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BUSINESS PROFILE

Smithpac Environmental Limited is an environmental consulting and engineering firm. We are specialists in contaminated Land and Marine Remediation, Spill Response, Chemical Incineration, Environmental Impact Assessment (EIA), Baseline Studies & Effluent Monitoring. We deploy our facilities in the oil producing areas of Nigeria and other countries where there is substantial demand for remediation services and oil recovery. Through strategic operating partnership with oil producing & servicing companies; we offer a broad range of oil waste management services including oil tankers and vessels cleaning, water treatment, waste management and project management.

We have strategically placed operational units to service our on-going remediation projects and contracts across Nigeria. These units also provide us with the structure to run our emergency response operations.

BUSINESS PROFILE

Our engineers are some of the most experienced in contaminated land and oil spill response industry in the country. They are supported by a knowledgeable customer services, marketing and administration team. We are committed to continually investing in our people for both the development and growth of the business as well as the personal development of our staff.

The company is accredited by the Federal Ministry of Environment for response to oil spills on land, and marine environments. This helps us carry out our business in a professional manner.

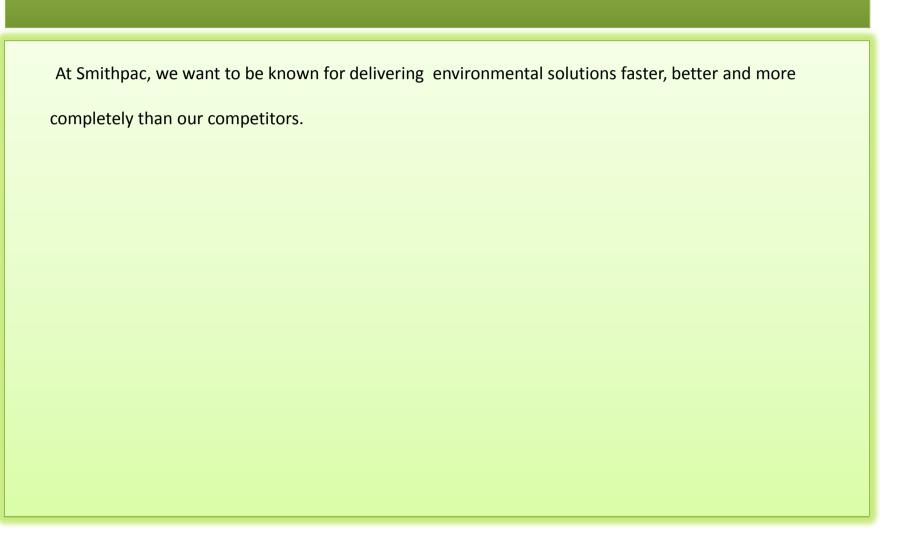
Our focus on best practice standards and quality is driven by the desire to continually exceed our customers' expectations and provide a world class service. The unprecedented growth of the company in the last few years and growing client base is testament to this strategy.

MISSION STATEMENT

Our purpose is to build a premier entrepreneurial company that consistently exceeds the managed expectations of our customers, team members, and shareholders.



VISION STATEMENT



WHY SMITHPAC?

Smithpac helps oil, gas and chemical industries run better, safer and cleaner operations. Our customers value our expertise, emphasis on safety and our ability to get the job done right.

From massive well blowouts and pipeline ruptures to other industrial incidents, we have earned the trust of major companies and smaller independents. The company owns and operates plants for bioremediation, soil stabilization, thermal treatment, soil washing & soil vapor extraction and has developed technologies for treating materials on site.

Smithpac has experienced and industry certified technicians who always provide the highest level of service delivered by no other. We make it not only our business but our passion to find the most cost effective and sound solution to your environmental issues.

Our emergency spill response service operates 24 hours a day, 365 days a year; we have the capability to respond to pollution incidents and spillages across the country. Our team of trained and highly skilled professionals will be on-site assessing the incident and taking care of any containment and mitigation works required even at very short notice.

SERVICES

Smithpac offers a wide range of environmental services on projects including environmental consultancy, assessments, remediation and management. Our diverse experiences allow us to handle all sizes and types of projects efficiently and effectively.

Our Oil Spill Response Services can range from qualified personnel assisting with incident command to clean-up of the incident. Our Response Team has grown significantly in size over the years; our response in recent projects shows the teams' range, capabilities and flexibility at its best coupled with in-depth knowledge and expertise. Below are our services:

SERVICES

- Contingency Planning & Risk Management
- Oil & Chemical Spill Response
- Phase1 Environmental Site Assessment
- Phase II Environmental Assessment
- Land & Marine Remediation
- Oil Recovery
- Sludge Treatment
- Waste Management
- Environmental Impact Assessment (EIA)
- Baseline Studies
- Effluent Monitoring
- Excavation
- Pollution control & Emergency Response training

CONTINGENCY PLANNING AND RISK MANAGEMENT

As part of any oil spill response plan a good contingency and risk assessment plan forms the backbone of successfully tackling incidents. Within our team there are countless experts who have vast experience in Oil Spill Response and Contingency Planning and as a result have been called in to either implement or review plans and procedures providing insight into use of best available technology (BAT) and solutions to incidents.

OIL AND CHEMICAL SPILL RESPONSE

Smithpac's Emergency Response Teams can mobilize and respond to a variety of emergency situations utilizing fully stocked response units and specialized equipment to mitigate almost any incident. We are capable of providing immediate protection, rapid mitigation and decontamination of chemical, biological and radioactive agents. Our employees, specialized field equipment, and safety equipment have made us a valuable risk management agency.

Smithpac has responded to several marine and land-based oil spill incidents around the globe and our expertise in this field is unequaled. We tailor our services to meet each client's specific needs and deliver a proven standard of excellence.

We work with our customers in the design, establishment and management of their oil spill response requirements and we provide customized packages for ports, terminals and oil & gas exploration and production activities.

OIL AND CHEMICAL SPILL RESPONSE

Our Spill Response Services Include:

- Incident Response, Management & Clean-up
- Establishment & Management of Oil Spills
- Response Exercise Design, Delivery & Evaluation
- Plan Development, Review & Management
- Gap Analysis & Preparedness Audits
- Risk Assessment & Facility Inspection
- Associated Waste Handling, Transportation & Disposal

PHASE1 ENVIRONMENTAL SITE ASSESSMENT

All site assessments are conducted utilizing ESA industry standards in accordance with the All Appropriate Inquiry (AAI) standard ASTM E 1527-05, Standard Practice for Environmental Site Assessments

This assessment can involve some or all of the following evaluations of potential damages: on-site hazardous waste contamination, off-site contingent liabilities, and on-site regulatory compliance. We perform the initial investigation to identify potential areas of contamination by reviewing past and current activities conducted on-site.

Based on the information gathered during the Phase I assessment, Smithpac will prepare a report summarizing the findings and providing professional opinions regarding the potential for an environmental concern to be present at the site. As necessary, we will make recommendations for additional work.

PHASE II ENVIRONMENTAL ASSESSMENT

When the Phase I assessment indicates the need for actual on-site sampling and analysis, or when the liabilities associated with the transaction dictate further action, a Phase II investigation is carried out. The purpose of this investigation is to obtain a better understanding of the potential environmental liabilities for the site. This is usually accomplished by field sampling and analytical laboratory testing of air, soil, groundwater, and/or site building materials to assess the presence and extent of hazardous materials that are suspected or have been identified during the Phase I assessment. To accomplish this, we offer the following services:

- Phase II Soil Sampling and Subsurface Investigations
- Soil Vapor Survey
- Soil-Gas Sampling
- Underground Storage Tank Inspection

LAND & MARINE REMEDIATION

We carry out Phase III Remediation Program if the results of the Phase II assessment indicate that hazardous materials are present, Smithpac's status as a leading environmental remediation firm allows us to follow through from site characterization into remedial investigation, design and construction. Our relationship with several leading regional geotechnical and engineering firms ensures that resources are available to handle projects of any duration or complexity. We continuously develop our range of technologies to offer our customers the best available solution to their problems and will continue to place our customers and their needs at the centre of everything we do. Some of our remediation technologies (which are often used in conjunction with each other) include:

ENHANCED IN-SITU & EX-SITU BIOREMEDIATION

This technique bolsters ongoing natural bio-degradation of contaminants through engineered and monitored conditions and the application of microbes, nutrients and vital elements. Enhanced bio remediation can be applied both in-situ and ex-situ for the degradation of organic contaminants to environmentally benign break down products.



IN-SITU & EX-SITU CHEMICAL OXIDATION

A technique utilizing the direct introduction of a chemical oxidant combined with an initiator for the total destruction of organic contaminants. This technique can be applied both in-situ and ex-situ, and is often used in conjunction with other techniques for the remediation of more recalcitrant residual contaminants particularly in heavy clays.



EXCAVATION AND LICENSED DISPOSAL

A technique utilizing the direct introduction of a chemical oxidant combined with an initiator for the total destruction of organic contaminants. This technique can be applied both in-situ and ex-situ, and is often used in conjunction with other techniques for the remediation of more recalcitrant residual contaminants particularly in heavy clays.



ENHANCED MONITORED NATURAL ATTENUATION (EMNA)

EMNA refers to the reliance on natural processes to achieve site-specific remedial objectives. EMNA usually includes a variety of physical, chemical, or biological processes that, under favorable conditions, act with or without human intervention to reduce mass, toxicity, mobility, volume or concentration of contaminants in soils, waters and airs.

AIR SPARGING

In-situ sparging is where compressed air is introduced at depth which produces simultaneous volatilization of soil and groundwater contaminates. This technique is often used in conjunction with vacuum to create a pressure gradient and capture the off-gasses for ex-situ treatment.

SINGLE VACUUM EXTRACTION (SVE)

Single - phase Vacuum Extraction is a pressure reduction technique to encourage direct insitu volatilization of available contaminants with subsequent recovery of soil vapours to one location for ex-situ treatment if required. This process can also be utilized for vapour recovery and subsurface pressure control in conjunction with other technologies, as well as breathing zone extraction to improve internal air quality.

DUAL VACUUM EXTRACTION (DVE)

Dual - phase Vacuum Extraction is a development of SVE utilized for the simultaneous bulk recovery of soil vapors, Light Non-Aqueous Phase Liquids (LNAPL) and contaminated ground water without the need for complex pumps, groundwater drawdown or strata fracturing. All phases are recovered to one ex-situ location for ease of subsequent treatment if required.



ABSTRACTION AND MULTI-STAGE TREATMENT

The use of down well or surface located liquid pumps for the recovery of LNAPL, Dense Non-Aqueous Phase Liquids (DNAPL) and contaminated groundwater for subsequent treatment at one location. This technique is applied in situations where other technologies may not be applicable, for example operation in deep bedrock, and is often enhanced by the application of vacuum.

VACUUM ENHANCED FREE PRODUCT RECOVERY (VEFPR)

Vacuum Enhanced Free Product Recovery is an advanced in-situ technique for the direct recovery of LNAPL whilst minimizing groundwater recovery and hence subsequent treatment. This technique can recover bulk LNAPL down to layers < 1.0mm thick, whilst simultaneously encouraging migration of LNAPL to wells without the need for draw-down and complicated pumps.

ACTIVE AND PASSIVE VENTING SYSTEMS

Individually designed site specific room, floor void, duct or sub-floor preferential flow venting systems to oxygenate and promote biological breakdown, capture ongoing remedial offgasses, or provide a change of contaminated breathing zone air volume with ambient air. Such systems can include active pumps or passively driven pumps utilizing environmental energy via wind and solar power.

CUT - OFF WALLS AND BARRIERS

Cut - off walls and barriers are often used to either partition contaminated high risk media from clean or low risk materials, capture and immobilize migrant contaminants, or to provide a physical flow path barrier. Materials and systems employed include MDPE and pre-hydrated bentonite hanging subsurface barriers, buried bentonite/cement slurry walls, and curtain well capture systems.

SLUDGE TREATMENT & OIL RECOVERY

Sludge, one of the major waste streams generated from the petroleum industry is an emulsion of heavy oil, water and various solid particles. The sludge pits that result can become more emulsified over time combining with oil mists and other toxins, sometimes forming 'tarcrete' crusts. We are at the forefront of modern and innovative technologies and processes, which allows us to offer effective sludge treatment and oil recovery.

BASELINE STUDIES

At Smithpac, we carry out baseline studies for our clients. These studies are adapted to suit their needs and the needs of their project. Our detailed reporting standard provides necessary information against which future changes can be measured.

In a project with well-developed indicators, our study in involves researching the status of indicators before the project starts. If the indicators are weak or hard to evaluate from the beginning then we tailor the baseline study to first determine the indicators that should be researched, and then to investigate them. We make sure that the commissioning of the baseline study is formulated as precisely as possible, close to those indicators that the evaluation will be about.

EFFLUENT MONITORING

We are a renowned service provider, rendering Effluent Monitoring services. We offer high performing Industrial Effluent Monitoring specially designed for monitoring & controlling effluents. Our services are rendered by the experts who understand the requirement of the clients. Moreover, we ensure timely completion of the project undertaken at the predescribed timeframe.

WASTE MANAGEMENT

Smithpac provides waste management services from initial assessment and categorization through collection, packaging and transportation for recycling, remediation and disposal. Our waste disposal services include:

- Waste Packaging
- Lab Packing
- Waste Profiling, Manifesting and Labeling
- Direct Landfill
- Stabilization/Solidification
- Fuels Blending
- Thermal Desorption
- Incineration
- Hazardous and Nonhazardous Waste
- Liquid, Solid, Sludge, Mixed Wastes

ENVIRONMENTAL IMPACT ASSESSMENT

Environmental Impact Assessment (EIA) serves to deliver projects that have considered the potential environmental impacts associated with a large development. The EIA process should identify potential environmental issues so that solutions may be implemented to minimize the potential impact.

There are various stages to undertaking an EIA, the first of which is to determine whether or not the project actually requires a full EIA to be undertaken. This is known as "Screening". If a full EIA is not required, it has often proved prudent to undertake a limited number of environmental assessments in relation to specific topics, such as air quality or noise, etc.

Should it be determined that an EIA is required, a detailed report will be created detailing: the project and its location (including existing environmental situation); the assessments that will be undertaken; justification for why these assessments are considered necessary; and, the assessment methodology that will be followed.

ENVIRONMENTAL IMPACT ASSESSMENT

This process, referred to as "Scoping" is not a legal requirement, but experience has shown that this approach sets the project off on the right foot from the start.

- •The end product of an EIA is a series of documents to be submitted to the Appropriate Authority. This will include:
- a non-technical summary (NTS)
- •an Environmental Statement describing the project and presenting the various assessments undertaken
- technical appendices

The EIA process considers alternatives to the proposed development, such as geographical location, layout, infrastructure, technology or indeed whether there is a need for the project at all – the "do nothing" alternative.

EIA projects are considered in light of international and national legislation, policies at all levels of Government and are assessed in line with best practice.

ENVIRONMENTAL IMPACT ASSESSMENT

The EIA may include assessment of one or more of the following broad headings:

Air Quality;

Cultural and Natural Heritage;

Human Health Effects;

Landscape and Visual Effects;

Noise and Vibration;

Soils and Geology;

Solid Residues;

Traffic;

Water; and,

The cumulative effect of any of the above.

We have the expertise to undertake all of the assessments mentioned above. We also have a close network of teaming partners who provide complementary knowledge and expertise so that all issues can be addressed.

OUR PROJECTS



OUR PROJECTS













OUR PROJECTS











Project Title	Client	Year
Cleanup oil spill at 3 rd Oyakama	NAOC	2001
Cleanup of Akri 4L flowspill site	NAOC	2001
Clean up oil spill at Ebocha 18 L flow line	NAOC	2001
Clean up of oil spill at Okwu Abada Mmahu	NAOC	2001
Clean up of oil spill at Oyigba North	NAOC	2001
Clean up oil spill at Oyigba	NAOC	2001
Clean up of oil spill at Okwuchu bush OB/OB gas plant flare stack area	NAOC	2001
Clean up of 24 Ogoda/brass pipeline at Oyakama	NAOC	2001

Project Title	Client	Year
Cleanup of oil spill at Obifu 24 tbg	NAOC	2001
Clean Up Of Oil Spill At Oyigba	NAOC	2001
Clean up of oil spill at Rumuekpe North	ELF (Total/ELF)	2001 (April)
Cleanup spill at Abacheke 3	NAOC	2002 (Oct.)
Clean up of 2 nd oil spill at Okogbe	NAOC	2002 (Feb.)
Clean up oil spill Oshie waste pit	NAOC	2002 (Nov.)
Clean up of oil spill Akri/Ebocha Pipeline mmahu 4	NAOC	2002 (June)
Clean up of oil spill at Ohali Elu	NAOC	2002 (March)
Clean up oil spill at Amuroto	NAOC	2002 (June)
Clean up of oil spill along the 4" Idu-pipeline at Orashi	NAOC	2002 (Jan.)

Project Title	Client	Year
Clean up of oil spill at Mbede 6 well head	NAOC	2002
Clean up of oil spill along the 18" Egbocha/Ogoda pipe line at	NAOC	2002
Okposi		
Clean up of oil spill along the 14 Akri/Egbocha pipeline at	NAOC	2002
Abacheke		
Clean up of oil spill along 24 ogoda brass pipeline R.O.W. the ad	NAOC	2002
joining bush and seasonal swamp at ozochi		
Clean up of oil spill at Idu 3 location	NAOC	2002
Clean Up of Oil Spill At Mmahu	NAOC	2002
Clean up Of Oil Spill At Oshie 6 Well Location	NAOC	2002
Clean up of oil spill at Akiri flow station waste pits	NAOC	2002
Clean up of oil spill at Obiafu 14 road	NAOC	2002

Project Title	Client	Year
Clean up of impacted area at idu 4 & 7 location	NAOC	2003
Cleanup of oil spill at Oshe 3tbg	NAOC	2003
Cleanup Of Oil Spill At Abocha near Orashi River	NAOC	2003
Clean up of oil Spill site at Abalakiri Near Okigbene	NAOC	2003
Clean Up Of Oil Spill along 24 Ogoda /Brass Pipeline R.O.W the ad	NAOC	2003
joining bush and seasonal swamp at Ozochi		
Clean up of oil spill at Adibawa	SPDC	2003
Cleanup of oil spill at Oshie	NAOC	2003
Biara oil spil cleanup	SPDC	2003
Clean up crude oil in Adibawa Area	SPDC	2003
Residual oil recovery/cleanup operation in Adibawa	SPDC	2003

Client	Year
SPDC	2003
SPDC	2004
SPDC	2004
SPDC	2004
SPDC	2004
NAOC	2004
NAOC	2004
	SPDC SPDC SPDC SPDC SPDC SPDC SPDC SPDC

Project Title	Client	Year
Clean up of oil spill at Tebidaba a well head near Tebidaba community	NAOC	2004
4 th Ebocha and location spill site	AGIP	2004
Cleaning of crude oil along Oshie 7 location leading to Oluede borrow – pit owners of Umu izigwe family	NAOC	2004
Clean up and remediation works at Rukpokwu	SPDC	2005
Major cont. clean up and remediation at Rumuojei	SPDC	2005
Clean up and Remediation work at Mgbuchi Rukpokwu spill site	SPDC	2005
Clean up and remediation works at Okodiaa Rumuutum and Edeoha	SPDC	2005
Clean up and remediation at Mgbuchi spill site Rumukpe T/Line	SPDC	2005
Clean up and remediation at Biara South at Pipeline and manifolds east	SPDC	2005

Project Title	Client	Year
Major Cont. clean up & remediation at Rumu ogori	SPDC	2005
Major contract cleanup and remodiation at Mahushi Buknokuu	SPDC	2005
Major contract cleanup and remediation at Mgbuchi Rukpokwu	SPDC	2005
Spill Containment and survey/024 TNP	SPDC	2005
Remediation work at Biara	SPDC	2006
Clean up of oil spill along Odugri is flow line	NAOC	2009
Clean up Impacted sites along Akri oil flow line near Odugri	NAOC	2009
Clean up of oil spill along 24 Ogbornbiri Ogoda pipeline at Oporoama	NAOC	2010
Clean up of oil spill along Ogbogene is flow line	NAOC	2010
Clean up along Obiafu 33" pipeline	NAOC	2011

Air Stripper
Regenerative Blower
Dual Phase Extraction Trailer
Thermal and Catalytic Oxidizer
Oil Water and Moisture Separator

Thermal Desorption Unit
Oil containment boom
Sea Snapper-Recovery Boat
Boat w/trailer and motor
Absorbent Spill Booms

Absorbent Pads
Pneumatic Steel Cutter "Thumper"
Enclosed Safety Trailer
Brush rake for 936 Cat Loader
Vacuum Hose

Discharge hose
Skid mounted ½ tanks (drill mud uses)
Chipper/Shredder
Excavator – Cat 225
Pay loader – 950F

MANAGEMENT

Chibueze Okorie

Mr. Chibueze holds a Bachelor of Science degree in Geology/Meteorology from Enugu State University of Science & Technology & a Master of Philosophy in Environmental Management from the Rivers State University. He has attended several trainings and seminars one of which was organized by the Federal Ministry of Environment and University of Lagos Linkage Centre

An experienced Geologist and Environmental Scientist, Mr. Okorie started his career with Dec Oil & Gas Limited before proceeding to Shell Petroleum Development Company after which

Over the last twelve (12) years, he has been exposed to several projects in diverse capacities and has built a successful career. Mr. Chibueze is versatile, widely read, well travelled and

He is the current Managing Director of Smithpac Environmental Limited

MANAGEMENT

Chim Okwu-Wolu

Mr. Okwu-Wolu is a graduate of Mathematics from the University of Lagos and the present Managing Director of Lyte Concept Limited. An astute business man, well educated and widely travelled; he has a reputation for consistently providing his clients with value added and excellent services. His position as Executive Director of Smithpac is a major motivating and driving force for staff efficiency.

He has applied his unique aptitude for identifying skill & talent in building a vibrant and dependable team; and his ability to keep them together has resulted in constantly high morale among staff with a track record of customer satisfaction.

Mr. Okwu-Wolu is a good golfer and is married with kids.

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