



COMPANY PROFILE

SUSTAINABLE ENVIRONMENTAL WORKS CO. LTD.
(ALMOSTADAMA)

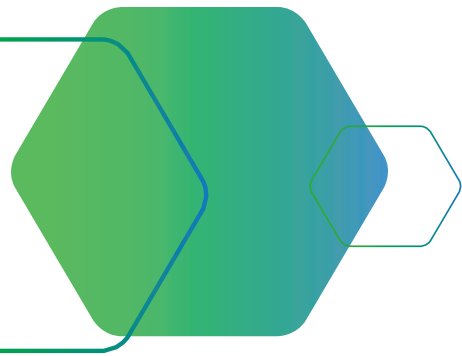




HISTORY»

In 2017, Sustainable Environmental Works Co. Ltd (Al-Mostadama) acquired the western region branch of Saudi Environmental Works Company (SEW) which was established in 1993 as the largest environmental services and industrial waste management company in Saudi Arabia. The acquisition includes: the existing waste management facility located in Al Johfa / Rabigh with an area of 1 million m2 and all related assets, equipment's, manpower, sponsorship and existing contracts.

Since then, Al-Mostadama has continued to pursue and expand the provision of waste management services benefiting from the vast experience of handling Medical waste, Petroleum and petrochemical industry wastes, hydrocarbon sludges, slurries, solids, contaminated soils and oil spills. Al-Mostadama employs physical, chemical and biological methods to recover from and / or treat wastes.



VISION »

To become the trusted environmental partner of our clients and community by managing & reducing all types of generated wastes, from collection to final safe disposal, while recovering valuable resources, all with a view to achieving an ecofriendly and sustained environmental system.

MISSION »

To provide, Industrial and medical hazardous and non-hazardous waste management (recycling, treatment and final safe environmental disposal) using socio economically accepted technologies and services. We offer and develop those technologies locally, we train Saudis to the highest level of competence following the highest professional and transparent procedures; all in accordance with the KSA vision of 2030.



TECHNOLOGIES & PROCESSES

Sustainable provides waste treatment solutions to the petroleum, and petrochemical industries to treat and manage a multitude of hazardous and non-hazardous refinery waste streams. Sustainable utilizes a combination of proven physical separation technologies, such as, thermal desorption and centrifuge for processing of Tank Bottom Sludge, Refinery Wastes, Hydrocarbon Residues, Hydrocarbon (oil) recovery, Hydrocarbon Soil Treatment, Soil Cleaning, Soil Surfactant Washing, Thermal Desorption and Distillation.



1-Three Phases Centrifuge

A high rate three-phase centrifuge system is used for hydrocarbon recovery and recycling operations. Centrifuging results in the separation of solids, water and oil from a variety of wastes. The separated oil can be directed back to the refinery for processing or used as energy source, water can be taken into a holding pond for evaporation, and the solids, representing the true waste generated, are minimized to the smallest volume. Depending on the residual levels in the solids, it is ready for discarding either by landfarming treatment methods or by thermal desorption, and final disposal in landfill.



2-Thermal Desorption (TD):

It is an ex situ process for physically separating volatile and semi-volatile contaminants from soil, sediment and sludge by heating to high temperatures (usually between 170 to 550°C) to volatilize organic contaminants. TD systems can volatilize selected contaminants and drive off water. Total oxidation or destruction of organics is achieved by subjecting the flue stream from the TD to an afterburning process.

Treatment

- Pasty and liquid slurry waste treatment
- Soils decontamination
- Sludge Dewatering
- Sludge Drying
- Thermal Desorption
- Hydrocarbon Vapor Oxidation

Treatment Benefits

- Substantial volume and waste reduction, generally greater than 80 percent
- Recover oil and water for reuse
- Substantially reduces disposal and incineration costs
- Detoxification of solids to inert materials for safe disposal
- Recovery of valuable resources for recycle
- Flexible process capability for waste streams and throughput capacity



WASTE MANAGEMENT

Sustainable owns and operates a comprehensive hazardous and industrial waste management facility for the safe treatment and disposal of hazardous and toxic waste streams of the kingdom. This facility (1 sq.km) is operated in the Western Province of the kingdom, north of Jeddah, at Rabigh. Sustainable currently offers incineration, solar treatment, landfarming, landfilling and several residuals management options, and is in the process of including other operations in the future.



Residuals Management:

Sustainable has over a decade's experience in residual waste management methods and has proficiency in the following methods.

1- Incineration:

Incineration is a waste treatment process that involves the combustion of organic substances contained in waste materials. Incineration and other high-temperature waste treatment systems are described as "thermal treatment". Incineration of waste materials converts the waste into ash, flue gas and heat.





2- Solar Treatment:

Solar treatment utilizes natural solar energy to drive off the water in various kinds of aqueous wastes and also takes advantage of the physical processes of sedimentation of suspended solids and precipitation of dissolved solids. The basic process involves the placing of aqueous wastes in large shallow ponds which optimize the surface area available for evaporation. The system is also designed so that coagulant and flocculent aids can be added to the waste liquids in the ponds to aid the processes of precipitation and sedimentation.



3- Stabilization/Solidification:

Stabilization/solidification is a process of converting a hazardous constituent into a non-hazardous form by actual chemical or physical interaction. Stabilization refers to those chemical techniques that reduce the hazard potential of a waste by converting the contaminants into their least soluble, mobile or toxic form. While solidification refers to physical techniques that encapsulate the waste in a monolithic solid of high structural integrity. It does not usually involve a chemical interaction between the wastes and the solidifying reagents, but mechanically binds the waste into the monolith. Contaminant migration is restricted by vastly reducing the surface area exposed to leaching and/or isolating the wastes within an impervious encapsulation.



4- Class I and Class II Landfills:

Sustainable currently operates Class I and Class II landfills at its newer Eastern Province facility. Additional landfills and other operations are planned at this facility. The new Rabigh facility also has Class I and Class II landfills.

A Class I landfill is designed to meet specific land disposal criteria. A Class I landfill can accept wastes that are hazardous in nature. A Class I landfill has a double HDPE membrane lining with a leachate collection system between the membranes. The wastes can be hazardous due to their toxicity, carcinogenicity, corrosiveness, ignitability, flammability, reactivity or explosiveness.

A Class II landfill is also designed to meet specific land disposal criteria. A Class II landfill has a single HDPE membrane lining. Wastes that are disposed of in a Class II landfill includes industrial waste and residues that are non-hazardous. These are generated from industrial sources such as the rubber industry, plastic industry, packaging industry, iron and steel industry, etc.

Waste, as required, is rendered non-hazardous or immobilized by chemical or physical processes prior to its disposal in either of these types of landfills.



5- Chemical Treatment:

a- Neutralization:

This is one of the simplest and most common technologies available for the treatment of hazardous waste. It involves the addition of an acid or a base to the waste to adjust its pH upward or downward, as required. It also serves as a form of pretreatment for optimization of performance of pH sensitive processes or for minimization of corrosion in more sophisticated physical/chemical treatment.

Bases commonly used for neutralization include lime (CaO), calcium hydroxide (Ca(OH)_2), caustic (NaOH), soda ash (Na_2CO_3) and ammonium hydroxide (NH_4OH); acids commonly used include sulfuric acid (H_2SO_4), hydrochloric acid (HCl) and nitric acid (HNO_3).

c- Oxidation/Reduction:

Reduction oxidation (redox) reactions involve the chemical transformation of reactants in which the oxidation state of one reactant is raised while the other is lowered. The process eliminates or reduces the toxicity of many organic compounds and heavy metals.

b- Precipitation:

This is a physical/chemical process in which dissolved chemical species in solution (e.g., metals) are transformed into solid phases for removal. Chemical equilibrium relationships between soluble substances are generally altered by the addition of chemicals such as lime and sodium sulfate.



6- Biological Treatment:

a- Landfarming:

Landfarming is nature aided treatment process for hazardous and non-hazardous oily wastes generated by petroleum refining and petrochemical processes. Soil bacteria in the presence of nutrients (Nitrogen, Phosphorus and Potassium), air, moisture and solar energy interact with oily waste to convert higher hydrocarbons into water, carbon dioxide and humic material.

This process utilizes the physical, chemical and biological capabilities of the soil- microbe system to serve as an ultimate receiver of wastes and to inactivate contaminants. In landfarming, the waste is generally applied in thin layers on the soil and common farm practices such as tilling, contouring, watering, and erosion control techniques are used. Nitrogen and Phosphorus fertilizers may be added in the process to enhance the microbial degradation of organic waste constituents.

b- Infectious Medical Waste Treatment and Disposal:

Steam sterilization technology or autoclaving is used for the treatment of infectious medical waste. The process consists of placing the infectious waste into a chamber with a hydraulically lockable door. Pressurized steam is then injected into the chamber for an extended period of time at a very extreme temperature to destroy the microorganisms and to render the waste disinfected. The treated solid waste is then shredded and ground to an unrecognizable mass, thus making it acceptable for sanitary landfills.



QA/QC CHECKS:

Stringent quality control checks are made at every stage of the waste treatment and disposal process. At periodic intervals, air, water and soil are monitored to ensure that its facilities are not inadvertently polluting the environment. Sustainable staff are trained extensively in the scientific handling of the different waste. Standard operating procedures for handling of waste is developed and adhered to rigorously. Meticulous documentation of all the processed waste is maintained at the facility for inspection by anyone concerned. Chain-of-control is established in waste handling. Sustainable accords the highest importance to work place safety issues and has provided the requisite safety measures at these sites.

SUSTAINABLE MONITORING & AUDIT SERVICES

Sustainable provides a comprehensive range of environmental monitoring and auditing services to help companies fulfill their legal obligations to comply with environmental regulations. Fully equipped, mobile teams are supported by state-of-the-art equipment, located at our bases in Al Khobar, Eastern Province, and Rabigh, Western Province, of the country.

AIR

We provide air monitoring services to ensure both compliance with environmental regulations and to provide pollution modeling data for planning purposes:

- Stack Emissions Monitoring
- Boundary Monitoring
- Ambient Air Monitoring
- Particulates (PM10/PM2.5/PM1.0) monitoring.
- Modeling
 - o Emissions Dispersion Modeling
 - o Ambient Air Quality Modeling



LAND

A comprehensive service of on-site sampling, laboratory analysis and consultancy conducted on existing property and potential new sites:

- Contaminated Land Analysis



WATER

A full sampling, analysis and interpretation service is available to ensure compliance with current regulations including:

- Effluent Monitoring
- Chemical Treatment Plant Audits
- Drainage Surveys
- Discharge Consent Consultancy
- Groundwater Analysis
- Borehole Sampling and Analysis



NOISE

A comprehensive noise monitoring service to ensure compliance with environmental regulations and to provide data for planning permission purposes: Effluent Monitoring

- Environmental Noise Monitoring
- Ambient Noise Modeling
- Noise Impact Assessment



Occupational Hygiene and Indoor Environment Assessment

Qualified occupational hygienists are able to provide workplace monitoring and to advise on suitable control measures:

- Dusts
- Gases, Vapor and Mists
- Noise and Vibration
- Local Exhaust Ventilation
- Sick Building Syndrome
- Asbestos
- Indoor Environment Evaluation
 - o Indoor Air Quality Testing
 - o Carpet Dust – pathogens and pests

Environmental Management & Audit Services

A consultancy and advice service to help minimize the cost of waste and to set up effective systems to reduce the risks of environmental liability:

- Environmental Management Systems
- Environmental Regulatory Compliance
- ISO14001 Audit and Implementation
- Advice on Remediation Measures

Environmental Audit Services

- Environmental Impact Assessments (EIA)
- Health Risk Assessment



TYPES OF WASTE

- Handling & Disposal of PCB Oil
- Commercial Waste (Disposable material)
- Expired medicines
- Expired and out of specs Chemicals
- Expired and out of specs Food materials
- Electronic Wastes
- Spent Engine Oils
- Spent Batteries (all types)
- Spent Florescent Bulbs & Tubes
- Contaminated Soil
- Empty Chemical Containers/Drums
- Used Oil & Air Filters
- Fly Ash
- Fire Works
- Acidic /Alkaline Waste & Sludge
- Paint Waste
- Medical Waste
- Tires
- Lagoons Sludge and Soils
- All type of Organic Solvents
- Chlorinated Solvents
- Contaminated PCB Waste
- All Hydrocarbon/Oily Wastes
- Residues of Chemical Treatment
- Inorganic Sludges (Brine, Phosphate, Caustic ..etc).



OUR CLIENTS

We proud to serve the environmental needs of the Saudi governmental and private sectors industries and businesses. We provide various services to Saudi ARAMCO, the different industries of the Saudi Arabian Basic Industries Corporation (SABIC) group, Petro Rabigh, the Royal Commissions for Yanbu and Jubail, the Presidency of Meteorology and Environment (PME). We also work with several international companies, such as Schlumberger, Halliburton, Foster-Wheeler, Worley-Petrocon, EarthTech, Inc., SNC-Lavalin, and Refinery Services LLC, etc... We provide environmental management and waste disposal services to several private industries and businesses in the country.



About Our Contractors



بترو رابغ
Petro Rabigh



Rabigh Power Company



SAIPEM



NOMAC



VendorNO
103118

Vendor NO
30000085

Vendor NO
158964

Vendor NO
21283

Vendor NO
502390

ANY QUERIES



Thank You



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