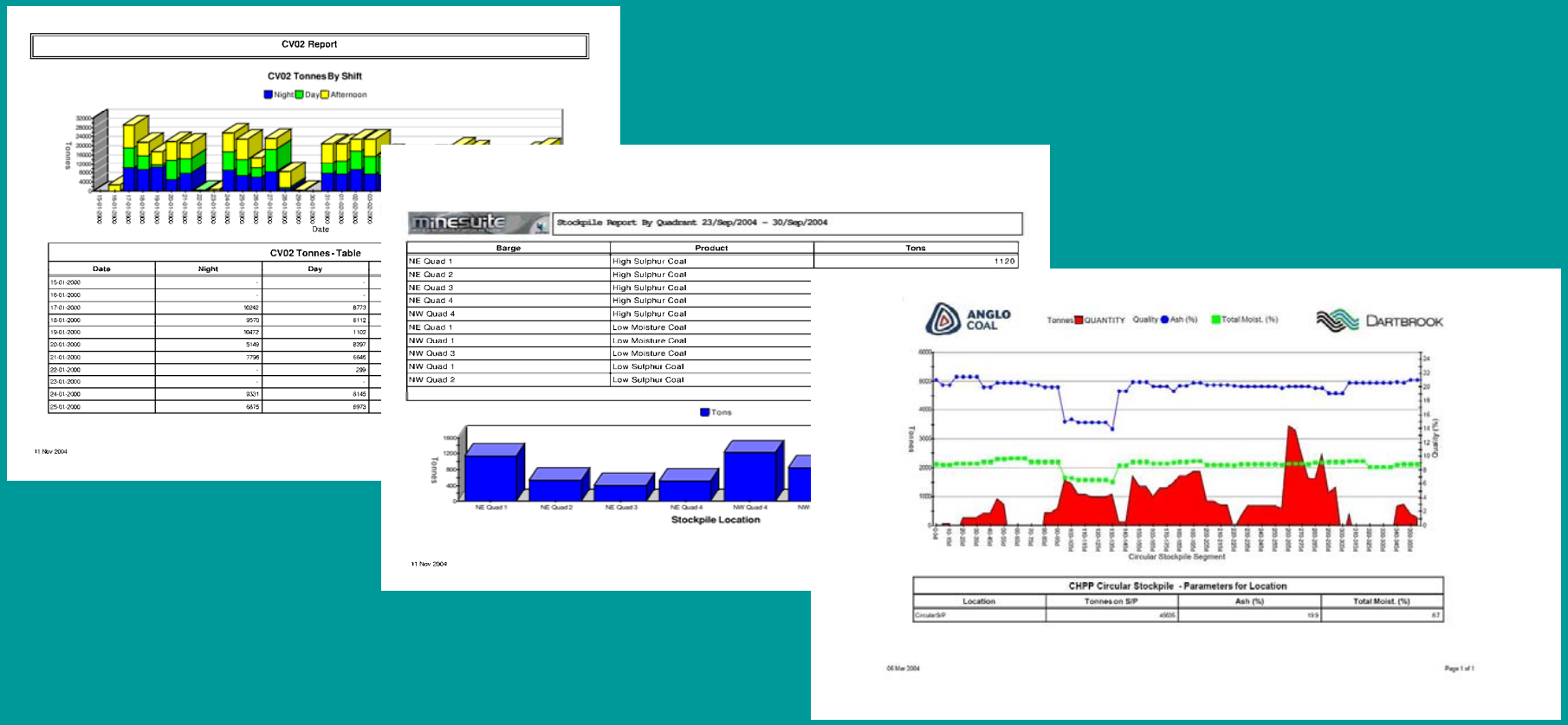
- Wash Plants, Mineral Processing and Materials Handling
- Stockpile Management
- Plant Performance Monitoring
- Interface to Plant control Systems

Features of MineSuite

- Interfaces to other mine systems
- Automatic Alarms and environment set points
- Fully integrated reporting tool, user can create own reports
- Rugged military tested hardware
- All functions of MineSuite are user configurable, Minesuite, Touch Screens, Reports, KPI's.

Presentation - Reporting

Examples of User configured reports from other sites



Who Uses MineSuite

Underground :

- BHP Billiton
- Anglo Coal
- Xstrata
- Assmang
- Pasminco
- Centennial Coal

This Package Can Be Customized To Fit Any Underground Or Surface Mine

The Main Advantages Of This Package Is That All of the Items Mentioned Can Be Linked To A Centralized Computer Accessed From Anywhere In The World

This Package Can Be Added To Or Upgraded At Any Given Time

Support For These Products Is Readily Available

We Will Be Happy To Discuss All Aspects And Questions

Minesuite & Maptek

MAPTEK

VULCAN 3D Software

- Geological Modeling
- Mine Design
- Scheduling
- Survey
- Optimization
- Consulting
- Software Development

I-Site 3D Laser Imaging

- Laser Scanning
- Software Development
- Scanner Development
- Consulting/Surveying
- Services

minesuite

- Production Monitoring Reporting
- Fleet Management
- Plant Reporting
- Real-Time Systems
- Software Development
- Database Management

Minesuite & Maptek

- 2001 Maptek Purchased Advanced Systems Integration (Product is Minesuite)
- 2002 Maptek Establishes Minesuite North America

North America / Europe

Luke Chorley – Minesuite Technical Manager North America

Dewayne Hannah Eastern Representative

Hannah Engineering

Donald Gilroy Senior IT Specialist

Hannah Engineering

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- End Of Presentation -