

Subsurface Imaging Report

July 27, 2006

Prepared For:

Any Company

Job Identification:

123 Any Street Chicago, Illinois

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Company Qualifications Statement

Worksmart, Inc. was established in 1998 to provide subsurface scanning and locating services to industry, construction, environmental and private concerns around the United States. Our mission statement is simple "Provide the highest level of quality and professionalism for the best value to the customer in every area of our business."

Key Personnel

Michael P. McGarry, President & COO

ERA Technologies, London, England - Advance studies graduate in Surface Penetrating Radar (SPR) applications, methodology and subsurface radar sciences USRADAR, Mattawan, New Jersey – SPR data interpretation training and sciences NULCA, National Utility Locating Contractors Association member CAM, Construction Association of Michigan RSPA, Research and Special Programs Administration compliant member *Denise Brausch, Vice-President* USRADAR, Mattawan, New Jersey – SPR data interpretation training and sciences RSPA, Research and Special Programs Administration compliant member

Company Assurance

General Liability \$3,000,000 Automobile Liability \$1,000,000 Excess Liability Umbrella \$3,000,000 Workers Compensation \$100,000 Professional Liability \$1,000,000 with Lloyds of London **ISO compliant**

Primary Equipment

ERA model from USRADAR, Inc. equipped with either a 500 MHz or 250 MHz antenna, survey trolley and unit controller. The latest version of SPR Super Scan Software 3.01. As of September 1, 2000 all devices which emit radio frequency (*RF*) must comply with the safety limits for human exposure as set forth by the Federal Communications Commission. If any facility, operation or device is found not to be in compliance with the commissions RF exposure guidelines, the FCC will consider this a violation of its rules resulting in possible fines, forfeiture or other actions deemed appropriate by the commission. Taken from the FCC Public Notice released February 25, 2000.

Our GPR equipment is compliant with all federal regulations and has the FCC license attached.

Po Box 442 - Paw Paw, Michigan 49079 Voice: 800-565-3347 - 269-341-9529 Facsimile: 269-341-9530 <u>WWW.worksmartinc.net</u> - <u>radar01@voyager.net</u>

Company Information

Physical Address

Work Smart, Inc. 63444 County Road 215 Lawrence, Michigan 49064

Mailing Address

P.O. Box 442 Paw Paw, Michigan 49079 Electronic Contact

radar01@voyager.net www.worksmartinc.net

Phone Contacts

Main Phone1-800-565-33471-269-341-9529 Fax1-269-341-9530 Mikes Cell1-269-217-1042 Denises Cell1-269-720-8762

Miscellaneous

Federal Identification Number	38-3461012
Tax Identification Number	38-3461012

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USRADAR SPR unit shown with 500 MHz antenna and trolley.



GPR unit shown with 500 MHz antenna on high speed rover.

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Equipment Capabilities

Ground Penetrating Radar offers the means to detect buried objects that are not detectable by other methods. In addition to the ability to locate metallic objects, GPR is able to detect nonmetallic objects. The system sends radar pulses into the surface, then it receives and processes the reflected energy. Through advanced processing technology the system calibrates to the dielectric constant of the surrounding material. When the signal is reflected from a material having a different dielectric constant, the signal is displayed on the screen as an anomaly. Depth can also be determined by processing the sampling interval and determining anomaly. Depth can also be determined by comparing relative data of other objects detected.

The radar system is concentrating on changes in dielectric constants and not specifically analyzing the characteristics of those changes, therefore, determination of the composition of the object detected is limited, but possible to some degree. Characteristics of the underlying soils will effect the penetration of the radar through the ground. Sands and gravel's offer the best results with the greatest depth penetration and clearest resolution. Whereas, dense saturated clays offer limited penetration of the radar signal resulting in limited data to process from the returning signal.

GPR utilizes different bandwidth antennas depending on the desired result of the survey. A higher Megahertz antenna will offer the highest resolution, but will not penetrate the surface as far as a lower Megahertz antenna. The lower MHz antenna will penetrate to a greater depth, but the resolution will not be as great as with the higher MHz antenna. An example would be that a 1000 MHz antenna could easily pin point a household telephone wire behind 6 to 8 inches of concrete, a 250 MHz antenna might completely miss it.

With the following parameters in mind an example of expected performance would be: 500 MHz Antenna in clean dry sand, depth penetration 12-15 feet.

250 MHz Antenna in clean dry sand, depth penetration to 40 feet.

500 MHz Antenna in dense wet clay, depth penetration 4-6 feet.

250 MHz Antenna in dense wet clay, depth penetration to 15 feet.

Site investigation prior to radar deployment is critical in determining its suitability and capabilities for your specific needs. While we do make every effort to perform the most complete investigation, it is possible that due to any number of factors including those outlined above, an accurate detection may be difficult to produce in your area of interest. The more information we have, the higher the degree of success can be expected. The biggest limitation of GPR technology is the composition of the material medium through which the investigation will occur.

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SVY_19.RAD



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Technical Summary

Ground Penetrating Radar Investigation For:

> 123 Any Street Chicago, Illinois

A Ground Penetrating Radar (GPR) investigation was performed at 123 Any Street in Chicago Illinois on July 27, 2006. The purpose of the investigation was to determine and mark anomalies consistent with orphan underground storage tanks (U.S.T.). The primary area of investigation was a specific area inside a utility room inside the existing building.

A 500 MHz antenna was used to collect the data scanning to an approximate depth of 2.6 meters. The area scanned was delineated using a one meter interval grid pattern. This grid pattern would allow for objects consistent with a UST to be scanned. Multiple scans in a North – South and East – West direction was performed. All site conditions can also be confirmed in the photographs section of this report.

In the areas scanned <u>ONE</u> anomaly with consistent features to an orphan underground storage tank was observed. This area was marked onsite using pink marking paint.

SVY_19 in the radar scans section of this report depicts a small localized anomaly with consistent characteristics to an underground storage tank observed on the inside of the building inside a small utility closet. The relative position was marked on site using pink marking paint. The anomaly is approximately 0.60 meters below the surface of the concrete.

The location, depth and relative size would suggest further investigation is recommended to determine the actual composition of this anomaly.

During the course of this radar scan other anomalies deemed inconsistent with the desired targets may have been observed. Since these items were not considered a focus of the investigation, they are not included in this report.

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Ground Penetrating Radar Update

Did you know:

* Radio frequency devices such as radar systems must be licensed with the FCC in order to be operated, imported, or sold in the United States?

* Intentionally or unintentionally operating or marketing an unlicensed, non compliant radar system is prohibited under the Communications Act of 1934?

* Penalties for operating, marketing, or importing unlicensed radar systems within the United States can include forfeiture, fines of up to \$10,000, or up to one year imprisonment?

Is your system compliant? Ours is. Work Smart, Inc. Exclusively uses US Radar equipment. US Radar is the only company to carry FCC approved radar systems as of February 2002.

Understanding the FCC rules applying to radio frequency devices has never been more important. We'd like to help you understand the basics:

Radar systems utilize multiple radio frequencies over extended areas. These frequencies have the potential to interfere with radio communications of all kinds if certain criteria are not met, as in the case of improperly shielded antennae which result in energy leakage.

Just because a company has been manufacturing, designing, selling, or leasing radar systems for many years doesn't mean their systems are compliant. Many companies have been operating for years with a total disregard for the US Code of Federal Regulations and FCC Rules. There are heavy penalties that can be levied against these companies, and if you own, lease or use their systems, you may incur penalties too.

The penalties imposed upon anyone who knowingly conducts business in violation of the US Code of Federal Regulations can include forfeiture, a fine of up to \$10,000 or up to one year in prison or both; these penalties increase with subsequent violations. In some cases, where FCC and/or international radio/wire communications regulations are violated and the United States becomes a party in the case, the person convicted of the violation will be subject to up to \$500 for each day during which the offense occurred plus any other penalties that are applicable.

How do you know if a radar system has met the requirements of and has been approved by the FCC? According to the US Code of Federal Regulations, all radio frequency devices must be "properly identified and labeled" as having been authorized by the FCC. If a company claims that their FCC approval is pending or if they are advertising or exhibiting systems without the proper FCC labeling, the following notice

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Technician Verification

Ground Penetrating Radar Investigation For:

123 Any Street Chicago, Illinois

I affirm that I *Michael P. McGarry* acting as an employee and representative of Work Smart, Inc. located in Paw Paw Michigan do here by affirm that I personally performed the Ground Penetrating Radar (GPR) scan at the above described location on July 27, 2006.

Michael P. McGarry President

Date: July 27, 2006

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