"Environmental Solutions
------- Naturally !"

Detailed Profile of Spilltech Environmental Ltd.

Tirnaneil,
Monaghan,
Co, Monaghan

Profile Report: 2014

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Section 1 Spilltech & Staff

Background:

Spilltech was founded in 2002 by Kieran Starrs with the intention and purpose of dealing sensibly and pragmatically with pollution and contamination events occurring at domestic and commercial properties.

At that time oil spill remediation work was being carried out by several other specialist firms although Kieran sensed that the costs were too high, works overly complicated and timeframes for repairs and the amount of collateral damage being caused were protracted and often unnecessary.

Following research and study of operations in other areas Kieran adopted a tried and tested methodology and with his understanding of structures and oil migration patterns he set up this new company bringing a new and cost effective, fully guaranteed approach to oil spill remediation.

The impact of the change in approach curtailed costs, reduced the amount of extra damage and helped safeguard against extensive structural works and the possible follow on effects of same.

Since its foundation the company has grown gently and employs family and established, trusted employees who honour the professional, friendly and complete approach required by Kieran in serving all clients.

Core Team:

Kieran Starrs

Managing director/Senior Environmental Consultant
12 years' previous experience as builder in construction industry
30 years' experience in oil spill remediation both in Ireland and abroad.

Duties include:

- Responsible for liaising with loss adjusters and insurance companies, policyholders and clients, Local Council engineers' and officials
- Hands on day to day management of all aspects of running the business
- Reviewing all environmental reports
- Reviewing all environmental information and preparation of detailed reports for others, e.g. solicitors in the event of legal cases or recovery actions, adjusters contemplating recovery.

Niall Starrs

Environmental Consultant/Quality Control Manager
Previous experience as quality control manager in multinational company,
Zomax Ltd., Clondalkin, Dublin
11 years' experience in oil spill remediation.
Duties Include:

- Site investigations and producing detailed reports.
- Responsible for the chain of custody of the samples taken.
- Calibration of all machinery and equipment used in day-to-day operations, PID meters, GC by FID analytical machinery.
- Analysing samples in SpillTech's in-house laboratory, soil and water, and all water analysis for local authority samples submitted.

Warren Rutledge

Company Director, Plumber/Commissioning Engineer
Previous experience as a plumber for seven years.
Warren is qualified to OFTEC 105E & OFTEC 101 standards.
14 years' experience in oil spill remediation,
Duties include:

Leading an emergency response crew. Warren has responsibility for a company van which is constantly stocked with all materials required for emergency attendance at commercial or domestic oil spillages. Equipment includes plumbing repair equipment, piping, joints, emergency replacement tank, replacement burner burners and emergency bioremediation treatments.

Repair of leaking joints or pipework and/or replacement of oil tanks when necessary to limit damage and mitigate losses, replacement of burners where required to ease discomfort and facilitate continued occupancy thus limiting the need for alternative accommodation and emergency bioremediation treatments.

In the event of plumbing issues or defective or incorrectly installed oil tanks being found to have caused an oil spillage, Warren prepares the necessary technical reports to present the detail.

Leading an investigation team to examine and report on damage sustained and extent of findings following an escape of oil.

Damien Starrs

Company Secretary/Director, Plumber/Commissioning Engineer,
Previous experience as a plumber for two years.
Damien is qualified to OFTEC 105E & OFTEC 101 standards.
14 years' experience in oil spill remediation,
Duties Include:

Leading an emergency response crew. Damien has responsibility for a company van which is constantly stocked with all materials required for emergency attendance at commercial or domestic oil spillages. Equipment includes plumbing repair equipment, piping, joints, emergency replacement tank, replacement burner burners and emergency bioremediation treatments.

Repair of leaking joints or pipework and/or replacement of oil tanks when necessary to limit damage and mitigate losses, replacement of burners where required to ease discomfort and facilitate continued occupancy thus limiting the need for alternative accommodation and emergency bioremediation treatments.

In the event of plumbing issues or defective or incorrectly installed oil tanks being found to have caused an oil spillage, Damien prepares the necessary technical reports to present the detail.

Leading an investigation team to examine and report on damage sustained and extent of findings following an escape of oil.

Responsible for all mechanically operated machinery and for ensuring that all plant is serviced and operating in compliance with requirements.

Roy Rutledge

Environmental Technician
Previously employed for six years as a mechanical service technician in plant hire shop.
11 years' experience in oil spill remediation with Spilltech Ltd.

Duties Include:

- Bioremediation treatments.
- Assisting with building works when required.
- Responsible for the upkeep of all vehicles, arranging servicing etc.
- On site and workshop repairs to all mechanical equipment.

Elaine Smith

Administration
Previously worked as an administrator in County court services for five years.
10 years' experience with Spilltech

Duties Include:

- All internal administration
- VAT reports
- Wages
- Invoices
- End of year accounts

Kieran Corrigan

Builder
Kieran has worked as a general builder for five years in the construction industry building one off houses and extensions from engineer's drawings to completion and as site foremen.

Duties Include:

- All building works.
- Preparation of costs.
- Removal of structural elements as required.
- Reinstatement of structural elements.
- Finishes and completions e.g. plastering walls, 2nd fix joinery etc.
- Reinstatement of gardens and garden structures.

Section 2: Equipment

Vans

Experience has shown that clients and those affected generally by oil spills prefer not to advertise the fact that this damage has occurred. None of our vehicles carry signage or logos thus maintaining the clients' privacy.

The two larger vans are specially kitted out for site investigation works and emergency plumbing works.

The two smaller vans are empty inside and are mainly use bioremediation treatments and any associated building works.

The two larger vans are carefully laid out and carry all the necessary plumbing and remediation equipment required to deal with the cause of the escape and to minimize spread and limit or contain damage as best possible.
Equipment carried includes:

- Replacement oil tank.
- Oil fired burner.
- Oil transfer pump to empty oil tank contents.
- An assortment of absorbent pads and booms to assist containment of water course pollution.
- Vacuum extraction pump to immediately alleviate oil smells within a property where suitable.

Analytical equipment

SpillTech's laboratory.
Gas chromatography analytical machine GC-FID used for analysing soil and water samples for the detection of the various components of oil and kerosene.
SpillTech's laboratory also analyses water samples for local authorities and private individuals to EU standards for bacteria in water.

SpillTech's indoor air quality analytical equipment, from left to right.

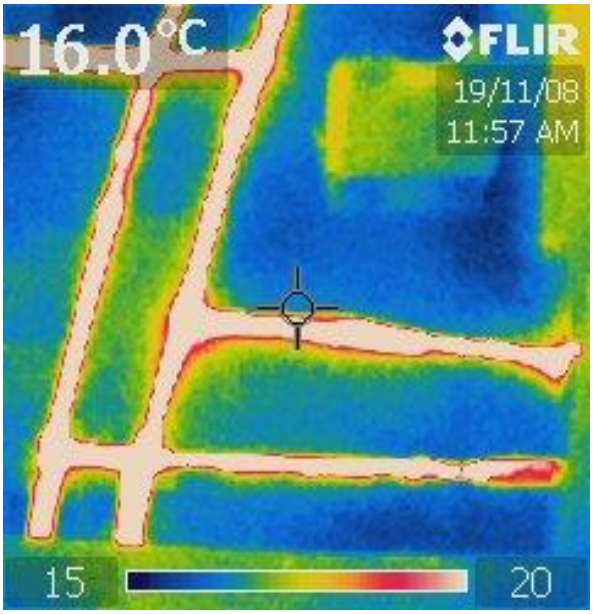
- Carbon filled analytical tube
- Air flow pump
- Air flow calibration equipment

Which is used for taking air samples to analyses indoor air quality to be referred to occupational air monitoring standards.

PID meter

- Each of SpillTech's vehicles carries its own PID meter for immediate on site referral readings.

Thermal imaging camera for detecting Underground heating pipes.



Thermal image of underground heating Pipes

Scanner

Scanner for detecting underground heating pipes and underground electrical cables.

Section 3 Methodologies, Strategies and Approach

SpillTech's approach and methodologies to the cleanup of a domestic oil spill vary and are uniquely designed in each instance on a case by case basis. The over-riding priority is to keep the entire process simple and to ensure that it easily understood by property owners. All reports are designed to be clear and easily read and understood by affected and interested parties.

When Spilltech is first instructed on a new oil spillage claim by a loss adjuster or insurance company or by a private client, we organise immediately a convenient time to attend the property and to carry out a site investigation. This is always within two days of initial contact and often sooner. We also try to ascertain from the property owner the general nature of the oil spillage, the extent of odours, the manner of discovery, the actions taken to date for example and we advise on immediate and suitable emergency or mitigation measures that may be required or helpful.

Once the Site Investigation Report is completed which is generally within five working days of the site investigation, it is immediately emailed to any loss adjuster involved with a hard copy being posted to the property owner on the same day.

A site remediation program consists of five essential steps.

These are:

Identifying the remediation objectives.
Identifying potential remediation technologies.
Selecting preferred remediation technology.
Designing, implementing and monitoring remediation.
Confirming that the remediation objectives have been achieved.

The initial environmental site assessment begins with an interview with the householder or proprietor. This interview allows us to establish background information regarding dates of oil spills, approximate quantities lost, length of time the client has occupied the premises, any structural works which have been undertaken during that time, and any other points of interest which may have a bearing on the impact of the oil spill. From this interview and from gathered on site sampling and detail we can establish the remediation objectives.

A walkover of the site allows us to establish the presence of any sinks likely to be impacted by the contaminant plume (e.g. Water Wells, local water course). Depending on the findings of this site walkover potential remediation technologies can be identified and chosen, (e.g. *In-situ* bioremediation, pump and treat systems or a combination of both physical and biological remediation technologies). At this time a site map is created using on site sketching, digital photography and desktop computer software.

Following consultation with the client a series of boreholes are advanced at the site in order to define the extent of the contaminant plume in three dimensions. Soil samples are collected from each borehole, sealed in air tight sample jars, and stored at a constant

temperature until delivered to the laboratory. Samples of groundwater are collected if encountered onsite, as well as water samples from local water courses or wells located on site. Samples submitted to the lab are tested for diesel and petrol range organics, for BTEX (Benzene, Toluene, Ethyl-benzene, and Xylene) and other chemical and physical parameters as required.

Following receipt of the initial sample results from the lab an individually tailored bioremediation solution is designed for the site. A multi phased approach is taken to ensure optimum results and a speedy reduction in contaminant levels while creating minimum disruption to the client.

The SpillTech's methodology involves an initial treatment phase which not only begins the bioremediation process but also restricts the migration of the contaminant plume off site. This phase is followed approximately 10 days later by a booster treatment designed to maximise the effectiveness of the bacterial action beneath the property.

SpillTech's bioremediation products combine the use of both aerobic and anaerobic bacteria and involve the inoculation of the contaminated soil or groundwater with proprietary mixtures of naturally occurring, non-engineered and non-pathogenic bacteria. SpillTech's has found this to be a much faster method than other *in-situ* bioremediation processes that rely solely on adding nutrients to the contaminated area to activate and grow indigenous bacterial populations.

Treatments are applied over a 6-8 weeks' timeline, although this cannot be guaranteed as a number of factors can affect timeline, weather conditions, migration of oil etc. With ongoing monitoring and sample collection after each treatment and interim sampling. Upon completion of the soil remediation process, SpillTech's closes and restores all boreholes to their original condition in an environmentally responsible manner.

Following receipt of final sample results a SpillTech's consultant provides the client with a certificate of completion. This certificate guarantees of all work undertaken by SpillTech and is our commitment to quality and pride in our work.