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Annex 1: Contributors to the ESMP

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Annex 2: IFC Guideline

Environmental, Health, and Safety Guidelines for Gas Distribution Systems

Introduction

The Environmental, Health, and Safety (EHS) Guidelines are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP)[1]. When one or more members of the World Bank Group are involved in a project, these EHS Guidelines are applied as required by their respective policies and standards. These industry sector EHS guidelines are designed to be used together with the **General EHS Guidelines** document, which provides guidance to users on common EHS issues potentially applicable to all industry sectors. For complex projects, use of multiple industry-sector guidelines may be necessary. A complete list of industry-sector guidelines can be found at: www.ifc.org/ifcext/enviro.nsf/Content/EnvironmentalGuidelines

The EHS Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs. Application of the EHS Guidelines to existing facilities may involve the establishment of site-specific targets, with an appropriate timetable for achieving them.

The applicability of the EHS Guidelines should be tailored to the hazards and risks established for each project on the basis of the results of an environmental assessment in which site-specific variables, such as host country context, assimilative capacity of the environment, and other project factors, are taken into account. The applicability of specific technical recommendations should be based on the professional opinion of qualified and experienced persons. When host country regulations differ from the levels and measures presented in the EHS Guidelines, projects are expected to achieve whichever is more stringent. If less stringent levels or measures than those provided in these EHS Guidelines are appropriate, in view of specific project circumstances, a full and detailed justification for any proposed alternatives is needed as part of the site-specific environmental assessment. This justification should demonstrate that the choice for any alternate performance levels is protective of human health and the environment. .

[1] Defined as the exercise of professional skill, diligence, prudence and foresight that would be reasonably expected from skilled and experienced professionals engaged in the same type of undertaking under the same or similar circumstances globally. The circumstances that skilled and experienced professionals may find when evaluating the range of pollution prevention and control techniques available to a project may include, but are not limited to, varying levels of environmental degradation and environmental assimilative capacity as well as varying levels of financial and technical feasibility.

Applicability

The EHS Guidelines for Gas Distribution Systems include information relevant to the distribution of low pressure natural gas from the city gate to residential, commercial, and industrial users. Annex A provides a summary of industry sector activities.

This document is organized according to the following sections:

Section 1.0 — Industry-Specific Impacts and Management
Section 2.0 — Performance Indicators and Monitoring
Section 3.0 — References
Annex A — General Description of Industry Activities

1.0 Industry-Specific Impacts and Management

This section provides a summary of EHS issues associated with gas distribution systems that occur during the construction and operations phases, along with recommendations for their management. Recommendations for the management of EHS issues common to most large industrial facilities during the decommissioning phase are provided in the **General EHS Guidelines**.

1.1 Environment

Distribution pipeline construction impacts greatly depend on the location of proposed pipeline installation. In already developed urban areas, environmental impacts are considerably different than in suburban or mixed use areas. Common impacts may include noise and vibration caused by the operation of earth moving and excavation equipment, and materials transport and delivery; dust emissions generated by a combination of on-site excavation and movement of earth materials, contact of construction machinery with bare soil, and exposure of bare soil and soil piles to wind; mobile emissions from exhaust of diesel engines for earth moving equipment; and hazardous materials and waste handling, including oil spills associated with heavy equipment operation and fueling activities. In newly developed areas, impacts may also include soil erosion resulting from excavated areas prior to the reestablishment of vegetation. In urban areas, impacts may include noise, traffic interruption, disposal of contaminated soil, and presence of archeological artifacts.

Recommendations for prevention and control of construction related impacts are addressed in the **General EHS Guidelines**.

Environmental issues that may occur during gas distribution projects include the following:

- Habitat Alteration
- Air Emissions

Habitat Alteration

Habitat alteration is only considered a relevant potential impact during construction of gas distribution pipeline systems in newly developed rural or periurban areas. These impacts may be associated with excavation, trenching, pipe laying, backfilling, and the establishment of infrastructure such as regulating stations, which may create temporary or permanent terrestrial habitat alteration depending on the characteristics of existing vegetation and topographic features along the proposed right of way. The potential for impacts depends on the level of existing development, and will likely be less of an issue in urbanized areas or along existing utility rights-of-way corridors.

Depending on the level of existing urbanization in the proposed project area, examples of habitat alteration from these activities may include landscape fragmentation; loss of wildlife habitat, including for nesting; and establishment of non-native invasive plant species. In addition, construction of distribution pipelines crossing aquatic habitats that may disrupt watercourses and wetlands, and require the removal of riparian vegetation. Sediment and erosion from construction activities and storm water runoff may increase turbidity of surface watercourses.

To prevent and control impacts to terrestrial habitats, distribution pipeline rights-of-way and regulating stations should be sited to avoid critical habitat through use of existing utility and transport corridors, whenever possible. To prevent and control impacts to aquatic habitats, distribution pipeline rights-of-way should be sited to avoid critical aquatic habitat such as watercourses, wetlands, and riparian areas, as well as fish spawning habitat, and critical fish over-wintering habitat, whenever possible. Use of guided / directional drilling for distribution pipeline installation

should be considered where feasible to reduce impacts to both terrestrial and aquatic habitats.

Air Emissions

Gas distribution systems may generate gas leaks as a result of normal operations, equipment venting for maintenance, and aging.[2] Gas leakage, principally consisting of methane (CH_4), a greenhouse gas, may result from corrosion[3] and degradation of pipelines and related components over time and from fugitive emissions from pipelines and regulating stations.

Recommended measures to prevent and control air emissions due to leaks include:

- Gas pipelines and pipeline components, in addition to general installation and pipe joining techniques such as welding, should meet international standards for structural integrity and operational performance;[4]
- Corrosion prevention of buried ferrous metal pipelines should be undertaken using coating or cathodic protection techniques.[5] For underground applications, the use of polyethylene pipe[6], which is not subject to corrosion, should be considered as an alternative to ferrous metal pipeline materials;
- Testing of pipelines and pipeline components for pressure specifications and presence of leaks should be undertaken prior to commissioning. The system should be gas tight when tested at a higher pressure than the normal maximum operation gas pressure;
- Leak and corrosion detection programs should be undertaken, including use of appropriate leak detection assessment techniques and equipment.[7] Maintenance programs to repair and replace infrastructure should be undertaken as indicated by detection results. Typical urban testing sites include atmospheres in confined spaces of utility infrastructure (e.g. sewer and water system manholes), as well as at openings in pavement and on streets and walkways. Areas of gas infrastructure subject to forces from heavy load traffic or physical land shifts should also be periodically monitored for leaks and ruptures;
- Comparisons of purchased and delivered gas amounts should be periodically examined for discrepancies and unaccounted for gas which may be an indicator of excessive system leakage;
- Regulating stations and vaults, both above and below ground, may contain equipment (e.g. safety valves, filters) that may emit fugitive emissions of gas. Pipelines, valves, and other component infrastructure should be regularly maintained, and ventilation and gas detection / alarm equipment installed in station buildings or vaults.

[2] The methane emission from the gas distribution sector is 26 percent of the total methane emissions in the US natural gas industry sector. United States Environment Protection Agency (US EPA) (1999).

[3] Steel and other ferrous metals used for gas pipelines may be subject to corrosion, a reaction between external and internal surfaces of the pipe and its surroundings in both below and above ground settings. Corrosion weakens the structural integrity of the pipe and may lead to leakage. The characteristics of the physical environment of the pipeline including soil resistivity, moisture, and presence of contaminants may encourage corrosive activity. US Department of Transportation, Office of Pipeline Safety (2002).

[4] For example, US 49 CFR Part 192—Transportation of Natural Gas and Other Gas by Pipeline: Minimum Federal Safety Standards subparts A to H, and European (EN) Standards: EN 12007-1:2000: Gas Supply Systems. Pipelines for maximum operating pressure up to and including 16 bar. General functional recommendations.

[5] Cathodic protection is a procedure by which an underground metallic pipe is protected against corrosion. There are two basic methods of cathodic protection: use of galvanic anode and impressed current systems. Galvanic systems rely on a sacrificial metal, such as zinc, to protect the pipe. For impressed current systems, a direct current is impressed onto the pipe by means of a rectifier, and corrosion is reduced where sufficient current flows onto the pipe. Testing of the electrical current for cathodic protection should be undertaken regularly. US Department of Transportation, Office of Pipeline Safety (2002).

[6] An example of the performance specifications for polyethylene gas pipe is the ASTM D 2513 Standard Specification for Thermoplastic Gas Pressure Pipe, Tubing, and Fittings or Standard EN 1555 Plastics Piping Systems.

[7] Leaks are indicated by the presence of gas odor and hissing sounds. Additional indicators may include changes in vegetation, insect activity, and the presence of fungal growths surrounding pipelines and components. Examples of leak detection equipment include specialized soap solutions, in addition to combustible gas indicators (CGI), flame ionization detectors (FI), and sonic detectors that use sound levels to locate leaks. US Department of Transportation, Office of Pipeline Safety (2002).

1.2 Occupational Health and Safety

Occupational health and safety (OHS) issues in the construction phase include potential exposures to dust, noise, physical strain, and trenching excavation hazards. Recommendations for the management of construction phase hazards are addressed in more detail in the **General EHS Guidelines.** Occupational health and safety hazards associated with the construction and operation of gas distribution systems may also include:

- Occupational exposure to gas leaks and explosions
- Confined spaces
- Electrocution

Additional recommendations for operational phase OHS issues also applicable to gas distribution activities are also addressed in the **General EHS Guidelines**.

Occupational exposure to gas leaks and explosions

Excavation, construction, and repair of gas distribution systems may result in accidental pipeline rupture or leakage and consequent exposure of workers to harmful gases and an explosive gas atmosphere. In addition, excavation by non-gas utility personnel may result in accidental ruptures and exposure of untrained workers to explosion hazards. Recommended techniques to prevent and control exposure to gases and explosive atmospheres caused by accidental gas line ruptures and / or leaks include:

- Training of employees and contractor personnel in safety procedures, together with provision of appropriate tools and equipment;
- Identification and location of existing gas and other buried utility infrastructure prior to excavation for installation or repair of gas pipelines. Installation of visual marking of gas lines as part of installation, and updating as necessary on an ongoing basis;
- Removal of sources of ignition prior to gas venting for maintenance and repair activities. Purging of gas from pipeline or pipe components prior to welding or cutting activities;
- Installation of gas lines and components using sufficient separation distance and appropriate pipe protection layering to minimize potential interference with other underground infrastructure. Separation of plastic pipes from sources of heat;
- Odorization of gas to facilitate detection of gas leakage;[8]
- Training of gas utility workers in procedures for emergency preparedness and response involving appropriate public authorities, in addition to emergency shutdown and pressure reduction in the pipeline system. Further recommendations for emergency preparedness and response are addressed in the **General EHS Guidelines**.

Confined spaces

Accumulation of natural gas in a confined space is a potentially fatal condition. Entry by workers into confined spaces and the associated potential for accidents may vary among gas distribution project phases and facilities. Specific and unique areas for confined space entry may include excavation trenches during construction and regulating stations and vaults, both above and below ground, which may also contain equipment (e.g. safety valves, filters) that may emit fugitive emissions of gas and create a potential for oxygen deficient and explosive atmospheres. Gas distribution companies should develop and implement confined space entry procedures as described the **General EHS Guidelines**, and including the following:

[8] A combustible gas in a distribution line must contain a natural odorant or be odorized so that at a concentration in air of one-fifth of the lower explosive limit, the gas is readily detectable by a person with a normal sense of smell. See US 49 CFR Part 192.

- Requiring work permits for all confined space entries;
- Installation of appropriate access controls for unauthorized personnel including signage to alert workers to the hazards of confined spaces;
- Use of ventilation and oxygen / explosive level detection and alarm equipment prior to access.

Electrocution

Excavation, construction, and repair of gas distribution systems may result in workers' exposure to existing aboveground or underground utilities, including aerial or buried electric transmission lines. Identification and location of all relevant existing underground utilities should be undertaken prior to any construction and excavation activities.

1.3 Community Health and Safety

Community health and safety hazards associated with the construction and operation of gas distribution systems include public exposure to gas leaks and explosions. Additional recommendations for community health and safety issues common to most industry sectors are addressed in the **General EHS Guidelines**.

Public exposure to gas leaks and explosions

The presence of gas distribution systems within populated areas may expose the public to hazards from gas leaks and explosions. Gas leakage may result from accidental rupture of pipelines during installation and repair or from contact during excavation unrelated to the gas system. Gas utility operators should inform and advise affected communities, schools, businesses / commercial facilities, and residents about the potential hazards presented by gas infrastructure. Gas distribution system operators should establish an emergency preparedness and response plan and communicate this plan to the public as necessary.

As part of the plan, gas system operators should implement a telephone notification system to respond to reports of leaks or questions of general safety from the affected community and other interested parties. Operators should also provide a pipe location service to assist outside contractors and the general public to determine the location of gas infrastructure prior to construction works proximate to gas pipelines.

Improper operation of natural gas fuelled appliances and equipment may expose the user and the public to gas leakage and explosion hazards. Gas distribution system operators should make information available to customers (e.g. through flyers and internet-based information) regarding the safe operation of gas fueled appliances and equipment. This information should address issues of proper and safe use of gas-fired appliances, which in the case of residential use, may include the following issues:

- Proper location, installation, and maintenance of appliances and equipment such as natural gas fired heating units. For example, installation in areas with adequate ventilation to ensure dispersion of residual carbon monoxide. Poor combustion in a natural gas fired appliance or piece of equipment may expose the user and the public to carbon monoxide exposure, especially in confined spaces;
- Recognition of potential hazards or operating problems. For example, recognition of the hazards of poor ventilation or identification of gas surges requiring action by the gas utility (identifiable when flame color in natural gas burning appliances is orange or yellow rather than blue), and how to respond to possible accumulation of gas vapors when odor is detected with instructions on proper response procedures. These procedures may include avoiding

sources of ignition (e.g. electrical switches, lighters), ventilating area of gas accumulation, and calling the emergency contact number of the local gas utility from a safe location.

2.0 Performance Indicators and Monitoring

2.1 Environment

Emissions and Effluent Guidelines

Although there are no significant point source emissions or effluents for the gas distribution sector, fugitive emissions (from city gate and regulating stations, underground piping, and third party damage) from gas distribution systems constitute a significant portion of the overall atmospheric losses from the natural gas transmission and distribution industry. Gas distribution system operators should conduct volume reconciliation programs as an indicator of leakages by comparing delivered gas amounts against sales to customers.[9] Operators should also implement inspection and maintenance programs to maintain and upgrade infrastructure and minimize fugitive gas emissions.

Environmental Monitoring

Environmental monitoring programs for this sector should be implemented to address all activities that have been identified to have potentially significant impacts on the environment, during normal operations and upset conditions. Environmental monitoring activities should be based on direct or indirect indicators of emissions, effluents, and resource use applicable to the particular project.

Monitoring frequency should be sufficient to provide representative data for the parameter being monitored. Monitoring should be conducted by trained individuals following monitoring and record-keeping procedures and using properly calibrated and maintained equipment. Monitoring data should be analyzed and reviewed at regular intervals and compared with the operating standards so that any necessary corrective actions can be taken. Additional guidance on applicable sampling and analytical methods for emissions and effluents is provided in the **General EHS Guidelines**.

2.2 Occupational Health and Safety

Occupational Health and Safety Guidelines

Occupational health and safety performance should be evaluated against internationally published exposure guidelines, of which examples include the Threshold Limit Value (TLV®) occupational exposure guidelines and Biological Exposure Indices (BEIs®) published by American Conference of Governmental Industrial Hygienists (ACGIH),[10] the Pocket Guide to Chemical Hazards published by the United States National Institute for Occupational Health and Safety (NIOSH),[11] Permissible Exposure Limits (PELs) published by the Occupational Safety and Health Administration of the United States (OSHA),[12] Indicative Occupational Exposure Limit Values published by European Union member states,[13] or other similar sources.

Accident and Fatality Rates

Projects should try to reduce the number of accidents among project workers (whether directly employed or subcontracted) to

[9] Supervisory Control and Data Acquisition (SCADA) systems may be another useful means of monitoring system volume flows, especially in new system installations.

[10] Available at: http://www.acgih.org/TLV/ and http://www.acgih.org/store/
[11] Available at: http://www.cdc.gov/niosh/npg/
[12] Available at: http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9992
[13] Available at: http://europe.osha.eu.int/good_practice/risks/ds/oel/

a rate of zero, especially accidents that could result in lost work time, different levels of disability, or even fatalities. Facility rates may be benchmarked against the performance of facilities in this sector in developed countries through consultation with published sources (e.g. US Bureau of Labor Statistics and UK Health and Safety Executive)[14].

Occupational Health and Safety Monitoring

The working environment should be monitored for occupational hazards relevant to the specific project. Monitoring should be designed and implemented by accredited professionals[15] as part of an occupational health and safety monitoring program. Facilities should also maintain a record of occupational accidents and diseases and dangerous occurrences and accidents. Additional guidance on occupational health and safety monitoring programs is provided in the **General EHS Guidelines**.

[14] Available at: http://www.bls.gov/iif/ and http://www.hse.gov.uk/statistics/index.htm

[15] Accredited professionals may include Certified Industrial Hygienists, Registered Occupational Hygienists, or Certified Safety Professionals or their equivalent.

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Annex A: General Description of Industry Activities

Gas distribution systems deliver natural gas to residential, commercial, and industrial clients for use in appliances, heating applications, and industrial process equipment. The distribution system typically begins at the 'city gate' where natural gas from high pressure transmission pipelines (typically at 50 to 70 bar[16]) is depressurized, metered and odorized (to facilitate leak detection). City gates are secure, above ground facilities, typically less than 1 ha in area and containing equipment belonging to both the transmission and distribution companies. Once metered and odorized, gas is fed into distribution mains and service lines for delivery of low pressure gas to end users through underground, small diameter steel or plastic pipe systems. Pressure is further lowered, often in stages, for delivery to the customer.

Gas supplied to distribution systems is normally referred to as "pipeline quality natural gas", which has been processed to remove water vapor and other contaminants and has predictable burning characteristics and heat content. Processed natural gas typically contains 75 to 90+ percent methane, 3 to 4 percent nitrogen, and 2 percent carbon dioxide, but these fractions may vary in different countries. In exceptional cases, gas distribution systems may need to include additional processing if supplied gas is not of pipeline quality, such as gas produced locally from landfills, biomass, or manure.

Gas distribution systems are often a mix of new construction and old infrastructure that may contain legacy issues such as old gas meters that contain mercury, obsolete gas processing facilities, and plants that were used for manufacture of synthetic gas. Special attention should be paid to leak management when old and new infrastructure is combined or when the source of gas is changed.

The construction and installation of natural gas distribution pipeline systems involves planning and design for the right-of-way, including use of existing utility corridors (e.g. co-location with sewer, water, telecommunication, and power systems) where possible. Establishment of the right-of-way may involve clearing of vegetation and grading of surfaces. Pipe is laid following trenching activities using a backhoe, and, where appropriate, the use of directional drilling to minimize land disturbance. Guided drilling may be particularly useful when crossing under roadways, waterways or wetland habitats. Trenches are then backfilled and the right-of-way is restored using existing vegetation. Distribution pipes are typically of steel or plastic materials. Various coating and cathodic protection techniques are employed to protect steel piping from corrosive reactions, both above and below ground.

Gas distribution systems typically involve the use of regulating stations to adjust the pressure of gas throughout the distribution network. These installations are typically located above ground and occupy approximately 20 m^2 of land area. Regulating stations are located after the 'city gate' and may operate in a sequential fashion to reduce gas pressure during distribution to end users. Final pressure adjustment is undertaken at the individual residential customer (to about 0.1 bar), and at commercial, and industrial meters (to from 1 to 15 bar).

Activities by the gas distribution system during operation and maintenance include overall systems operation and monitoring of infrastructure components, such as valves, regulating stations, and pipes through flow meter data analysis and onsite inspection. Operators regularly undertake inspections for gas leaks, corrosion, and overall system integrity. Ongoing connection of new subscribers within the distribution market is a regular operational activity, and is typically undertaken while the distribution pipes are pressurized, so as not to interrupt service

[16] 1 bar is approximately 1 atmosphere, or 14.5 lb/in^2.

to other customers. Repair activities involve all parts of the distribution system and typical tasks include repair and replacement of pipes and valves, in particular after accidental damage due to excavation near pipeline infrastructure.

Gas distribution operators are also typically responsible for training their employees, and ensuring that contractors are trained, in the procedures and actions necessary for effective emergency response to leaks, ruptures, and other incidents caused by the operators themselves, third parties, or natural hazards. Effective emergency response requires that gas distribution operators integrate with local government and municipal authorities, in addition to residential, commercial and industrial partners to ensure coordinated actions in the event of an emergency.

Decommissioning of distribution lines typically involves the closure and securing of valves to impede flow of gas to the customer and disconnection and sealing of the distribution mains and service line piping after purging of residual gas. Above ground structures such as regulating stations may be removed. Below ground pipelines, vaults and other components may be removed or left in place depending on site specific considerations.

Annex-3 Air Quality and Noise Measurements

Ambient Air Quality and noise Measurements Report

Gas pipeline network in Monofeya/ Shintina Al Hajar, Um Saleh, Tilbent Abshish and Salaka

Introduction

Air quality and noise monitoring has been carried out as part of the baseline description for the Environmental and Social Impact Assessment of the proposed transmission line route gas project located in Shintina El Hajar, Um Saleh, Tilbant Abshish and Salaka at Monofeya governorate, since the rout is passing nearby sensitive receptors in study areas. The location was set as suitable location for ambient air quality and noise level monitoring.

Air quality monitoring has been undertaken for the pollutants of primary concerns (NO_2, SO_2, T.S.P and PM_{10}), in order to better characterize the baseline air quality as part of the environmental impact assessment required where a one-hour average measurements were conducted for carbon monoxide (CO), nitrogen dioxide (NO_2), sulphur dioxide (SO_2), Total Suspended Particulates (T.S.P) and particulate matter (PM_{10}) for one specific sensitive location in the study area, where the air quality complies with the national guidelines for all the analysed parameters. The site-specific air quality measurements were conducted using Standard ambient air quality monitoring instruments under the supervision of experienced specialists. Noise levels were conducted as per the international standard using type 1 precision noise level meter.

Objectives

The overall objectives of this monitoring round are to:

Assess/confirm compliance of the air quality in the baseline environment with relevant national guidelines;

Identify any non-compliance issues, if any; and

Provide general conclusions based on analysis results.

Scope of Work

The scope of work of the present monitoring includes the sampling and analysis of active air and noise in the surrounding area as to distinguish whether air quality is impacted by the project activities or not.

The measurement will be conducted in the herein location within the boundaries of the sensitive object.

- **Sampling strategy**

The selection of the active air measurement location is based on the prevailing wind direction; site Topography, the future layout of the proposed project components and the location of the nearest sensitive receptors with respect to the project plots. Moreover, the selection is based on the guidelines stated in the American Society for Testing Materials (ASTM) reference method[1].

The following ambient air pollutants where the target parameters to be measured during the monitoring program:

- Total Suspended Particulate (TSP)
- Thoracic particulate (PM_{10})
- Nitrogen dioxide NO_2.
- Sulfur dioxide SO_2.
- Carbon monoxide CO.

Moreover, location of the measurements is shown in the figure below

- **Location**

The GPS coordinates of the as Ambient Air (**AA**) measurement location

Table 0-1 Geographical coordinates of the study areas

Location	Latitude	Longitude
Shintina El Hajar school/Residential area	30°38'.616"N	31°3'.360"E
Um Saleh School	30°39'.272"N	31°2.811"E
Tilbant Abshish Primary School	30°28'14.01"N	31° 5'28.28"E
Salaka Primary School, Salaka	30°28'14.01"N	31° 5'28.28"E

[1] D1357-95 (Reapproved2000) Standard Practice for Planning the Sampling of the Ambient Air

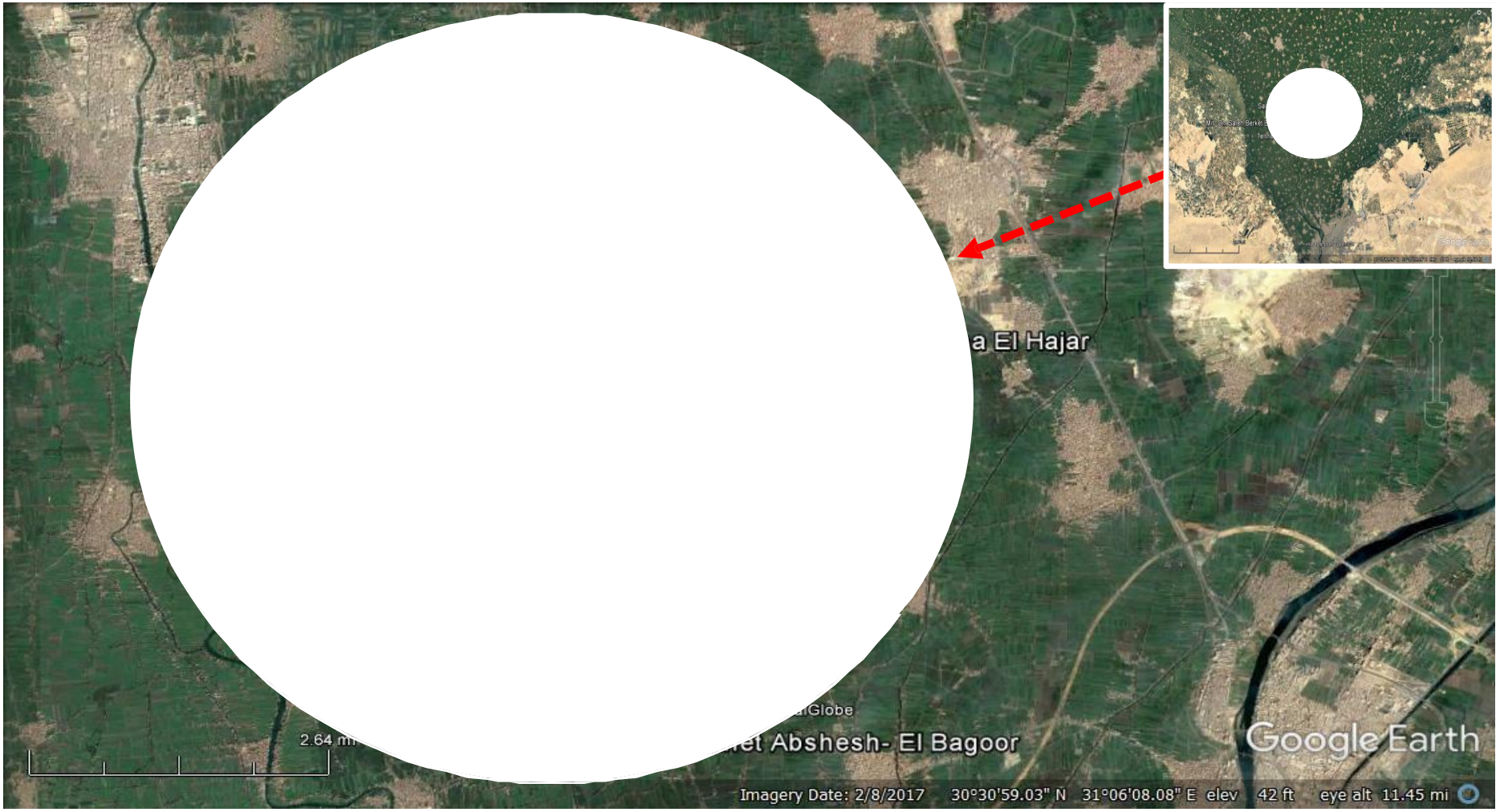


Figure 0-1 Satellite map shows study area (Shintina Al Hajar, Um Saleh, Tilbant Abshish and Salaka)

- Legislation and regulatory framework

National and International Legislation

The results of ambient air quality measurements were compared to the national limits set in Annex 5 of the Executive Regulation (D1095/2011) and the guideline values of world health organization (WHO) for the ambient air quality.

Table 0-2 and Table 0-4 lists the corresponding applicable national and international permissible limits.

Table 0-2 Applicable national permissible limits for ambient air quality levels for urban area

Pollutant	Average Period	Egyptian Standards ($\mu g.m^{-3}$)	Egyptian Standards (ppm)
Sulphur dioxide (SO_2)	1 hour	350	0.1337
	24 hours	150	0.0573
	Annual	60	0.0229
Carbon monoxide	1 hour	30,000	26
	8 hours	10,000	9
Nitrogen dioxide (NO_2)	1 hour	350	0.2
	24 hours	150	0.08
	Annual	60	0.032
Total suspended particulate T.S.P	24 hours	230	---------
	Annual	125	---------
Thoracic particles (PM_{10})	24 hours	150	---------
	Annual	100	---------
$PM_{2.5}$	24 hours	100	---------
	Annual	70	---------

Table 0-3 Applicable National and International Permissible Li

Location	LAeq (dBA) National Permissible Limits (Annex 7 Decree 710/2012)			
	During Day (7 am to 10 pm)	During Night (10 pm to 7 am)	During Day (7 am to 10 pm)	During Night (10 pm to 7 am)
Residential	60 [2]	55 [2]	70 [3]	70 [3]

Table 0-4 WHO Ambient Air Quality Guidelines 4,5

Pollutant	Average Period	Guideline value (µg.m^{-3})
Sulphur dioxide (SO_2)	24 hours	125 (interim target 1) 50 (Interim target 2) 20 (guideline)
	10 minutes	500
Nitrogen dioxide (NO_2)	1 hour	200
	1 year	40
Thoracic particles (PM_{10})	24 hrs	150 (interim target 1) 100 (interim target 2) 75 (interim target 3) 50 (guideline)
	1 year	70 (interim target 1) 50 (interim target 2) 30 (interim target 3) 20 (guideline)
Ozone	8 hours daily maximum	160 (interim target 1) 100 (guideline)

[2] National permissible limits for ambient noise levels for areas on roads 12 m wide or more or light industrial areas including other activities

[3] IFC permissible limits for ambient noise levels for industrial or commercial receptors

[4] World Health Organization (WHO). Air Quality Guidelines Global Update, 2005. PM 24-hour value is the 99th percentile.

[5] Interim targets are provided in recognition of the need for a staged approach to achieving the recommended guidelines.

- Methodology

  - **Ambient air quality**

Ambient Air Quality Monitoring equipment is an integrated system of which includes several analyzers with data recording devises. A typical system would include gas analyzers for ambient air analysis, data recording, and signal transmission instrumentation.

  - **Ambient air pollutants**

The most common gaseous air pollutants (also known as "criteria pollutants") are carbon monoxide, sulfur oxides, and nitrogen oxides. These pollutants can be harmful to health and the environment, and cause property damage. To acquire baseline information on background levels of Thoracic Particulates, the team conducted for one-hour active sampling using a dust sampler. The sampler measures the respirable fraction of airborne dust (of particle size 0.1 to 10 µm) with a measuring range of 0.001 to 400 mg/m^3 and an accuracy of ± 5 % of the reading. The levels measured and recorded would serve as baseline values for reference during future monitoring activities.

- Ambient air quality monitoring system specifications
  - General Features

    - Standard methods of measurement which means:
    - SO_2 analyzer: ISO 10498 equivalent to(U.S.A EPA Reference method – EQSA-0486-60) – UV Fluorescence
    - NOx analyzer: ISO 7996 equivalent to(U.S.A EPA Reference method – RFNA-1289-74) – Chemiluminescence
    - CO analyzer: ISO 4224 equivalent to U.S.A EPA Reference method – RFCA-0981-54) – IR GFC
    - PM_{10} sampler: Plow volume sampler equivalent to(EPA method, Appendix J-Reference method FR)
    - T.S.P low volume sampler equivalent to(EPA method, Appendix J-Reference method FR)

- **Ambient Particulate Matter PM_{10} sampler**

  - Approval and Certification: U.S.EPA (USA), UBA/ TUV (Germany), / Sira Certification Service
  - Measuring Method: Sequential Particulate sampler
  - Sampling on filter membranes, which can be used for further Chemical analyses as required by current regulations and standards.
  - Active flow Control Flow range: 0-10 LPM
  - Nominal flow: 5LPM Sampler
  - Dimensions: 10" x 12" x 7" Sampler
  - Weight: 9.8LBS (fully configured) Transport Case: 19.75" x 12" x 18"
  - The analyzer should be equipped with batteries in order to avoid possible data losses due to power failures.
  - Source: Beta Ray Source with appropriate activity
  - Ranges: 0-500 µg/ m^3 (2.3 m^3/ h operating flow rate); 0-1,000 µg/ m^3 (1 m3/ h operating flow rate)
  - Lower Detectable Limit: ≤ 1.5 µg/ m3 (24 hour cycle time, 2.3 m3/ h operating flow rate)
  - Precision: ≤ 0.4 µg/ m^3 (24 hour cycle time, 2.3 m^3/ h operating flow rate)
  - Correlation Coefficient R > 0.98

- **Sulphur Dioxide SO_2 Analyzer** (Thermo Scientific SO_2 Analyzer model 43i-USA)

  - Approval and Certification : U.S.EPA (USA), UBA/ TUV (Germany), / Sira Certification Service
  - Measuring Method : UV Fluorescence Technology
  - Ranges.: Auto ranging feature, Multiple Ranges to cover from 0 to 10 ppm (especially from 0 to 1 ppm)
  - Zero Noise: ≤ 0.5 ppb
  - Lower Detectable Limit: ≤ 1 ppb
  - Zero drift (daily): ≤ 1 ppb

- Span drift (daily): ≤ 1% of full scale
- Response time: fast, ≤ 100 seconds
- Precision: ≤ 0.5% of reading
- Linearity: ≤ ± 1% of full scale
- Operating temperature: not exceed 40 °C

- **Nitrogen Monoxide, Nitrogen Dioxide and Nitrogen Oxides NO, NO_2 & NO_X Analyzer** (Thermo Scientific NOx Analyzer - Model 42i- USA)

  - Approval and Certification: U.S.EPA (USA), UBA/ TUV (Germany), / Sira Certification Service
  - Measuring Method.: Chemiluminescence Technology
  - Ranges.: Auto ranging feature, Multiple Ranges to cover from 0 to 20 ppm (especially from 0 to 1 ppm)
  - Zero Noise: ≤ 0.2 ppb
  - Lower Detectable Limit: ≤ 0.4 ppb
  - Zero drift (daily): < 0.5 ppb
  - Span drift (daily): < 0.5% of full scale
  - Response time: fast, ≤ 100 seconds
  - ◆ Precision: ≤ 0.5% of reading
  - Linearity: ≤ ± 1% of full scale
  - Operating temperature: not exceed 40 °C

- **Carbon Monoxide CO Analyzer** (Thermo Scientific Carbon Monoxide CO Analyzer model 48i- USA)

  - Approval and Certification: U.S.EPA (USA), UBA/ TUV (Germany), / Sira Certification Service
  - Measuring Method: Non Destructive Infra-Red Gas Filter Correlation (IRGFC) Technology
  - Ranges: Auto ranging feature, Multiple Ranges to cover from 0 to 200 ppm (especially from 0 to 50 ppm)

- Zero Noise: ≤ 0.02 ppm
- Lower Detectable Limit: ≤ 0.04 ppm
- Zero drift (daily): ≤ 0.1 ppm
- Span drift (daily): < 0.5% of reading
- Response time: fast, ≤ 100 seconds
- Precision: ≤ 0.5% of reading
- Linearity: ≤ ± 1% of full scale
- Operating temperature: not exceed 40 °C

Noise Measurement Methodology

The methodology adopted was to record ambient noise levels for one hour, as per the national and international standards, in the current location at the proposed transmission line route. The following devices were used during the first round of noise level measurements:

- Two B & K 2238 Mediator, Integrating Sound Level Meters, Type I (precision grade), compliant with IEC 1672 Class 1 standard;
- B & K 4198 Outdoor Weatherproof Microphone Kit;
- GPS unit (Garmin MONTANA 650); and
- Digital Camera.

Noise monitoring measurements included recording the following parameters using a Type 1 precision grade hand-held sound-level meters:

- Equivalent continuous noise level (LAeq)
- 95th percentile noise level (LA95)
- 90th percentile noise level (LA90)
- 50th percentile noise level (LA50)
- 10th percentile noise level (LA10)
- Peak sound pressure level (LCpeak)

The following equation[6] is the main equation used to calculated day night equivalent sound pressure level:

$$L_{den} = 10\log\frac{1}{n}\sum_{i=1}^{n}10^{0.1(L_i+D_i)}$$ **Where** L_{den} = Day Night Equivalent , L_i = The hourly L_{eq} ,

D_i = the addition for the different periods of the day , n = number of measured hours.

The sound level meters were calibrated before sound measurements to ensure reliability and precision. GPS coordinates and meteorological conditions were recorded using hand-held kits at all locations prior to the start of noise measurements. It is anticipated that most of these locations would remain the same for the purpose of pre-construction, construction, performance guarantee tests and operation monitoring. **Error! Reference source not found.** Shows the locations of the different noise measurement locations; furthermore, table (0-1) lists the GPS coordinates of measurement locations, measurement dates, location description and a selection of photos at each location.

- **Results**

The following tables present the results for ambient air quality measurements conducted at all the four monitoring locations.

The objectives of the ambient air quality Monitoring activities conducted at the proposed site are:

- To verify compliance with authorized discharge limits and any other regulatory requirements concerning the impact on the public and the environment due to the normal operation of a practice or a source within a practice;
- To establish air quality baseline which will assist in the estimation of the site impact on the local physical, biological and social environment ;
- To check the conditions of operation and the adequacy of controls on discharges from the source and to provide a warning of unusual or unforeseen conditions and, where appropriate, to trigger a special environmental monitoring program.

The air qualities at the current site of the project site in all locations are exhibiting acceptable levels of classic air pollutants in fact the levels are way below the national guidelines. Generation and dispersion

[6]The equation used to obtain the average noise level of a designated time interval based on weighted readings according to "Long-term Leq errors expected and how long to measure (Uncertainity & Noise Monitoring)", Dietrich Kuehner, Forum Acusticum 2005 Budapest.

of dust from increased vehicle traffic, especially during the daily activities, may reduce visibility, relative to baseline levels, and, together with combustion engine emissions, may affect ambient air quality. Concentration of dust particles, both total suspended particulate and repairable particulate matter and other pollutants from open burning, emissions from equipment and machinery used in transportation, the nearby plant operations and emissions from vehicles used to transport workers also contribute to air pollution. These impacts may affect the human environment and, typically, arise during the ordinary daily activities and, to a much lesser extent, during the operation phase, requiring monitoring and assessment of the natural and man-made air pollutants.

One-hour average results for 8 hours continuous measurements are shown in **Error! Reference source not found.** for all the measured parameters

Table 0-5 Daily average Ambient Air (µg/m3) at Tilbant Abshish location

Time	NO ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	CO (mg/m^3)	PM_{10} ($\mu g/m^3$)	T.S.P ($\mu g/m^3$)
10:AM	17.7	25.9	43.6	15.3	2.8	122.6	161.22
11:00	13.2	24.2	37.4	16.2	2.8		
12:00	11.2	29.3	40.5	13.5	2.8		
13:00	12.5	26	38.5	11.8	2.9		
14:00	12.6	25.2	37.8	17.2	2.9		
15:00	20.1	25.3	45.4	15.1	3		
16:00	19.2	30.3	49.5	11.6	3		
17:00	12.2	29.1	41.3	14.7	3.1		
Limits		200		350	30 (mg/m^3)	150	230

Table 0-6 Daily average Ambient Air (µg/m3) at Salaka Location (Sadat Primary School)

Time	NO ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	CO (mg/m^3)	PM_{10} ($\mu g/m^3$)	T.S.P ($\mu g/m^3$)
10:00	14.7	20.2	34.9	12.4	2.2	101	137
11:00	13.7	21.1	34.8	11.6	2.4		
12:00	12.5	19.3	31.8	10.9	2.7		
13:00	17.8	22.2	40	15.8	3.2		
14:00	16.7	21.6	38.3	12.3	2.9		
15:00	19.1	23.5	42.6	13.2	3.5		
16:00	18.2	25.4	43.6	15.5	3.3		
17:00	15.2	20.1	35.3	12.7	3.6		
Limits		200		350	30 **(mg/m^3)**	150	230

Table 0-7 Daily average Ambient Air (µg/m3) at Um Saleh Location (Um Saleh school)

Time	NO (µg/m3)	NO2 (µg/m3)	NOx (µg/m3)	SO2 (µg/m3)	CO (mg/m3)	PM10 (µg/m3)	T.S.P (µg/m3)
10:00	18.3	26.2	44.5	15.4	4.5	93	117
11:00	19.2	19.3	38.5	14.1	6		
12:00	16.8	15.6	32.5	14.4	6.1		
13:00	15.5	18.4	33.9	14.9	6.2		
14:00	12.9	24.8	37.7	18.2	6.3		
15:00	17.2	33.2	50.4	16.6	5.9		
16:00	13.3	29.1	42.4	17.3	5.1		
17:00	14.8	18.6	33.4	15.8	5.5		
Limits	150	200	150	350	30 **(mg/m^3)**	150	230

Table 0-8 Daily average Ambient Air (µg/m3) at Shintina Al Hajar Location.

Time	NO ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	CO (mg/m^3)	PM_{10} ($\mu g/m^3$)	T.S.P ($\mu g/m^3$)
10:00	21.1	27.8	48.9	13.2	3.4	79	109
11:00	13.9	18.7	32.4	11.3	4		
12:00	15.2	26.1	41.3	12.6	4.1		

13:00	15.5	29.1	44.6	13.8	4.3		
14:00	19.3	36.8	56.1	13.9	3.9		
15:00	37.7	41.8	79.5	14.2	3.3		
16:00	11.5	17.2	38.7	15.3	3.1		
17:00	12.2	17.5	29.7	15.6	2.9		
Limits		200		350	30 **(mg/m^3)**	150	230

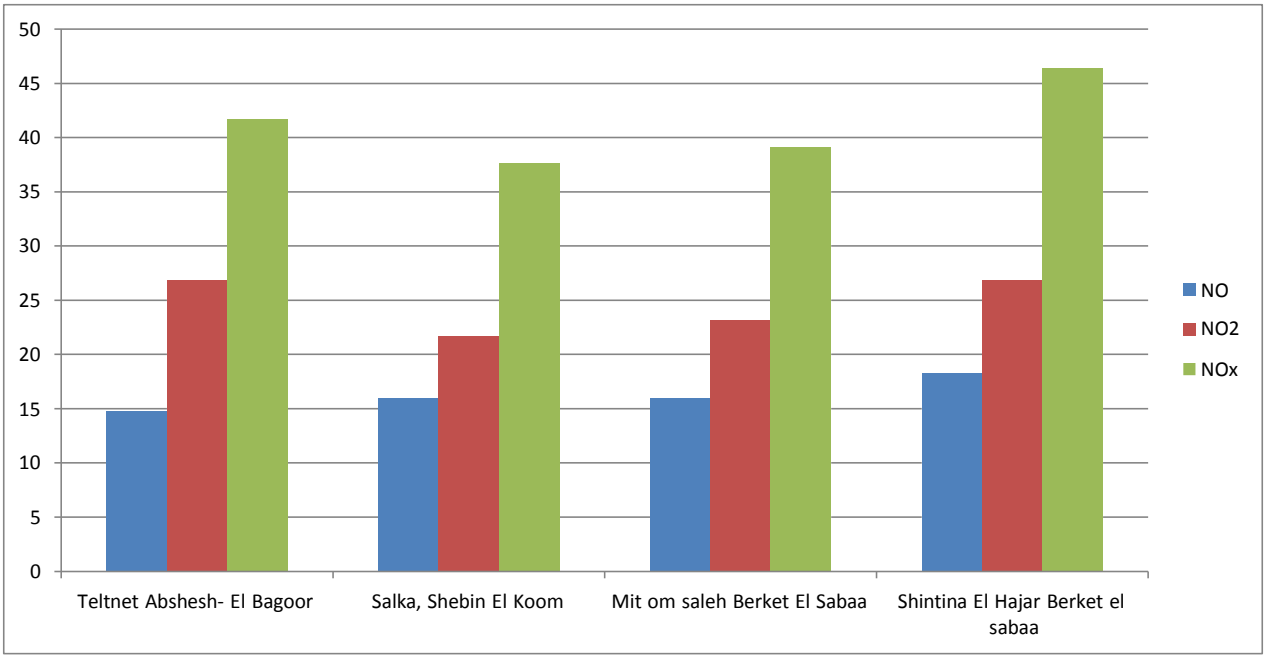


Figure 0-2 NOx variation in the four locations

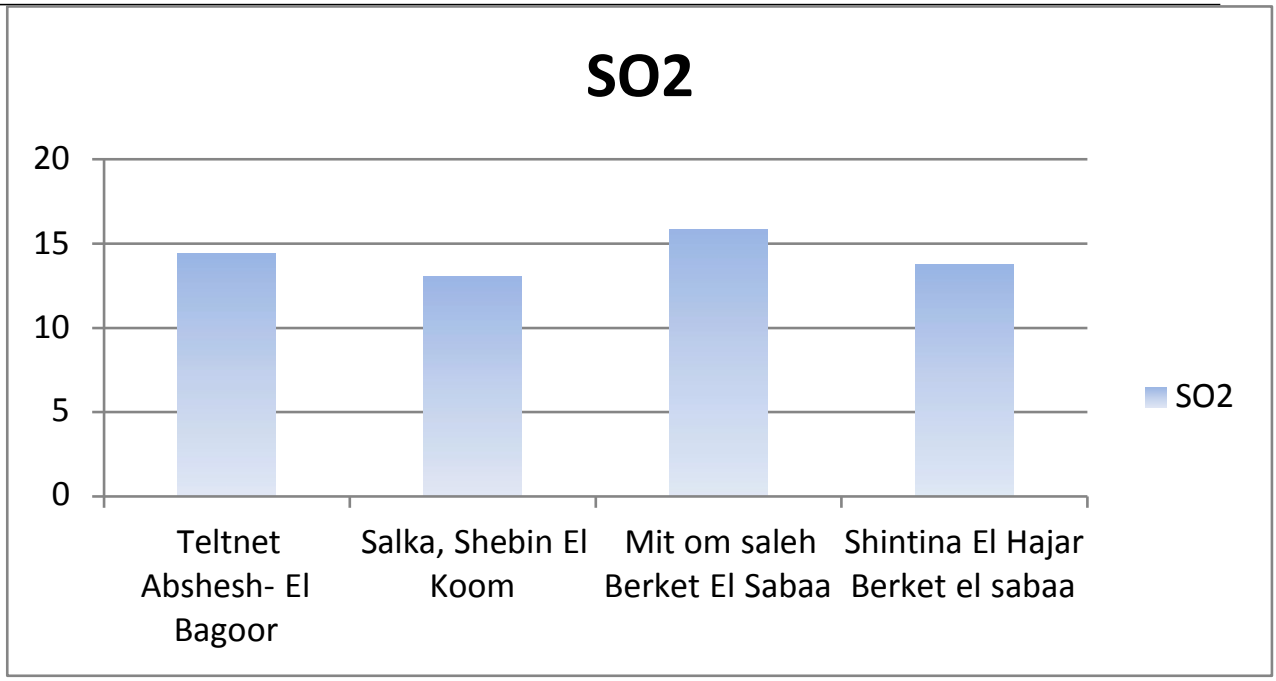


Figure 0-3 SO2 variation in the four locations

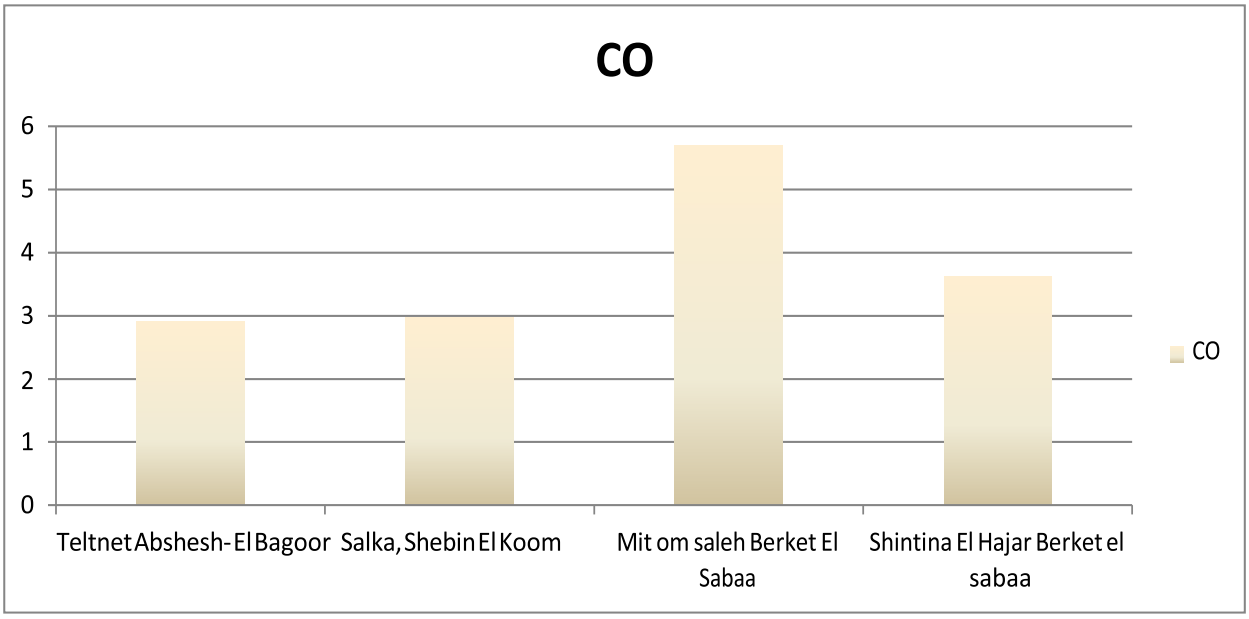


Figure 0-4 Co variation in the four locations

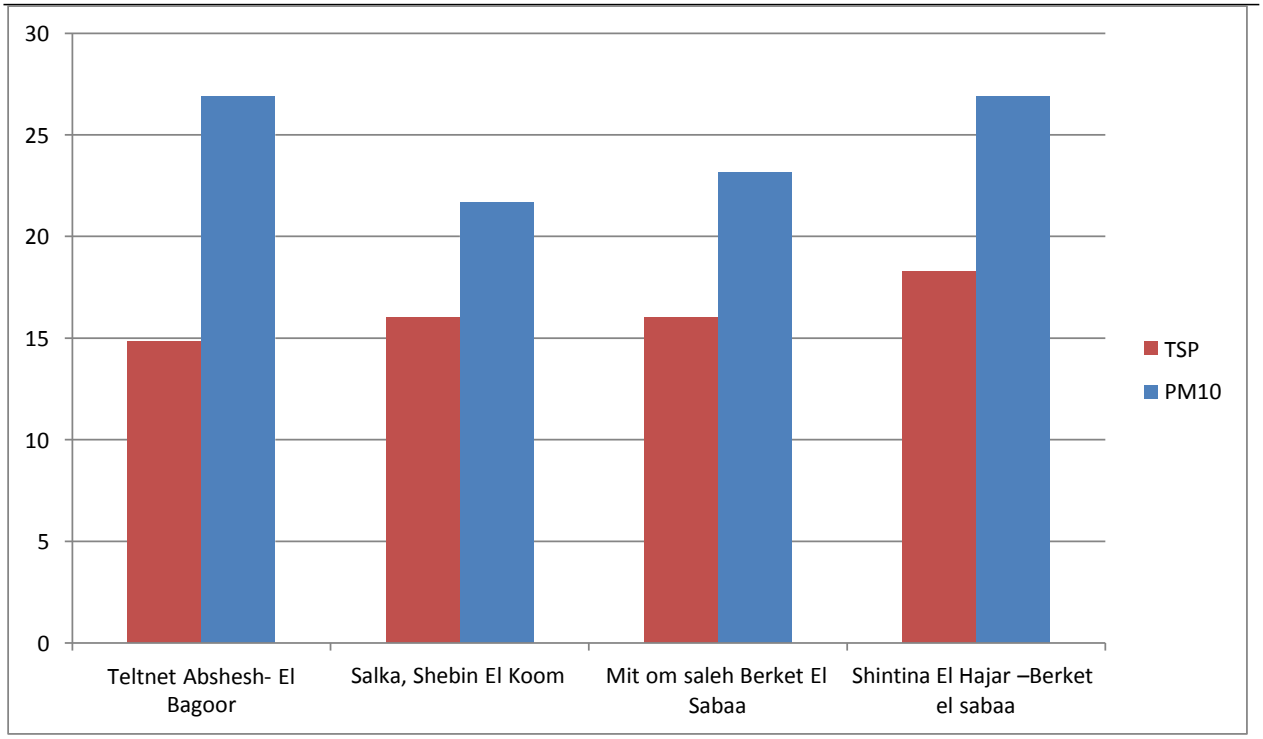


Figure 0-5 TSP& PM10 variation in the four locations

- **Analysis of air quality Results**

In general, there are two main factors affecting the ambient air concentration of a certain pollutant emitted from a certain source or sources in a selected area:

- The intensity of the emissions (e.g. concentration and flow rate) from the source or sources.
- The uncontrollable atmospheric dispersion conditions, which include but not limited to (wind speed, wind direction, temperature, humidity, rainfall, atmospheric turbulence, solar radiation intensity and atmospheric pressure).

All the recorded rests showed compliance with the national and international guidelines for ambient air quality moreover, most of the data recorded were way below the guidelines, which indicates that the ambient air quality in those areas are matching with guidelines of emissions released from industrial sources.

Moreover, the areas is mainly beside a variety of other sources of air pollution other than the nearby the old Monofeya plant and some small roads.

- **Noise levels Results**

Error! Reference source not found. presents the results of one-hour average ambient noise measurements and their corresponding national and international permissible limits.

Table 0-9 Ambient Noise Levels Readings at the proposed four locations

Area	Time	Sound Level Equivalent & Percentile Recordings in dBA for 8 Hours						Permissible Limits LAeq (dBA)	
		LAeq	LA10	LA50	LA90	LA95	LCpeak	National	International
Tilbant Abshish	10:00	5o.5	58.22	47.05	34.93	34.27	106.77	60	70
	11:00	52.9	47.66	38.62	29.4	29.83	111.52		
	12:00	58.4	58.37	49.47	37.7	39.8	100.96		
	13:00	59.3	54.68	48	43.11	37.06	125.77		
	14:00	58.7	53.59	43.9	32.13	36.77	99.7		
	15:00	58.3	50.55	45.65	36.86	35.17	109.77		
	16:00	49.6	63.96	58.44	44.95	48.89	114.99		
	17:00	48.9	53.23	47.75	39.61	39.17	98.22		
Salaka	10:00	52.4	58.22	47.05	34.93	34.27	106.77	60	70
	11:00	51.9	47.66	38.62	29.4	29.83	111.52		
	12:00	55.2	58.37	49.47	37.7	39.8	100.96		
	13:00	54.3	54.68	48	43.11	37.06	125.77		
	14:00	56.4	53.59	43.9	32.13	36.77	99.7		
	15:00	53.8	50.55	45.65	36.86	35.17	109.77		
	16:00	48.2	63.96	58.44	44.95	48.89	114.99		
	17:00	49.9	53.23	47.75	39.61	39.17	98.22		
Um Saleh	10:00	59.3	58.22	47.05	34.93	34.27	106.77	60	70
	11:00	57.2	47.66	38.62	29.4	29.83	111.52		
	12:00	54.9	58.37	49.47	37.7	39.8	100.96		
	13:00	56.3	54.68	48	43.11	37.06	125.77		
	14:00	52.4	53.59	43.9	32.13	36.77	99.7		
	15:00	51.5	50.55	45.65	36.86	35.17	109.77		
	16:00	49.9	63.96	58.44	44.95	48.89	114.99		
	17:00	45.2	53.23	47.75	39.61	39.17	98.22		
Shintina Al Hajar	10:00	60.7	58.22	47.05	34.93	34.27	106.77	60	70
	11:00	60.3	47.66	38.62	29.4	29.83	111.52		
	12:00	53.7	58.37	49.47	37.7	39.8	100.96		
	13:00	60.6	54.68	48	43.11	37.06	125.77		
	14:00	58.9	53.59	43.9	32.13	36.77	99.7		
	15:00	59.1	50.55	45.65	36.86	35.17	109.77		
	16:00	57.8	63.96	58.44	44.95	48.89	114.99		
	17:00	47.4	53.23	47.75	39.61	39.17	98.22		

The results of ambient noise measurements were compared to the national and international permissible limits.

Conclusion

Based on the environmental monitoring and measurements, that performed for the ambient air quality. The results showed compliance with all the national and international guidelines.

FUTURE RECOMMENDATION

It is recommended that monitoring should continue for all the regulated parameters, in order to verify/assure compliance.

References

- EU directive 2008 50 EC -ANNEX I Data quality objectives for ambient air quality assessment
- D1357-95 (Reapproved2000) Standard Practice for Planning the Sampling of the Ambient Air
- Egyptian Law 4/1994 Amended by law 9/2009 and Decree 1741/2005, amended by decree 1095 /2011 Annex 6 (amendments to executive regulations of Law 4).

Appendix I - Selection of Photos from the Air Quality Monitoring activities

Shintina Al Hajar	Um Saleh
	
Tilbant Abshish	**Salaka**
	

Figure 0-6 Ambient air quality monitoring system at Shintina Al Hajar, Um Saleh, Tilbant Abshish and

Appendix II - Selection of Photos from the noise Monitoring activities

Shintina Al Hajar	Um Saleh
	
Tilbant Abshish	**Salaka**
	

Figure 0-7 Noise Monitoring activities at Shintina Al Hajar, Um Saleh, Tilbant Abshish and

Annex 4: Impact Assessment

The impact of each activity on each receptor was assessed according to magnitude on a scale of -10 to 10, where negative values indicate a negative influence on the receptor, and importance on a scale of 0 to 10, which encompasses the probability of occurrence, frequency of the impact etc. The numbering system is used as a relative measure, where more negative numbers correspond to impacts having a higher negative magnitude. Susceptible receptors and corresponding activity are deduced and addressed if both magnitude and importance are of minor severity.

Further, the Buroz Relevant Integrated Criteria and is used to determine the total importance, I, of the impact for each activity on all receptors and of the project overall.

On the basis of the value of the importance of impact, I, obtained, the severity of the impact of an activity is assessed.

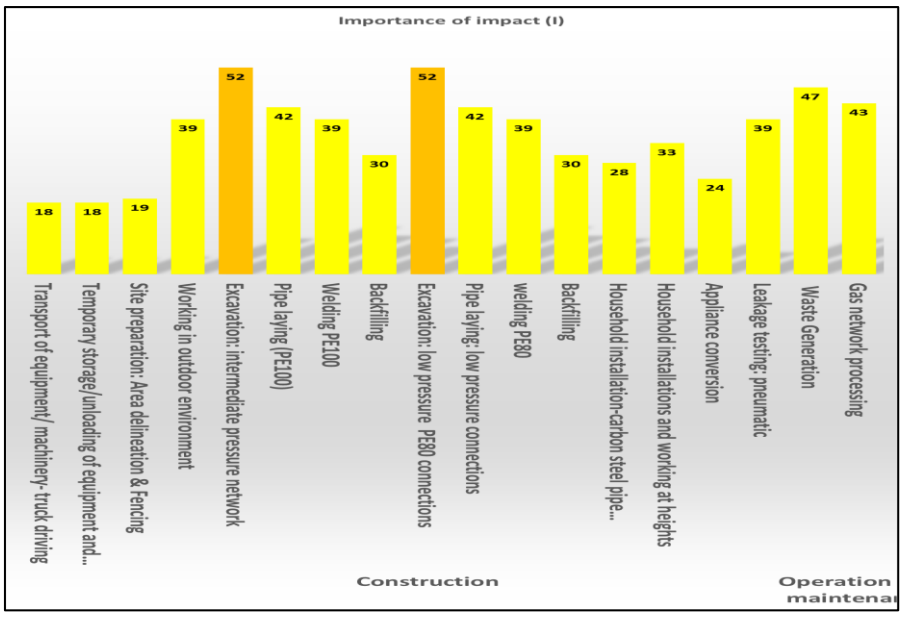
Criterium	Definition	Scoring Scale
Intensity (IN)	Degree of destruction of activity on receptor	1 (lowest)-12 (highest)
Extension (EX)	Theoretical area of influence of the impact	1 (localized) – 8 (widespread)
Momentum (MO)	Period of time for manifestation of the impact	4 (immediate: <1 year) – 2 (medium: 1-5 years)- 1 (long term: >
Persistence (PE)	Duration of the effect of the impact	1 (fleeting, < 1 year), 2 (temporary, 1-5 years), 4 (permanent,
Reversibility (RV)	Possibility of returning to pre-activity initial conditions by rebuilding or natural means	1 (short term, < 1 year)- 2 (medium term, 1-5 years) – 4 (long term, > 5
Recoverability (MC)	Possibility of reconstruction with corrective measures	1 -2 (full and immediate recovery)- 4 (partial recovery and medium term)- 8 (unrecoverable)
Synergy (SI)	Reinforcement ability of manifested effects	1(No synergy of actions on a receptor) -2 (moderate synergism)-4
Accumulation (Ac)	Progressive increase of the effect	1 (no cumulative effect)- 4(cumulative effect)
Effect (EF)	Directionality of impact-the cause (action)-effect (impact)	4 (direct)- 1 (indirect)
Frequency (PR)	Regularity of manifestation of the effect	4 (continuous) – 2 (irregular)-1 (periodic)
Importance of Impact (I)	$I = \pm (3\ IN + 2\ EX + MO + PE + RV + SI + AC + EF + PR + MC)$	

The table below is based on the Buroz‟s Relevant Integrated Criteria

Receptor Category	Component	Receptor \ Activities	Construction: Transport of equipment/ machinery- truck driving M	I	Temporary storage/unloading of equipment and materials M	I	Site preparation: Area delineation & Fencing M	I	Working in outdoor environment M	I	Excavation: intermediate pressure network M	I	Pipe laying (PE100) M	I	Welding PE100 M	I	Backfilling M	I	Excavation: low pressure PE80 connections M	I	Pipe laying: low pressure connections M	I	welding PE80 M	I	Backfilling M	I	Household installation-carbon steel pipe threading M	I	Household installations and working at heights M	I	Appliance conversion M	I	Leakage testing: pneumatic M	I	Waste Generation M	I	Operation: Gas network processing M	I	Assessment: Construction Magnitude	Construction Importance	Operation Magnitude	Operation Importance
PHYSICAL	Soil	Soil Degradation					-3	2			-2	2							-2	2																	-7	6	0	0
		Soil Pollution			-2	1	-1	1							-1	1							-1	1									-5	5	-10	1	-10	9	-10	1
		Landscape			-2	2	-3	5			-2	5					3	5	-2	5					3	5											-3	27	0	0
	Air	Emission of Gases	-2	2			-2	2			-3	2	-1	2	-4	4			-3	1	-1	2	-4	4			-2	2							-2	3			-24	24	0	0
		Emission of dust	-4	3			-4	3			-6	6	-1	2			-6	4	-6	6	-1	2			-6	4									-3	3			-37	33	0	0
	Water	Surface water pollution																																	-3	3			-3	3	0	0
	Noise	Background noise level	-2	2	-2	3	-4	1			-6	6	-4	4	-2	4	-4	2	-6	3	-4	4	-2	4	-4	2	-4	4			-1	1							-45	40	0	0
BIOLOGICAL	Flora	Trees and plants	-1	1			-2	1											-2	1															-2	2			-5	4	0	0
	Fauna	Dogs, Cats, Pigeons	-1	1	-1	2	-2	1			-2	3	-2	1			-2	1	-2	3	-2	1			-2	1									2	2			-14	16	0	0
SOCIO-ECONOMIC		OHS Workers	-2	2	-3	4	-2	1	-6	6	-5	4	-6	2	-7	2	-4	4	-5	4	-6	2	-7	2	-4	4	-8	8	-8	8	-3	2	-8	4	-2	1			-86	52	0	0
		Infrastructure and underground utilities									-5	4							-3	4																	-2	2	-8	8	-2	2
		Traffic	-3	2			-2	1			-6	2					-3	1	-6	1					-3	1													-23	8	0	0
		Community Health , Safety & Security	-2	2	-1	1	-1	2			-5	5	-2	2	-2	3	-4	2	-5	5	-2	2	-2	3	-4	2	-1	1	-6	4	-1	2	-4	2	-5	2	-4	2	-47	36	-4	2
Total			-17	15	-11	13	-26	20	-6	6	-42	39	-16	13	-16	14	-20	19	-40	34	-16	13	-16	14	-20	19	-15	15	-14	12	-5	5	-12	6	-20	21	-16	5	-312	266	-16	5
Average			-2	2	-2	2	-2	2	-6	6	-4	4	-3	2	-3	3	-3	3	-4	3	-3	2	-3	3	-3	3	-4	4	-7	6	-2	2	-6	3	-3	3	-5	2	-24	20	-1	0

	Construction: Transport of equipment/ machinery- truck driving	Temporary storage/unloading of equipment and materials	Site preparation: Area delineation & Fencing	Working in outdoor environment	Excavation: intermediate pressure network	Pipe laying (PE100)	Welding PE100	Backfilling	Excavation: low pressure PE80 connections	Pipe laying: low pressure connections	welding PE80	Backfilling	Household installation-carbon steel pipe threading	Household installations and working at heights	Appliance conversion	Leakage testing: pneumatic	Waste Generation	Operation and maintenance: Gas network processing
Receptor \ Activities																		
Type of impact																	-	
Intensity (IN)/12	3	3	3	7	9	7	6	5	9	7	6	5	5	7	5	6	6	7
Extension (EX)/8	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	4	1	4
Momentum (MO)/4	3	4	3	0	4	0	0	0	4	0	0	0	0	0	0	0	4	4
Persistence (PE)/5	1	3	2	1	4	4	4	1	4	4	4	1	2	1	1	1	4	1
Reversibility (RV)/4	1	1	1	1	4	4	4	1	4	4	4	1	1	1	1	1	1	1
Sinergy (SI)/4	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	4	2
Acumulation (AC)/4	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	4	1
Effect (EF)/4	1	1	1	4	4	4	4	4	4	4	4	4	1	1	1	4	4	3
Frequency (PR)/4	4	1	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	1
Recoverability (MC)/8	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1
Importance of impact (I)	**26**	**26**	**27**	**39**	**52**	**42**	**39**	**30**	**52**	**42**	**39**	**30**	**28**	**33**	**27**	**39**	**47**	**43**
Sub-Average (I)	**36.4**																	**43.0**
Total-Average (I)	**39.7**																	

None/ irrelevant	0	25
Minor Severity	26	50
Medium Severity	51	75
Major Severity	76	300



Annex 5: HSE Documentation

	إجـــراء شكاوى البيئة والسلامة والصحة المهنية كود : P32	رقم الإصدار / التعديل : ٠/١ تاريخ الإصدار: ١ / ١٠ / ٢٠١٠ تاريخ التعديل : ... / ... / ... عدد الصفحات: 5

Egypt Gas

إجـــراء
شكاوى البيئة والسلامة والصحة المهنية

كـــود: P32

إعداد	مراجعة	إعتماد
الاسم : م / عبد المحسن رأفت الوظيفة :رئيس قسم السلامة التوقيع :	الاسم : م/ هشام يحيى الأمين الوظيفة : مدير عام التوقيع :	الاسم : م / هشام الصفتى الوظيفة : ممثل الإدارة التوقيع :
نسخة رقم ( )		

شركة غاز مصر	إجـــــراء شكاوى البيئة والسلامة والصحة المهنية كـود : P32	رقم الإصدار / التعديل : ١/٠ تاريخ الإصدار: ١ / ١٠ / ٢٠١٠ تاريخ التعديل: ... / ... / ... صفحة رقم : ٢

١- الغرض:

متابعة الشكاوى البيئية والسلامة والصحة المهنية الواردة من الجهات المعنية بالبيئة والتأكد من اتخاذ الإجراءات التصحيحية والوقائية لإزالة أسباب هذه الشكاوى.

٢- المجال :

شكاوى البيئة والسلامة والصحة المهنية.

٣- المسئولية:

٣-١ قطاع السلامة
٣-٢ مديرو المناطق .

٤- التعريفات : لا يوجد

٥- النماذج المستخدمة:

٥-١ شكوى بيئية / سلامة وصحة مهنية نموذج رقم (F32-1)
٥-٢ سجل شكاوى البيئة / سلامة وصحة مهنية نموذج رقم (F32-2)

٦- الإجراءات :

٦-١ استقبال الشكوى :

٦-١-١ يتم استقبال الشكاوى البيئية الناتجة عن نشاط الشركة من الجهات المعنية بالبيئة سواء الجهات الحكومية أو الأهلية أو المقدمة من العاملين بالشركة وذلك عن طريق قنوات الاتصال المعلنة (تليفون-فاكس) أو بإرسال خطاب أو الحضور إلى مقر الشركة أو أحد فروعها.

٦-١-٢ يقوم متلقى الشكوى بإبلاغ مدير المنطقة التابع لها ويقوم مدير المنطقة بإخطار مدير قطاع السلامة بالشكوى فورا" .

٦-١-٣ يقوم قطاع السلامة بتسجيل بيانات الشكوى فى نموذج شكوى بيئية / سلامة وصحة مـهنية-F32) 1)

٦-٢ دراسة وتحليل الشكوى:

٦-٢-١ يقوم مدير قطاع السلامة بالإجتماع مع مدير الإدارة المختص بالنشاط الناتج عن الشكوى لعمل معاينة فنية لتقييم الأخطار وتحليل الشكوى وذلك للتأكد من صحة الشكوى ومعرفة أسبابها.

٦-٢-٢ بناء على نتائج دراسة الشكوى يتم الآتي.

- يتم حفظ الشكوى إذا ثبت عدم جديتها أو زالت أسبابها
- اقتراح الإجراءات التصحيحية اللازمة لإزالة أسباب الشكوى وتحديد التاريخ المخطط للتنفيذ وكذلك المسئول عن التنفيذ ويتم تسجيل ذلك فى نموذج رقم F32-1 .

٦-٣ تطبيق الإجراءات التصحيحية والمتابعة

٦-٣-١ يقوم مدير الإدارة المختصة بتطبيق الإجراءات المقترحة لإزالة أسباب الشكوى ويتم إخطار قطاع السلامة فور انتهاء تنفيذ الإجراءات.

٦-٣-٢ يكون قطاع السلامة مسئول عن متابعة تنفيذ الإجراءات التصحيحية وتقييم فاعليتها

٦-٣-٣ يقوم مدير قطـاع السلامة بتسجيل ملخصا للشكوى وما تم من إجراءات فى سجل متابعة شكاوى البيئية والسلامة والصحة المهنية (F32-2)

٦-٣-٤ بعد التأكد من إزالة أسباب الشكوى ، يتم حفظ الشكوى فى ملف متابعة الشكاوى البيئية والسلامة والصحة المهنية مع إخطار الشاكى إن لزم.

٦-٤ يتم الاحتفاظ بتسجيلات الشكاوى البيئية لمدة ثلاثة سنوات طبقاً لإجراء ضبط التسجيلات .

٧- الوثائق المرجعية:

- المواصفات القياسية ISO-14001 & OHSAS-18001.

٨- التعديلات :

رقم	التاريخ	الصفحات	التعديل	التوقيع

شركة غاز مصر	إجـــــراء شكاوى البيئة والسلامة والصحة المهنية كـود : P32	رقم الإصدار / التعديل : ٠/١ تاريخ الإصدار: ١ / ١٠ / ٢٠١٠ تاريخ التعديل: ... / ... / ... صفحة رقم : ٤

شركة غـازمصـر إدارة السالمة والصحة المهنية والبيئة

شكوى بيئية / سلامة وصحة مهنية

رقم: التاريخ: / / وسيلة الإبلاغ.

(أ) بيانات الشاكى:

١- اسم الشاكى.

٢- العنوان. التليفون:

٣- نوع الشكوى: بيئة ☐ سلامة وصحة مهنية ☐

٤- ملخص الشكوى:

. . . . . .

. . . . . .

. . . . . .

٥- اسم (متلقى الشكوى): الوظيفة: التوقيع:

(ب) **تحليل الشكوى وأسبابها :**

. . . . . .

. . . . . .

. . . . . .

. . . . . .

التاريخ: / / مدير إدارة البيئة: مدير الإدارة المختصة: مدير عام إدارة البيئة.

(ت) القرار:

☐ حفظ الشكوى لعدم الجدية

☐ الإجراء التصحيحى / الوقائى

☐ .....

.....

تاريخ التطبيق : / / مدير عام الإدارة: قطاع السلامة.

(ث) إبلاغ الشاكى

☐ غير مطلوب ☐ تم ابلاغ الشاكى بتاريخ: قطاع السلامة. التاريخ :

(F32-1)

غـــاز مصـــر

إدارة السلامة و الصحة المهنية

سجل شكاوى البيئة والسالمة والصحة المهنية

م	تاريخ الشكوى	ملخص الشكوى	أسبابها	الجهة المسئولة	رقم الشكوى	تاريخ انتهاء الشكوى	توقيع

(F32-2)

مراجعة: مدير إدارة الآمن الصناعى:

اعتماد: مديرعام مساعد الأمن الصناعى و الصحة و البيئة

Egypt Gas

إجـــراء
تحديد مصادر المخاطر وألبعاد البيئية

كـــود: P29

إعداد	مراجعة	اعتماد
الاسم : م/ عبد المحسن رأفت الوظيفة : رئيس قسم السلامة التوقيع :	الاسم : م/ هشام يحيى الامين الوظيفة : مدير عـــام التوقيع :	الاسم : م/هشام الصفتي الوظيفة : : ممثل الإدارة التوقيع :
نسخة رقم ( )		

شركة غاز مصر	إجـــــــــراء **تحديد المخاطر والأبعاد البيئية** **كود : P29**	رقم الإصدار/التعديل : 0/2 تاريخ الإصدار : ٢٠١٠/١٠/١ تاريخ التعديل : .../.../.... صفحة رقم : ٢

1-الغرض :

تحديد النظام المتبع لتقييم المخاطر / التأثيرات الناجمة عن نشاطات الشركة بالنسبة للبيئة والسالمة والصحة المهنية

2-المجال:

جميع أعمال وخدمات ونشاطات الشركة

3- المسئوليات:

-إدارة السالمة والصحة المهنية والبيئة
-مديرو اإلدارات

4- التعريفات:

4-1مصادر المخاطر : هى عنصر فى نشاط أو منتج أو خدمة يمثل أو قد يحتمل أن يمثل خطرا على السالمة والصحة المهنية أو على البيئة أى أنها تعنىAspects) Or (Hazards

4-2 تقييم المخاطر : هى دراسة لكل عملية لتحديد المخاطر الناجمة عن هذه العملية سواء على البيئة أو سالمة ألفراد أو المعدات أو المنشآت

5- ٤-١النماذج المستخدمة:

٤-٢ تسجيل تقييم مخاطر نموذج رقم .
قائمة حصر أعمال نموذج رقم (F29-1).
(F29-2)

6-الخطوات:

٦-١ حصر الأعمال (النمطية) :

٦-١-١ تقوم الإدارات المختلفة بحصر الأنشطة والخدمات والأعمال التى تقوم بها أو تشرف عليها (أعمال المقاولين) على نموذج "قائمة حصر أعمال نمطية" ثم تقوم بإخطار قطاع السلامة والصحة المهنية والبيئة بيان الأعمال التى تقوم بها (F29-1)

٦-٢ تحديد مصادر المخاطر :

٦-٢-١ بناءا" على خطوات تنفيذ الأعمال والزيارات الميدانية لمواقع العمل ، يقوم قطاع السلامة والصحة المهنية والبيئة بمراجعة ودراسة النشاطات والأعمال لتحديد مصادر الخطر (Hazards/Aspects) لكل خطوة سواء على البيئة (التأثيرات البيئية) أو العاملين أو المعدات أو المنشآت على نموذج "تقييم مخاطر" . (F29-2)

(Hazards/Aspects)

٦-٢-٢ يقوم قطاع السلامة والصحة المهنية والبيئة بتحديد المخاطر على السلامة والصحة المهنية (Risks) أو على البيئة (Impacts) لكل مصدر خطر(Hazard/Aspect)

٦-٢-٣ يقوم قطاع السلامة والصحة المهنية والبيئة بتحديد نطاق التأثير / الخطر سواء على البيئة أو على العاملين والممتلكات

٦-٣ تقييم الأخطار/ الآثار المحتملة (Risk/impact)

٦-٣-١ يقوم قطاع السلامة والصحة المهنية والبيئة بتقييم المخاطر/ الآثار البيئية لنشاطات الشركة طبقا للآتي :

الدرجة الكلية = أ × ب

حيث أن :

أ : درجة احتمال حدوث الخطر

= ٠ احتمال عالى أو كيد

= ١ احتمال متوسط

= ٢ احتمال ضعيف أو نادر حدوثه

ب : درجة شدة الضرر

= ٠ ضرر جسيم أو مميت أو يخالف القانون أو موضع شكوى من الجهات الرسمية قد يؤثر على عدد كبير أو المنطقة المحيطة كلها .

= ١ ضرر محسوس يمكن علاجه أو موضع شكوى متكررة من المواطنين أو العاملين قد يؤثر على منطقة العمل والعاملين بها .

= ٢ ضرر طفيف قد يؤثر على القائم بالعمل أو نطاق عمله فقط .

٦-٤ تصنيف مصادر المخاطر

٦-٤-١ بناء على الدرجة الكلية ، ينم تصنيف المخاطر/ والآثار البيئية المحتملة الى :

أ – **غير مسموح** : إذا كانت الدرجة الكلية = ٠ – (خطر/ أثر لا يسمح بحدوثه ولا يسمح بالعمل أو استمراره حتى يتم تخفيض الخطر/الأثر)

ب – **عالى الأهمية** : إذا كانت الدرجة الكلية = ١ (خطر/ أثر يسمح بحدوثه ويسمح بالعمل أو استمراره مع توافر ضوابط مناسبة مع وضع هدف قصير الأجل لتحسينه)

جـ – **متوسط الأهمية** : إذا كانت الدرجة الكلية = ٢ (خطر أو أثر يؤخذ فى الاعتبار عند اختيار الأهداف طويلة الأجل)

د – **قليل / عديم الأهمية** : إذا كانت الدرجة الكلية = ٤ يسمح به في ظل وسائل الأمان المتاحة

٦-٥ تحديد الاحتياجات

٦-٥-١ يقوم قطاع السلامة والصحة المهنية والبيئة بتحديد احتياجات السلامة والبيئة

- تدريب وتأهيل .
- تعليمات السلامة للأعمال .
- أدوات وقاية
- إجراء قياسات

٦-٦ تحديث سجلات تقييم المخاطر

٦-٦-١ يتم تحديث سجلات تقييم المخاطر فى الحالات التالية :

- نشاط جديد .
- تحديث العمليات .
- وقوع حادثة مؤثرة / حالة طارئة .
- تقديم شكوى من الجهات الرسمية .

٦-٧: تقييم المخاطر للمشروعات الجديدة (الغير نمطية)

٦-٧-١ عند الموافقة واعتماد المشروع/التطوير في إحدى المناطق، يقوم مدير المنطقة بإخطار إدارة البيئة والسلامة والصحة المهنية كتابيا بملخص عام عن المشروع/التطوير مع توضيح خطوات العمل بالمشروع تفصيلا .

٦-٧-٢ تقوم إدارة البيئة والسلامة والصحة المهنية بالتعاون مع المنطقة المسئولة بدراسة مراحل تنفيذ المشروع في جميع المراحل.

٦-٧-٣ تقوم إدارة البيئة والسلامة والصحة المهنية بحصر لجميع المخاطر المرتبطة بمراحل المشروع ويتم إخطار المنطقة المسئولة بصورة منها.

٦-٧-٤ تقوم إدارة البيئة والسلامة والصحة المهنية بتقييم المخاطر المرتبطة بجميع مراحل المشروع.

٧- الوثائق المرجعية:

- المواصفات القياسية ISO-14001 & OHSAS-18001.

٨- التعديلات :

رقم	التاريخ	الصفحات	التعديل	التوقيع

حصر الأعمال النمطية

إدارة: الموقع:

م	النشاط	المستخدمة المعدات	التكرار	الفترة الزمنية

إعداد **مراجعة**

(F29-1)

تسجيل تقييم المخاطر

احتمال الوقوع) أ(	الدرجة
احتمال عالي) أكيد(	0
احتمال متوسط	0
احتمال ضعيف) نادر(	2

الضرر) ب(				الدرجة
أفراد	تكلفة	الجمهور	بيئة	
ضرر شديد) مميت(	تكلفة اكبر من 0000000 جنيه	اهتمام دولي و عالمي	على المنطقة) عدد كبير(	0
ضرر متوسط) إصابة عمل(	تكلفة من 00000 إلى 0000000 جنيه	اهتمام متوسط – على مستوى الصناعة	على مكان العمل	1
ضرر طفيف	تكلفة اقل من 00000 جنيه	اهتمام شخصي فقط	على القائم بالعمل) أو في حدود نطاق عمله فقط(	2

الدرجة الكلية) أ x ب (	الإجراءات	الأولوية
0	إيقاف العمل حتى أخذ الإحتياطات لتقليل مستوى الخطر	أولى
0	أخذ إجراء مربع لتقليل مستوى الخطر) هدف قصير الأجل(	ثانية
2	بذل بعض الجهد لتحسينها) هدف طويل الأجل(	ثالثة
4	لا يلزم أخذ احتياطات إضافية	رابعة

م	النشاط	مصادر المخاطر	الخطر / التأثير		التقييم		الكلية الدرجة	المتاحة الإحتياطات	تقييم الخطر المتبقي		للخطر المتبقي الدرجة الكلية	الأولوية	الإجراءات الإضافية
			صحة وسلامة	بيئة	احتمال	الضرر			احتمال	الضرر			

F (29 – 2)

Egypt Gas

إجـــراء
الأغراض و الأهداف و البرامج
لتحسين البيئة والسلامة والصحة المهنية

كـــود :P28

إعداد	مراجعة	اعتماد
الاسم : م / عبد المحسن رأفت الوظيفة :رئيس قسم السلامة التوقيع :	الاسم : م/ هشام يحيى الأمين الوظيفة : مدير عام التوقيع :	الاسم : م / هشام الصفتى الوظيفة : ممثل الإدارة التوقيع :
نسخة رقم ( )		

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إجـــراء
قياسات البيئة والسلامة والصحة المهنية

كـــود: P30

إعداد	مراجعة	اعتماد
الاسم : م / عبد المحسن رأفت الوظيفة : رئيس قسم السلامة التوقيع :	الاسم : م/ هشام يحيى الأمين الوظيفة : مدير عام التوقيع :	الاسم : م / هشام الصفتي الوظيفة : ممثل الإدارة التوقيع :
نسخة رقم ( )		

إدارة المخلفات

==========

١- الغرض:-

- وضع نظـــام لتجمـــيع وتصـــنيف المخـــلفات وطرق التـــخلص منـــها .

٢- المجال :-

- جميع المخلفات الناتجة عن الأعمال بجميع أنشطة الشركة .

٣- المسئولية :-

- مسئولية المدير المختص التابع له كل موقع عمل .

٤- النماذج :-

- يتم تسجيل خروج سيارات المخلفات عن طريق فرد الأمن الميداني بمنطقة الخروج وكذلك بمخازن أبي رواش .

٥- تعريفات :-

٥-١- المخلفات الخطرة :- وهي جميع أنواع المخلفات التي تؤثر على ســلامة موقــع العمــل أو البيئــة المحيطة مثل الزيوت المستخدمة – عبوات البويات و الثنر الفارغة – بقايا الكيروسين – البطاريـــات – عبـــوات أحبـــار الطباعة .... الخ .

٥- ٢- المخلفات السائلة :-

وتشمل سائل التبريد الخاص بماكينات القلاووظ والمخارط – براميل مادة الرائحة ..... الخ .

٥- ٣- المخلفات الصلبة :-

وتشمل الخردة – الخشب – الورق – بقايا الصاج – بقايا المواسير – الإطارات المستعملة – بقايا أعمال الحفر الأعمـــال المدنية – المواد العضوية .....الخ .

٦- الخطوات :-

أ- المخلفات الخطرة :-

- يتم تجميع المخلفات الخطرة في مكان مخصص لذلك من قبل المسئول لحين التخلص منها طبقاً للآتي :-

* **الزيوت المستهلكة:-** يتم إرسالها لمخزن أبي رواش للتخلص منها بالبيع .

* **البطاريات :-** يتم إرسالها لمخزن أبي رواش للتخلص منها بالبيع .

* **عبوات البويات والثنر والكيروسين الفارغة :-** يتم إعادة إستخدامها فى تعبئة بقايا الرايش و الصاج و التي يتم بيعها بالمزاد العلنى مع أخذ التعهدات اللازمة .

* **بقايا الكيروسين :-** يتم إعادة استخدامها في أعمال غسيل المواسير .

* **عبوات أحبار الطباعة :-** يتم التخلص منها بمدفن الناصرية للمخلفات الخطرة.

- يتم وضع الملصقات التحذيرية على اماكن تخزين المواد الخطرة لتوضيح خطورتها و كيفية التعامل معها (مرفق الملصقات).
- يجب إرتداء مهمات الوقاية عند التعامل مع المخلفات الخطرة

ب- المخلفات السائلة :- يتم تجميعها في أوعية مناسبة ومميزة يتم إرسالها إلي مخازن أبي رواش تمهيداً للتخلص منها بالبيع .

- براميل الرائحة : يتم معالجتها كيميائيا و تخزينها بمخازن ابى رواش و التخلص منها عن طريق شركة يونيكو للخدمات البترولية.

ج- المخلفات الصلبة:-

- مخلفات بقايا المواسير والخردة والأخشاب والكاوتش والبراميل الفارغة والصاج ويتم إرسالها لمخازن أبي رواش وتصنف ويتم التخلص منها بالبيع .
- مخلفات الاستخدام الآدمي والأعمال المكتبية والمباني الإدارية يتم تجميعها بمعرفة الشركة المختصة بالنظافة ويتم التخلص منها عن طريق الجهات الحكومية .

مهمات الوقاية اللازمة للتعامل مع المخلفات الخطرة

إرتدى مهمات وقاية العين

إرتدى أحذية السلامة

إرتدى مهمات وقاية اليد

تعليمات السلامة فى حالة انسكاب الزيوت

- يتم وضع رمال لعدم انتشار الزيوت.
- يتم تجميع هذه الرمال في أكياس.
- يتم كتابة مخلفات خطر على الأكياس.
- يتم التخلص من هذه الأكياس مع المخلفات الخاصة بكل موقع.

تعليمات السلامة للتخزين

- على مسئول الأمن الصناعي التأكد من وجود العدد الكافي من أجهزة و معدات الإطفاء.
- ممنوع التدخين بتاتا داخل المخازن.
- يجب مراعاة نظافة أماكن التخزين و خلوها تماما من الأوراق المهملة أو الاسطبة أو الخشب.
- لا يجوز استعمال البنزين في النظافة أو في إزالة الشحومات و يسمح فقط باستعمال المنظفات السائلة غير المتطايرة.
- يجب الفصل في التخزين بين المواد القابلة للاشتعال و باقي المهمات.
- يجب الكشف دوريا على عبوات الجمدانات و البراميل لاكتشاف وجود تسرب أو ثقب.
- يراعى استخدام الطرق الصحيحة في مناولة و تحميل ورص المهمات و على المشرفين مراقبة تنفيذها.
- عند استعمال الأيدي في رفع الأحمال يجب مراعاة الوضع الصحيح الأرجل و الظهر و على العامل مراعاة الوضع الصحيح و هو ثنى الركبتين و جعل الصدر مستقيما بقدر الإمكان ثم القبض على الحمل بقوة تجعله ملتصقا بالجسم تماما ثم حمل العزم كله على عضلات الساقين و الركبتين و يجب التأكد من أن الحمل المطلوب رفعه لا يزيد عن قدرة الإنسان في الرفع و إلا فيجب مساعدة الآخرين أو استعمال آلآت الرفع.
- يجب أن يكون تحميل الأحمال الطويلة أو المواسير بواسطة شخصين و أن يكون الحمل على الكتفين في اتجاه واحد و أن يكون السير على خطوه واحدة.
- يجب استخدام مهمات الوقاية المناسبة عند القيام بأي عمل فيه تعريض لسلامة العاملين.
- يجب وضع المهمات و المعدات و قطع الغيار بطريقة منظمة و مأمونة و عدم العلو بها إلى حد التعرض للسقوط أو الانهيار.
- يراعى تخزين المهمات و المعدات الثقيلة بطريقة منظمة و تكون قريبة من الأرض.
- يراعى عدم بروز المهمات خارج أرفف التخزين.
- عند رص أو تفريغ المهمات في الأماكن المرتفعة يجب استعمال السلالم المعدة لذلك و لا يجوز التسلق على الرصات.
- ممنوع المرور أو الوقوف أسفل الونش أو الأحمال المرفوعة أثناء تفريغ و شحن المعدات الثقيلة.
- يراعى فصل التيار الكهربي داخل المخازن بعد انتهاء العمل .
- يجب الإبلاغ عن أي حالات أو ظروف العمل الغير مأمونة.
- إرتدى مهمات الوقاية .

تخزين السوائل القابلة للاشتعال

أجهزة الإضاءة :

من الأفضل عدم وجود توصيلات أو تجهيزات كهربائية داخل المخزن و أن تعتمد الإضاءة على الوسائل الطبيعية نهارا أو مصابيح كهربائية مسلطة على المبنى من الخارج بحيث يمكن أن ينفذ ضوؤها خلال فتحات مثبت عليها زجاج مقاوم للنيران.
و إذا تطلب الأمر وجود تجهيزات كهربائية فيجب أن تكون من النوع المأمون (المانع للهب Flame proof) في الأماكن التى تحوى أبخرة هذه السوائل.

التهوية :-

من الافضل أن تكون التهوية بالوسائل الطبيعية و ذلك بتجهيز المخزن بفتحات عليها سلك شبكى ذو نسيج ضيق.

منع مسببات الاشتعال: –

يجب منع التدخين أو أستخدام لهب مكشوف و غيره من المصادر الحرارية الأخرى داخل المخزن و أيضا بالمنطقة الوقعة حول المخزن من الخارج بمسافة لا تقل عن ٢٠ قدم .
يجب إتخاذ العناية عند نقل أو تداول هذه الأدوات داخل المخزن (الأدوات المعدنية).
و لتفادى خطر تجمع شحنات الكهرباء الاستاتيكى يبغى ترابط العبوات و الأنابيب بموصلات كهربائية أو توصليها بموصلات أرضي.

العبوات المحتوية للسوائل:-

يجب حماية عبوا السوائل من ضرر الصدمات الميكانيكية و يراعى حفظها قائمة في وضعها الطبيعي و الأفضل ألا يزيد ارتفاع الرصات أكثر من رصتين.
و يجب أن تكون العبوات محكمة الغلق و لا يسمح بترك عبوات مفتوحة.

وسائل الهروب عند حدوث حريق:-

يراعى أن يكون التخزين على هيئة رصات بينها ممرات كافية للمرور بحيث يسهل نقل و تداول العبوات و يجب أن تظل هذه الممرات و أيضا مواقع المخارج خالية تماما من المعوقات.
يجب ترك المخزن مفتوح طالما كانت هناك أشخاص داخل المخزن.

توصيات أخرى:-

يجب مراعاة عدم دخول المخزن لغير المختصين و يجب كتابة لافتات بخط واضح تحمل عبارات (خطر – سوائل قابلة للالتهاب – ممنوع الاقتراب – ممنوع التدخين لمسافة لا تقل عن ٢٠ قدم)

شركة غاز مصر	إجـــــــراء قياسات البيئة والسلامة والصحة المهنية كـــود : P30	رقم الإصدار / التعديل : ٠/٢ تاريخ الإصدار: ١ / ١٠ / ٢٠١٠ تاريخ التعديل: / / صفحة رقم : ٢

١- الغرض:

وضع نظام وتحديد المسئوليات لإجراء قياسات البيئة والصحة المهنية للمخاطر المتعلقة بالأبعاد البيئية للشركة و التأكد من مطابقتها مع الحدود القانونية.

٢- المجال:

جميع الأبعاد البيئية المؤثرة علي البيئة والصحة المهنية

٣- المسئولية:

٣-١ قطاع السلامة و الصحة المهنية
٣-٢ الشئون الهندسية

٤- تعريفات: لاتوجد

٥- النماذج:

٥-١ حصر قياسات البيئة والسلامة والصحة المهنية نموذج رقم (F30-1)
٥-٢ الخطة السنوية لقياسات البيئة والسلامة والصحة المهنية نموذج رقم (F30-2)
٥-٣ نموذج قياس الضوضاء نموذج رقم (F30-3)
٥-٤ نموذج قياس الإضاءة نموذج رقم (F30-4)
٥-٥ نموذج قياس العادم (المعدات التي تعمل بالديزل) نموذج رقم (F30-5)
٥-٦ نموذج قياس العادم (المعدات التي تعمل بالبنزين) نموذج رقم (F30-6)

٦- الخطوات:

أ- تحديد وتخطيط القياسات :

٦-١ يقوم أخصائي السلامة بمراجعة التسجيلات وحصر المخاطر والأبعاد البيئية لتحديد القياسات المطلوبة للبيئة والسلامة والصحة المهنية طبقا" للقوانين .

٦-٢ يقوم أخصائي السلامة بحصر للقياسات المطلوبة للبيئة والصحة المهنية على نموذج حصر قياس البيئة والسلامة والصحة المهنية (F 30-1) موضحا" به القياسات المطلوبة وأماكن القياس ومعدل القياس .

٦-٣ يقوم أخصائي السلامة بناءا" على نتائج الحصر بعمل خطة سنوية لإجراء القياسات البيئية والصحة المهنية موضحا" بها مواعيد القياس على نموذج الخطة السنوية لقياسات البيئية والصحة المهنية (F 30-2) .

ب – المطابقة القانونية للقياسات :

٦-٤ تقوم جهة القياس بتسجيل نتائج القياسات بطريقة مناسبة ، ويتم تسليمها لأخصائي السلامة

٦-٥ يقوم أخصائي السلامة بمقارنة نتائج القياسات بالحدود القانونية للتأكد من مطابقتها

جـ - القياسات الغير مطابقة :

٦-٦ عند اكتشاف عدم مطابقة القياسات للحدود القانونية يقوم أخصائي السلامة بتميز القياسات غير المطابقة ويتم التعامل معها طبقا" لإجراء الإجراءات التصحيحية والوقائية رقم (P5) , لزم الأمر يتم إخطار الجهات المسئولة إن لزم الأمر.

د ــ معايرة أجهزة القياس :

٦-٧ يقوم أخصائي السلامة بالتأكد من أن الأجهزة المستخدمة فى القياسات تم معايرتها قبل الاستخدام سواء تم القياس بواسطة الشركة أو الجهات الخارجية .

٦-٨ يتم الاحتفاظ بنتائج القياسات والتحليل وشهادات معايرة الأجهزة طبقا" لإجراء التسجيلات F30-1لمدة عشر سنوات على الأقل .

٧- **الوثائق المرجعية:**

- المواصفات القياسية ISO-14001 & OHSAS-18001.

٨- **التعديلات :**

رقم	التاريخ	الصفحات	التعديل	التوقيع

شركة غاز مصر

حصر قياسات البيئة والسلامة والصحة المهنية

التاريخ: / /

م	القياسات	المكان	معدل القياس	جهة القياس	ملاحظات

إعداد :

اعتماد :

غـــاز مصـــر إدارة السلامة و الصحة المهنية

خطة قياسات البيئة والسلامة والصحة المهنية

التاريخ : القياس :

م	المكان	يناير	فبراير	مارس	إبريل	مايو	يونيو	يوليو	أغسطس	سبتمبر	أكتوبر	نوفمبر	ديسمبر

☐ : موعد التنفيذ ☐ : تم التنفيذ

إعداد: **اعتماد:**

(F30-2)

شركة غاز مصر	إجـــــــراء قياسات البيئة والسلامة والصحة المهنية كـــــود : P30	رقم الإصدار / التعديل : ٠/٢ تاريخ الإصدار: ١ / ١٠ / ٢٠١٠ تاريخ التعديل: / / صفحة رقم : ٦

نموذج قياس الضوضاء

□□□□□□□□□□□□

المنطقة : التاريخ / / ٢٠٠

م	المكان	نتائج القياس (ديسيبل)	الحد القانوني (ديسيبل)	مدة التعرض المسموح بها	حالة المطابقة	ملاحظات

الاسم :

التوقيع :

F(30-3)

نموذج قياس الإضاءة

□□□□□□□□□□□□

المنطقة : التاريخ / / ٢٠٠

م	المكان	نتائج القياس LUX	الحد القانوني LUX	حالة المطابقة	ملاحظات

الاسم :

التوقيع :

F(30-4)

شركة غاز مصر

نموذج قياس العادم

المعدات التى تعمل بالديزل

□□□□□□□□□□□□□□□

المنطقة :..... التاريخ : / / ٢٠٠

م	نوع المعدة	رقم المعدة	المكان	نتائج القياس		الحد المقبول طبقا لمتطلبات الشركة		حالة المطابقة	ملاحظات
				Bacharach	Opacity (درجة اعتام)	Bacharach	Opacity (درجة اعتام)		
						٨	٢٥,٦		
						٨	٢٥,٦		
						٨	٢٥,٦		
						٨	٢٥,٦		
						٨	٢٥,٦		
						٨	٢٥,٦		
						٨	٢٥,٦		
						٨	٢٥,٦		
						٨	٢٥,٦		

* الحد القانوني طبقا لقانون البيئة رقم ٤ لسنة ١٩٩٤م و لائحته التنفيذية الصادرة بقرار رئيس مجلس الوزراء رقم ٣٣٨ لسنة ١٩٩٤م و المعدلة بالقرار رقم ١٧٤١ لسنة ٢٠٠٥م هو ٣٠% درجة اعتام .

* للتحويل من Bacharach إلى opacity (درجة الإعتام) :

١ Bacharach = ٣,٣ % درجة إعتام opacity

نظراً لأن أعلى قياس متاح للجهاز المستخدم (٩ Bacharach) فإنه تم إعتبار القياس رقم (٨) هو الحد الأعلى للقياس المقبول

الاسم /

التوقيع /

شركة غاز مصر

نموذج قياس العادم

المعدات التى تعمل بالبنزين

المنطقة :.................. التاريخ : / / ٢٠٠

م	نوع المعدة	رقم المعدة	سنة الصنع	المكان	نتائج القياس غاز CO	الحد القانوني (% بالحجم) يتم القياس عند السرعة الخاملة (٦٠٠-٩٠٠ لفة/دقيقة)		حالة المطابقة	نتائج قياس الهيدروكربونات	الحد القانونى (جزء في المليون PPM) يتم القياس عند السرعة الخاملة (٦٠٠-٩٠٠ لفة/دقيقة)		حالة المطابقة	ملاحظات
						المعدات المصنعة قبل عام ٢٠٠٣	المعدات المصنعة بدءا من عام ٢٠٠٣			المعدات المصنعة قبل عام ٢٠٠٣	المعدات المصنعة بدءا من عام ٢٠٠٣		
						%٤،٥	%٢،٥			٩٠٠	٦٠٠		
						%٤،٥	%٢،٥			٩٠٠	٦٠٠		
						%٤،٥	%٢،٥			٩٠٠	٦٠٠		
						%٤،٥	%٢،٥			٩٠٠	٦٠٠		
						%٤،٥	%٢،٥			٩٠٠	٦٠٠		
						%٤،٥	%٢،٥			٩٠٠	٦٠٠		
						%٤،٥	%٢،٥			٩٠٠	٦٠٠		
						%٤،٥	%٢،٥			٩٠٠	٦٠٠		
						%٤،٥	%٢،٥			٩٠٠	٦٠٠		
						%٤،٥	%٢،٥			٩٠٠	٦٠٠		
						%٤،٥	%٢،٥			٩٠٠	٦٠٠		
						%٤،٥	%٢،٥			٩٠٠	٦٠٠		
						%٤،٥	%٢،٥			٩٠٠	٦٠٠		

القائم بالقياس :

الاسم /

التوقيع /

F(30-6)

١- الغرض :

تحديد الأغراض و الاهداف البيئية والسلامة والصحة المهنية للشركة ووضع برنامج تنفيذى لها و ذلك بغرض التحسين المستمر للاداء البيئى والسلامة والصحة المهنية .

٢- المجال:

جميع النشاطات و العمليات بالشركة التى يمكن ان تؤثر على البيئة والسلامة والصحة المهنية

٣- المسئوليات :

٣-١ قطاع السلامة .
٣-٢ مديرى العموم ومديرى المناطق .
٤ – تعريفات : لايوجـــد .

٥- النماذج المستخدمة :

٥-١ حصر أهداف البيئة والسلامة والصحة المهنية (F28–1)
٥-٢ برنامج أدارى بيئى / سلامة وصحة مهنية (F28-2)

٦- ألخطوات :

٦-١ اقتراح الأهداف :

٦-١-١ يتم تحديد أهداف أغراض الشركة لتحسين الأداء فى مجال البيئة والسلامة والصحة المهنية بإتباع إحدى الطرق التالية :-

تحليل بيانات
تحليل شكاوى
تحليل إصابات
اقتراحات العاملين

٦-١-٢ يقوم قطاع السلامة بحصر الأهداف المقترحة على نموذج حصر أهداف البيئة والسلامة والصحة المهنية (F28–1) حيث يوضح الهدف والغرض وتقييم الأولويات.

٦-٢ تقييم الأولويات للأهداف:

٦-٢-١ يقوم قطاع السلامة بتقييم أولويات الأهداف كالتالى :-

درجة أولوية الهدف = أ × ب × جـ × د × هـ

حيث أن :

أ : درجة للخطورة .
= ٠ خطورة عالية .
= ١ خطورة متوسطة .
= ٢ قليل الخطورة .

ب : درجة للمتطلبات القانون
= ٠ مخالفة القانون .
= ١ مطابق للقانون ومخالف لمتطلبات الشركة .
= ٢ مطابق للقانون ومطابق لمتطلبات الشركة .

جـ : درجة الأهمية البعد البيئي
= ١ عالى الأهمية
= ٢ متوسط الأهمية
= ٣ قليل الأهمية

د : درجة للعائد المالى
= ١ عائد مادى مرتفع [يغطى التكلفة خلال سنة]
= ٢ عائد مادى متوسط [يغطى التكلفة خلال ٣ سنوات]
= ٣ عائد مادى منخفض [يغطى التكلفة خلال ٥ سنوات]

هـ : درجة اهتمام الجهات المعنية
= ١ اهتمام حكومى
= ٢ اهتمام جماهيرى
= ٣ اهتمام الشركة

٦-٢-٢ تقسم الأهداف ألى :

أولوية أولى . إذا حصل على درجة صفر ، ١ درجة .
أولوية ثانية . إذا كانت الدرجة محصورة بين ٢ – ٨ درجة .
أولوية ثالثة : إذا كـــانت الدرجـة أكثر من ٨ درجة

٦-٢-٣ يقوم قطاع السلامة بتسجيل درجات التقييم فى نموذج (F28-1)

٦-٣ اعتماد الأهداف :

٦-٣-١ يتم عرض الأهداف المقترحة وتقييمها على الإدارة العليا لمناقشة وإعتماد الأهداف التى تنفذ فى حدود الميزانية المتاحة .

٦-٣-٢ إذا كانت الميزانية المتاحة تغطى نفقات جميع الأهداف المقترحة لا يتم تقييم درجة الأولوية ويتم عرض الأهداف مباشرة على الإدارة العليا للمناقشة والاعتماد

٦-٤ إعداد البرامج الإدارية البيئية والصحية :

٦-٤-١ يقوم قطاع السلامة بالتعاون مع الإدارة المسئولة بإعداد برنامج تنفيذى للأهداف المعتمد من قبل الإدارة العليا وذلك على نموذج (F28-2) "برنامج أدارى" .

٦-٤-٢ يوضح البرنامج الإداري الخطوات التنفيذية للهدف ، الفترة المقدرة لكل خطوة ، والمسئول عنها وما يلزم من وسائل أو موارد

٦-٥ متابعة البرامج الإدارية:

٦-٥-١ يقوم قطاع السلامة بمتابعة تنفيذ البرامج الإدارية للسلامة والصحة والبيئة ويتم عرض ما تم من إنجازات فى إجتماعات الإدارة العليا للبيئة والسلامة .

٦-٥-٢ يتم تعديل البرامج الإدارية للأخذ فى الاعتبار التغيير فى العمليات أو الخدمات أو ظروف التشغيل

٦-٦ قطاع السلامة مسئول عن حفظ تسجيلات الأهداف والبرامج (النماذج) لمدة عامين بعد تنفيذ الهدف .

٧- الوثائق المرجعية:

- المواصفات القياسية ISO-14001 & OHSAS-18001.

٨- التعديلات :

رقم	التاريخ	الصفحات	التعديل	التوقيع

غـــاز مصـــر
نموذج برنامج أدارى
للبيئة والسلامة والصحة المهنية

الغرض:

الهدف:

م	الخطوة	المسئول	الفترة		المطلوبة الموارد	ملاحظات
			من	الى		

(F28-2)

تاريخ الإعداد **إعداد** **اعتماد**

غـــاز مصـــر

نموذج متابعة لتنفيذ

البرنامج الإدارى للبيئة والسلامة والصحة المهنية

الموضوع:

م	الخطـــــوة	تاريخ التنفيذ	التوقيع	ملاحظات

(F28-3)

تاريخ الإعداد **إعداد** **اعتماد**

غـــاز مصـــر

حصر أهداف البيئة والسلامة والصحة المهنية

عام

م	الإدارة	الغرض	الهدف	التكلفة	التقييم						أولوية	ملاحظات
						أ				جـ		
						ب				د		
										هـ		

(F28-1)

تاريخ الإعداد **إعداد** **اعتماد**

Annex 6: Emergency Response Plan

Egypt Gas

إجـــراء
الطوارئ
كـــود :P31

إعداد	مراجعة	إعتماد
الاسم : م / عبد المحسن رأفت الوظيفة :رئيس قسم السلامة التوقيع :	الاسم : م/ هشام يحيى الأمين الوظيفة : مدير عام التوقيع :	الاسم : م / هشام الصفتى الوظيفة : ممثل الإدارة التوقيع :
نسخة رقم ( )		

شركة غاز مصر	إجـــــــــــــراء الطوارئ كـــود : P31	رقم الإصدار / التعديل : 0/2 تاريخ الإصدار: ١ / ١٠ / ٢٠١٠ تاريخ التعديل: ... / ... / ... صفحة رقم : 2

١- الغرض:

توضيح الاستعدادات لحالات الطوارئ و الخطوات المتبعة لمواجهتها بهدف تقليل المخاطر والتأثير البيئى الناتج عنها.

٢- المجال:

حالات الطوارئ

٣- المسئولية:

٣-١ قطاع السلامة و الصحة المهنية
٣-٢ العاملين بالشركة

٤- تعريفات

٤-١ **الحدث الطارئ** : هو أى تغيير يحدث بصورة مفاجئة فى بيئة العمل و يكون له آثار سلبية على العاملين وعلى البيئة والممتلكات .

٤-٢ **خطة الطوارئ**. هي تصميم محكم مركب من عناصر زمنية و مكانية و بشرية للحفاظ على العاملين و المعدات و المنشاة والبيئة بأكبر قدر من الكفاءة وفى اقصر وقت وبأقل خسائر ممكنة بناءا" على مجموعة من ردود الفعل المدروسة للأخطار الطارئة المحتمل حدوثها بنسب متفاوتة أثناء العمل .

٥- النماذج:

٤-١ تقرير عن حادث/إصابة/طوارئ	نموذج رقم (F31-1)
٤-٢ سجل حالات الطوارئ	نموذج رقم (F31-2)

٦- الخطوات:

٦-١ تحديد حالات الطوارئ :

٦-١-١ يقوم أخصائي الأمن الصناعى بتحديد حالات الطوارئ المحتملة لمواقع الشركة المختلفة بناء على فحص اسلوب العمل المتبع بالموقع و خصائص المواد المتداولة و الخامات و المعدات الموجودة بالموقع وحصر الأبعاد البيئية والمخاطر.

٦-٢ الاستعداد لحالات الطوارئ

٦-٢-١ يقوم أخصائي الأمن الصناعى بتحديد الاستعدادات اللازم توافرها لمواجهة حالات الطوارئ المحتملة بما يتوافق مع اسس السلامة و الصحة المهنية.

٦-٢-٢ يقوم أخصائي الأمن الصناعى بتحرير إشعار احتياج لتوفير متطلبات الموقع من أجهزة الأمن الصناعى و إعداد رسم كروكى لكل موقع موضح عليه توزيع هذه الاجهزة.

٦-٢-٣ تقوم الشئون الهندسية بتركيب أجهزة الإطفاء فى الأماكن المخصصة لها طبقا للرسم الكروكى

٦-٢-٤ يقوم أخصائي الأمن الصناعى بتدريب العاملين بالموقع على أعمال الأمن الصناعى فى إدارات الدفاع المدنى و الاطفاء التابع لها الموقع.

٦-٣ إعداد خطط الطوارئ

٦-٣-١ يقوم أخصائي الأمن الصناعى بوضع خطط لمواجهة حالات الطوارئ موضح بها المسئوليات و المهام للعاملين بالموقع و سبل الاتصال بالمسئولين بالشركة و كذا الجهات المساعدة الخارجية مثل إدارة الدفاع المدنى – الإسعاف الخ...

٦-٣-٢ يقوم أخصائي الأمن الصناعى بمراجعة خطة الطوارئ بالمواقع المختلفة بصفة دورية على الأقل مرة كل سنة و ذلك للتعديل بالإضافة أو الحذف.

٦-٤ اختبار خطط الطوارئ عمليا

٦-٤-١ يقوم أخصائي الأمن الصناعى بعمل اختبار عملى للعاملين بالموقع على خطة الطوارئ بصفة دورية ثم عمل تقييم لكفاءة الافراد اثناء مواجهة حالة الطوارئ.

٦-٥ مواجهة حالات الطوارئ

٦-٥-١ عند حدوث حالة طارئة يتم تفعيل خطة الطوارئ طبقا" للمسئوليات والمهام المحددة بالخطة .

٦-٥-٢ يقوم أخصائي الأمن الصناعى بكتابة تقرير مفصل عن حالة الطوارئ فى نموذج تقرير عن حادث/إصابة/طوارئ رقم (F31-1) و تقييم لكفاءة الأدوات و المعدات و الأفراد أثناء مواجهة حالة الطوارئ و تحديد اوجه القصور و التميز فى خطة الطوارئ و الاقتراحات لمنع حدوث حالات مماثلة.

٦-٥-٣ يتم عرض و مراجعة تقرير حالات الطوارئ فى الاجتماعات الدورية للأمن الصناعى كما يتم عرضها و مناقشتها فى اجتماعات الإدارة العليا .

٦-٥-٤ يقوم أخصائي الأمن الصناعى بتسجيل ملخص لبيانات حالة الطوارئ فى سجل حالات الطوارئ (F31-2)

٧- الوثائق المرجعية:

- المواصفات القياسية ISO-14001 & OHSAS-18001.

٨- التعديلات :

رقم	التاريخ	الصفحات	التعديل	التوقيع

شركة غـاز مصـر — قطاع السلامة والصحة المهنية والبيئة

تقرير عن وقوع حادث/إصابة / طارئ

١- تاريخ الحادث : وقت وقوع الحادث: نوع الحادث:
عنوان الحادث :

٢- المصابون:

اسم المصاب	رقم الأداء	السن	الجهة التابع لها	الوظيفة	مدة الخبرة	مدة العمل بالشركة

٣- بيان و تقدير المعدات/مواد تالفة : ----------
٤- نوع الإصابة : ---------- العضو المصاب : ----------
٥- وصف الحادث : ----------

٦- الآلات و المعدات المتسببة فى وقوع الحادث : ----------
٧- الظروف الطبيعية السائدة فى مكان الحادث/الإصابة : ----------
- الحرارة - حالة الرياح - الضوء : كافى [ ] ، غير كافى [ ] - الضوضاء عالية [ ] ، متوسطة [ ] ، ضعيفة [ ]
٨- أسباب وقوع الحادث/الإصابة: ظروف عمل غير مأمونة ( ) أفعال غير مأمونة ( )
٩- توافر مهمات الوقاية الشخصية وقت الحادث: ----------
متوفرة ( ) غير متوفرة ( ) تستعمل بطريقة صحيحة ( ) لا تستعمل ( )

شهود الحادث/الإصابة:

الاسم	رقم الأداء	السن	الوظيفة	جهة العمل

١٠- رأى المسئول عن العمل وقت الحادث/الإصابة: ----------

أ- مسئولية المصاب فى وقوع الحادث/الإصابة : ----------
ب- مسئولية مشرف العمل فى وقوع الحادث :----------
١١- رأى الأمن الصناعى و التعليق على الحادث/الإصابة: ---------- ----------
---

١٨-الإجراءات الوقائية لعدم تكرار الحادث/الإصابة : ----------

اسم معد التقرير

التوقيع :

(F31-1)

غـــاز مصـــر

إدارة السلامة و الصحة المهنية

سجل حالات الطوارىء

م	التاريخ	الموقع	وصف حالة الطوارىء	رقم التقرير	التوقيع	ملاحظات

(F31-2)

مراجعة: مدير إدارة الآمن الصناعى:

اعتماد: مدير عام مساعد الأمن الصناعى و الصحة و البيئة

Annex 7: Stakeholder Engagement and Public Consultation (Governorate of Monofeya 2013)

8 Stakeholder Engagement and Public Consultation

The public consultation chapter aims to highlight the key consultation and community engagement activities and their outcomes, in addition to outlining the key aspects to be addressed when holding the consultation activities of the (11) site-specific ESIAs upon final project detailing.

Throughout the various consultation and engagement activities, the work teams experienced and recorded remarkable and overwhelming public acceptance, even eagerness, by the community and the governmental stakeholders towards the proposed project. The indignity and financial hardships experienced by scores of Egyptian families (especially women) in obtaining LPG cylinders (the current household fuel) was revealed through testimonies all over the country. Aside from a limited number of concerns regarding street rehabilitation after construction works and options of installation fee payment; the glaring message from governmental and community consultations was to commence implementation ASAP (with repeated requests to expand coverage beyond what is planned for the project).

Consultation activities (scoping, interviews, focus group discussions, public hearings/consultations) with various stakeholders and community people in the host communities were held for the proposed 1.1 million household NG connections project in compliance with:

- WB policies related to disclosure and public consultation, namely,
  - World Bank Procedure (BP 17.50)
  - World Bank Operational Policy (OP 4.01)
- Egyptian regulations related to the public consultation
  - Law 4/1994 modified by Law 9/2009

Objectives of various consultation activities are summarized as follows:

1- Define potential project stakeholders and suggest their possible project roles
2- Disseminate comprehensive information about the project to enable stakeholders to identify their concerns, needs, and recommendations.
3- Document stakeholder feedback and enhance the ESIAF accordingly
4- Identify the most effective outreach channels that support continuous dialogue with the community
5- Discuss potential resettlement plans and impacts of involuntary resettlement

8.1 Defining the stakeholder

Given the fact that the project exact routes and project details have not been finalized at this stage, stakeholder identification was based on analysis of geographical, legal, institutional, and operational scope of the project. The following table represents the stakeholders contacted and engaged for the consultation events:

Table 8-1 Main stakeholders identified for the Framework

Stakeholder	Role/ concern
Local Governmental entities	
Governorates	The main role of the governorates is the provision of support to the project through mobilizing people to gain information about the project. Media is known to shed light on activities of the governorate entities
Local Governmental units (District authorities and village authorities)	- Permissions for the lands needed for PRS should be prepared by the governorate and approved by the LGU. - Rehabilitation of roads, which is one of the major issues raised by the community, will be performed by the LGU.
Other governmental entities	
Information Centers on the governorate level	Provide NG companies with underground utilities and infrastructure maps.
Governmental Authorities	Various authorities in the governorate will support the project through permissions for excavation works, maintenance, health related issues, etc.
The Social Fund for Development	Offers loans in LPG distribution startups.
Egyptian Environmental Affair Agency (HQ and RBOs)	Responsible for reviewing and approving ESIAs, and monitoring implementation of the Environmental Management Plan
Security Department	Secure the construction sites and prevent people from in- flushing into it
Ministry of Health	Providing health facilities to the project workers
Ministry of Tourism	Relevant to project implementation in Touristic Governorates such as Aswan, Qena, Matrouh, and Alexandria.
Ministry of Antiquities	Very important to issue permissions for excavations and accompany the working teams, particularly, in Sohag and Aswan which are rich in monuments.
Media	
Television and radio representatives	Inform the community about the project and its impacts and support dissemination of ESIA studies
Press people	
Websites editors	
NGOs working on environmental and social related aspects	
NGOs on the central level	Play an active role in any awareness-raising related to the project May provide financial support to the poorer customers
NGOs on district level	
Specific union of NGOs	
Universities and Educational institutes	
Faculty of Engineering	Review and enrich the ESIA study with feedback
Secondary vocational schools	Propose needed capacity building for their students to potentially find employment with the project
Researchers/consultants	Review results of the study and provide feedback
Other	
Private companies	Mainly potential tenderers for construction works
Traders	Provide workers with food and amenities.
Contractors	From the project adjacent areas, may be affected.
Community people	
Community leaders	Main cornerstone in mobilizing the communities.
Heads of tribes	In Marsa Matrouh city, provide security to the pipelines. Their approval to allow the project to cross their lands should be obtained during the early stage of the project.
Potential beneficiaries	Potentially benefit from the project

Stakeholder	Role/ concern
Potential Project Affected Persons (PAPs)	Farmers whose lands may be traversed by project components. LPG distributors(formal and informal), LPG storage workers.
Natural Gas companies	
EGAS	Implementing agency overseeing activities of the Environmental and Social Management Plan
Egypt Gas	Local distribution company (LDC) who will implement, operate, and manage the ESMP
Town Gas	Local distribution company (LDC) who will implement, operate, and manage the ESMP
Butagasco	May be affected due to the installation of the NG
Petro trade	They are the responsible entity for collecting the consumption fees and the bank installment

The abovementioned stakeholders were consulted using various tools i.e. Individual interviews, group meetings and public consultation. Most of them have attended the public consultation hearings conducted during December 2013 in the 11 governorates. However, some of them were interviewed in their premises in order to enable them to spell out their concerns and worries freely.

8.2 Consultation Methodology and Activities

3441 community members were engaged directly. Consultations were conducted on various levels to outreach all levels of stakeholders.

8.2.1 Public scoping sessions

- Giza and Qalubia Governorates on November 24th of 2013 in Flamenco Hotel.
- Upper Egypt Governorates on November 26th 2013 in Maraga City Hall, Sohag.
- Delta governorates on November 28th 2013 in Menufia University Hotel.

Participants profile

Participants of the scoping session consultation events represented different categories of stakeholders from the targeted areas. In total, 251 persons attended those sessions, of which 198 were males and 53 were females. The males represented (78.9) % of the total participants, while females represented only (21.1%) This is relatively a high presentation of females comparing to similar projects implemented in the same Governorates.

Diversity in age and educational backgrounds was reflected in participants" contributions and enriched the session with a wide range of opinions. The visits paid to introduce the project to the community were an appropriate aperitif that drove the community people to be more willing to get information about the project. The diversity between literate and illiterates, workers and unemployed enriched the discussion to a

الشركة المصرية القابضة للغازات الطبيعية (إيجاس)

جلسات الاستماع ومناقشة عامة (أولى)

لدراسة تقييم التأثيرات البيئية والإجتماعية لمشروع توصيل الغاز الطبيعى فى ١١ محافظة

فى إطار خطة الشركة المصرية القابضة للغازات الطبيعية خلال الثلاث سنوات القادمة والتى تعد جزءا متكاملاً من استراتيجية الدولة فى التوسع فى توصيل الغاز الطبيعى للوحدات السكنية لعدد ١,١ مليون عميل فى محافظات (الإسكندرية / الجيزة / مرسى مطروح / القليوبية / الدقهلية / الغربية / المنوفية / سوهاج / قنا / أسوان / الإسماعيلية). فإنه يسعد الشركة المصرية القابضة للغازات الطبيعية (إيجاس) بالتعاون مع شركة إيكونسرف للحلول البيئية دعوة ممثلى المجتمع المدنى والجهات والأفراد المعنيين بموضوعات التنمية المستدامة والبيئة للمشاركة وإبداء الرأى بشأن المشروع وتأثيراته البيئية والإجتماعية المحتملة وذلك طبقا للمواعيد التالية:

المحافظة	التاريخ	الموعد	المكان
الجيزة	الأحد ٢٤ نوفمبر ٢٠١٣	الساعة ١٠ صباحا	فندق فلامنكو ٢ شارع الجزيرة الوسطى بالزمالك
سوهاج	الثلاثاء ٢٦ نوفمبر ٢٠١٣	الساعة ١٠ صباحا	قاعة مجلس مدينة المراغة
المنوفية	الخميس ٢٨ نوفمبر ٢٠١٣	الساعة ١٠ صباحا	فندق جامعة المنوفية بجوار كلية الزراعة

وفى حالة الرغبة فى الحصول على نسخة من مسودة ملخص الدراسة المبدئية برجاء زيارة الموقع الإلكترونى للشركة القابضة للغازات الطبيعية www.egas.com.eg

أو الحضور لمقر الشركة ٨٥ طريق النصر . مدينة نصر

وأننا لنتطلع لمشاركة سيادتكم فى هذه الجلسة

للمزيد من المعلومات برجاء الاتصال بالمكتب الاستشارى – إيكونسرف

فاكس: ٠٢-٢٧٣٦٥٣٩٧ تليفون: ٠٢-٢٧٣٦٤٨١٨ / ٠٢-٢٧٣٥٩٠٧٨

بريد إلكترونى genena@ecoconserv.com

Photo 1: Advertisement published in El Ahram related to the 3 scoping sessions

great extent. A variety of organizations as well as representatives from governmental and community based authorities, institutes, and entities also took part in these scoping session meetings.

- 35.5% from governmental entities
- 17.7% from government environment sector
- NGOs (4.6% in Giza , 15.9% in Menufia and 20.3% in Sohag)
- Five TV, press and Radio reporters attended the 3 scoping meetings.
- Community people (technicians, service sales laborers and teachers)

Summary of discussions

All participants expressed their eagerness for commencement of project implementation without further delay and many participants demanded the extension of the project to additional areas. Following is a summary of all discussions conducted.

Subject	Questions and comments	Responses
LPG cylinder problems	Speeding up the environmental and social studies and permissions so as to launch the construction phase as soon as possible	• EcoConServ is preparing the ESIAF study required to obtain EEAA approval. • EGAS is working on obtaining other required permissions
Recommendation to enhance the project performance	• EGAS should obtain detailed information about all project areas and develop a report about each area • The installation of NG should be obligatory not optional • EGAS should share infrastructure maps developed for the project with the Local Governmental units • The selection of project areas should be revisited • All towns and cities should be connected	• The exact streets will be defined at a later stage. Thereafter, an ESIAF will be prepared for each governorate • EGAS cannot oblige anyone to have NG installed • All available information will be shared with the Local Governmental Units • Project areas were selected based on certain criteria as presented • This project is one of a series of projects that aim at connecting all houses to NG
Scope of social study	It is important to meet with informal LPG distributors and house guards in the project areas	• This task is within the scope of ESIAF study
Awareness activities and NGOs roles	Will the project undertake any awareness activities? Local NGOs should be integrated in these activities	• Awareness activities are among the recommendations of the ESIAF study
Street rehabilitation	• It is crucial to study the impacts on streets and the restoration process • Street restoration should not be the responsibility of Local Governmental units	• All impacts will be fully investigated • Restoration alternatives are 1.Restoration will be fully undertaken by NG companies (Town Gas – Egypt Gas)or 2.NG companies will pay local governmental units to carry out restoration works
Considering alternative sources of energy	In addition to NG, EGAS should consider also making use of solar energy and biogas	• This particular project is limited to NG. However, solar and wind energy projects are being implemented by the New and Renewable Energy Authority on the national level

Subject	Questions and comments	Responses
NG installations for houses constructed with no official permits	It is crucial not to install the NG to illegally constructed houses.	• One of the requirements for installing NG is the provision of an electricity bill. Houses constructed without the necessary permits do not have access to „state electricity" and will not be able to provide the required bills.
NG installation to areas with no sewage system	Areas with no access to a sewage system should not be deprived of NG as well. This is not fair.	• NG should be the last facility to be installed. This is mainly due to safety requirements
Vulnerable groups working in LPG distribution	EGAS should consider meeting the poor and marginalized groups working in LPG distribution	• Vulnerable groups are an essential component of this study. Due attention will be given to them. They will be investigated during the ESIAF
Poor people	EGAS should provide a subsidy enabling the poor to install NG	• The NG connection is already subsidized by the state. Thus, it is recommended that other entities step in to provide additional support to the poor
Visual intrusion	The pipelines damage the entrance of houses and diminish the aesthetic value of buildings	• We try to follow the maximum safety procedures while at the same time minimizing damage to houses. Plans to minimize visual intrusion have been developed

8.2.2 Data collection activities

- 44 mini group meetings were conducted in 29 project areas, attended by 263 members of community and governmental entities.
- 36 individual meetings were conducted in the 11 governorates with governmental stakeholders. In addition, 16 individual meetings were conducted with the LPG distributors.
- 1904 Households were consulted in various project areas.
- Dual meetings were conduct held with 20 persons in Marsa Matrouh city as households will be provided NG for the first time governorate-wide.
- A leaflet about the project was prepared and uploaded to the website. Thereafter, 1000 leaflet were printed and distributed during the site visits[8]:
  1- Brief description of the project
  2- Potential impacts of the project
  3- Total number of installations

Participants profile

In addition to the above mentioned, mini meetings and individual interviews were conducted in the 11 governorates. The community people on the district level were interviewed. As well as, the health centers' service providers, the LPG distributors, NGOs and Governmental entities. Participants were of a variety of age categories. Young people were motivated to attend the meetings held in their own premises. Females were strongly represented at 26.9% of the participants. Consultations with women took place in homes, LPG storerooms, and NGOs. Some consultation activities were conducted informally. A casual ambiance was adopted during consultations to encourage people to spell out their concerns freely.

[8] Details are presented in the SIA document (submitted to WB and EGAS in parallel to this report).

Photo 2: Woman interviewed in the NGO

Photo 3: Consultation on the street

Summary of discussions

The discussion addressed/documented the following:

1- Options of poorer customers to receive additional financial support
2- Physical and financial burdens of LPG cylinders and dilemmas during shortage
3- Corruption related to LPG distributors
4- Credible information due to the misconceptions related to NG safety
5- Feasibility of connecting NG to rural areas and remote ones
6- Importance to integrate community based organizations in awareness activities
7- Monitoring and maintenance of the grid
8- NG job opportunities for areas adjacent the project
9- Cooperation with the LGU throughout the life of the project

8.2.3 Final public consultations

Consultation activities were conducted in the 11 Governorates during the last 10 days of December 2013. Parallel teams implemented the consultation activities.

- Four consultants from EcoConServ (two environmental and two social)
- Eight representatives of EGAS, Town Gas and Egypt Gas
- Four representatives of EEAA accompanied the teams over the 11 governorates
- 2 administrative managers and numerous drivers

Table 8-2: 11 Consultation activities conducted during the final consultation phase

Governorate	Date	Venue
Aswan	21st of December 2013	Governorate Hall (Arous El Neil)
Menufia	21st of December 2013	Governorate Hall
Qena	23rd of December 2013	Girls Club Hall in Qena city
Giza	23rd of December 2013	Army Hotel Hall
Matrouh	25th of December 2013	Nile centre for Media
Sohag	25th of December 2013	Local Popular Council
Alexandria	26th of December 2013	Mercure Hotel
Daqahlia	29th of December 2013	Marshal Hotel
Gharbeia	29th of December 2013	Panorama Hotel
Qalubia	30th of December 2013	Egypt Public Library in Benha
Ismailia	30th of December 2013	Media Compound in El Sheikh Zaid

The list of invitees was developed by EEAA regional branches, environmental offices of the governorates, NGOs, governmental media centers, and various government employees, in cooperation with the Consultant. Invitees were informed of the date and location of the Public Consultation at least two weeks ahead. Participants were invited through:

1- Invitations sent by EGAS via mails, Faxes and e-mails.
2- Telephone communication by EGAS and the Consultant.
3- An advertisement was published in El Ahram El Mesay followed by a second advertisement published in Aswan Newspaper and El Esboua Newspaper.
4- Aswan Newspaper presented a news clip about the project prior to the event.
5- A simplified Fact-sheet/brochure in Arabic (500 copies) distributed:: i) Governorates that the project will be implemented in, ii) general description of the project, iii) Potential long and short term impacts of the project .

Photo 4: One of the developed posters

Hearings/consultations were held in adequately situated and equipped venues affiliated to NGOs, Media centers, Governorate, and hotels. In Sohag, Qena, and Aswan microbuses were rented to move people from the remote areas to the public consultation venues.

Participants profile

971 participants attended the 11 final consultation events. Participants reflected different categories of stakeholders from the project targeted areas. Female participation was targeted throughout advertising and invitation process. The highest representation of women was noted in Ismailia Governorate (60.8%) while the least representation of females were found in Matrouh. Taking the unique cultural traits of Matrouh into account, additional mini meetings were conducted with the females on the governmental employees and residents levels. Matrouh as invitations extended to heads of tribe and the NGOs working on the tribal levels.

Overall, special attention was paid to involving young groups and females as they are most affected by the physical hardships of obtaining the LPG cylinders. The physically-challenged were represented in consultation activities through NGOs working with them.

- NGOs represented 14.9% of the participants among which 70.0% of them work on the solid waste management and street afforestation
- 42.0% of the participants represented governmental entities (Local Governmental Units, Road Authority, the Urban planning, etc.)
- Governmental environmental sector represented 15.8% of the total participants (EEAA regional branches, governorate EMU and local environmental units)
- 38.8% of the total participants held administrative jobs
- 26.5% specialists (Lawyers, professors, businessmen, chemists, etc.)
- 23.8% of the total participants were of top managerial positions (government) and heads of municipalities
- Technicians and specialists represented 6.8%
- 2.0% were students.

Summary of discussions

All consultation events started with a summary of the project and the Natural Gas in Egypt. Using PowerPoint and multimedia, representatives of EGAS, Town Gas and Egypt Gas presented detailed information about all project activities.

Using PowerPoint and multimedia, EcoConServ experts presented the ESIAF to the community people. Simple wording was used whenever possible by the environmental and social expert in order to be comprehended by the members of community. The resettlement policy framework was presented as an important element of the final public consultation.

Photo 5: A tribe leader in Matrouh Gov.

Photo 6: Participants in Daqahlia Governorate

Photo 7: Posters in Sohag Governorate.

Photo 8: Consultation event in Sohag Governorate

During breaks, Media interviewed EGAS representatives, government officials, community members, and the consultants. The main issues raised during these interviews were as follow:

1- General information about the Natural Gas
2- Positive and negative impacts of the NG
3- The rules and regulations of EEAA
4- The role of stakeholders and community participation

Each session ended with an open discussion lasting for a couple of hours.

Table 8-3: Key comments and concerns raised during the Final Public Consultations

Subject	Questions and comments	Responses
Damaging underground utilities and infrastructure during digging	Will the implementing agencies avoid damaging the underground utilities/facilities and infrastructure?	All necessary procedures should be carried out to avoid damaging underground utilities/facilities and infrastructure. In case any facilities are damaged, they will be restored

Subject	Questions and comments	Responses
Collaboration with governmental entities and information centers	Many governmental entities (Local Governmental Units, Information centers, Road Authority, Water resource, Mayors…etc.) are willing to cooperate with the project to facilitate work. Will this be possible?	It is crucial to collaborate with these entities in order to obtain information, maps and permissions
Role of community based organization and tribe leaders	It is recommended to cooperate with members of civil society in order to increase awareness	Civil Society members play a major role in carrying out awareness raising activities as well as securing the financial aid to poor people
Role of the Army	EGAS should consult and contribute with the army in the frontier governorates	Their approvals and permissions are key to implementing project activities
Reduction the installation cost	It is recommended to: 1. Take the LPG cylinder as an advance payment for the NG. Thereafter, the poor pay by installment 2. Cooperate with the Ministry of Social Solidarity to reduce the installation cost for poor 3. Mobilize the local community and the NGOs to provide support to poor	It is difficult to adopt these recommendations
People living with disabilities	At least 5% of jobs provided by EGAS should be filled by people with disabilities	This recommendation will be taken into consideration
Appropriate time for construction	Matrouh, Alexandria and Ismailia are touristic areas. Thus EGAS should avoid working there during summer time	This recommendation will be taken into consideration
Restoration of streets	All attendees voiced their concern about damaging the streets without restoring them after the completion of installation activities due to the bad performance of the Local Governmental Unit (corruption)	Two alternatives of street rehabilitation were investigated: - Restoration will be fully undertaken by NG companies (Town Gas – Egypt Gas)or - NG companies will pay local governmental units to carry out restoration works
Some devices cannot be operated by the NG	We use a baking stove. This will not be operated by the NG. What should we do?	The baking stove can" t be connected to the NG for safety purposes
Awareness activities	Awareness activities should cover the following: Contact person in the site (foreman) GRM personnel Hotline for damage and maintenance Website and SMS	This recommendation will be taken into consideration
Job opportunities	The jobs provided by this project should be made available to the local community	It is more economically viable to provide jobs to the local community

Subject	Questions and comments	Responses
Remote areas and suburbs	NG should be installed to remote areas and the suburbs	They will be concerned in later stage
Capacity building	EGAS should raise the capacity of community members in order to enable them to work in the project	This will be investigated and implemented whenever possible
Paying by installment	Does the proposed system for paying by installment contain any interest?	The bank should have their interest rate
Criteria to select certain areas to install the NG	What are the criteria to select the project areas	There are numerous selection criteria based on economic aspects and technical consideration
Safety measures	What are the safety measures followed by the NG companies	We apply the maximum standards of safety (British standards)

Second Public Consultation Disclosure Activities

The importance of the project for the government and the community was reflected in remarkable media coverage. Media covered events and interviewed participants:

1- **Newspapers: El Youm 7, El Masry El Youm, El Watan**
2- **News websites: El Ahram, El Borsa website, El Shrouk, Aswat Mesria, El Mashad, Misr El Youm**
3- **Aswan governorate website, ONA news**
4- **Tibah and Canal National TV channels**

1. GOVERNORATE OF MENOFYA

Menofaya - 21/12/2013

Serial	Name	job title / company	E-mail	Telephone
1	Ch.Nadia Khatab	EGAS head assistant for environment protection	nkhattab@egas.com.eg	02-22642534
2	ElAmir Ebrahim Eldosouky	General Manager for Government Relations (EGAS)	ibrrahim@egas.com.eg	1090020059
3	Amr Abdelmonsief Youssry	Director of following up the implementation of projects	ayousmy@egas.com.eg	1001485990
4	Zeinad Mohamed Reda	Director of government relations (EGAS)		1120002993
5	Nansy Mohamed Elqabani Mohamed	Specialist in Government Relations (EGAS)		1201557767
6	Mohamed Ahmed Elfengini	Babil Mayor		1226137649
7	Alaa Elsayed Tolba	Information system network director		1005738767
8	Ahmed Abo Bakr Mohamed	Environment affair unit in Shebien Elkoum	ahmedchem2005@yahoo.com	1007929139
9	Ramadan Mohamed mostafa	Sers Ellayan Mayor – Ashmoun	ramdan_oumf2002@yahoo.com	1024396933
10	Saber Saad Shebl	Elsembelawien Mayor – Ashmoun		1069379145
11	Mohamed abdelfatah Mohamed	Studies Institute for Environmental Research	mtahoun_fyc@yahoo.com	1009545999
12	AbdelMoneem Mohamed Hassan	Environment unit manager –Elsadat		109361900
13	Ebrahim Mohamed Elsharqawi	Irrigation department Menofeya		1007322767
14	Aymen Mohamed Mohamed	Irrigation department Menofaya		1065319914
15	Yasmin Mostafa ElShemi	Urban planning engineer Menofaya governorate		02-22642534
16	Belal Khalaf	Operation manager		
17	Ahmed Reda Eldeeb	Talaa Mayor		
18	Nozha Ali Salem	Environment unit – Shebien municipality		
19	Magdi Abu AboElsaad	Bagour Secartaty General		
20	Monir Mohamed Taha	Municipality Mayor		

Serial	Name	job title / company	E-mail	Telephone
21	Galal Eldin Mohamed Shalan	Shebien Mayor		
22	Tamir AbdelMoneem	Municipality Mayor		
23	Ahmed Bahaa Eldin Hussien	Municipality Mayor		
24	Elsayed Hassan Ahmed	Berket Elsabaa Deputy Mayor		
25	Ahmed AbdelAziz Gamal	Monshat Elsultan Mayor		
26	Said AliEldin	Enviroment affair inspector		
27	Hassan abdalla GaZal	Enviroment affair unit		
28	Heba Mohamed Khoudir	Enviroment affair researcher		
29	Mokhtar AbdelHakiem Mohamed	Retired		1061761077
30	Gomaa AbdelSamee Elatief	Retired		1002228975
31	Ahmed Ibrahim ElShal			1281448359
32	Adil Mohamed Elgamri			1281068451
33	Zaki abdelrafiee Elbeqi			1289407430
34	Sayed Garieb	Police officer		1141380916
35	Amira AbdelAziz Shams	Researcher		
36	Mona Mohamed Elhawari	Enviroment affair inspector		1005475651
37	Basuni Eid Elbasuoni			1282934086
38	Azza Ahmed			
39	Mohamed AbdelMoeti ismail			1226836702
40	Yasser Eissa Zagloul	Monument inspector	ramsis.tomb@yahoo.com	1116387402
41	Aymen Mohamed AbdelRashied	Engineer – Gas Misr company	hse-eg@hotmail.com	1008955836
42	Fakhri AbdelKhaliq	Environment consultant EcoEconServ	fakhryablkhalek@ecoconserv.com	1061804901
43	Ahmed Ragab Gaafar	Environment affair general manager		1063327692
44	Zeinab Mohamed Hafez	Social consultant EcoEconServ	zeinabhafez@yahoo.com	1066127117

Serial	Name	job title / company	E-mail	Telephone
45	Abel Mohamed mansour	Deputy manager Information utility network center		1283687475
46	Shabaan AbdelGwad Elhalawani	Field manager Information utility network center		1002385017
47	Ahmed Mohamed AboDan	Ashmoun Mayot		1004400491
48	Seham Mamdouh Elkhayat	Sahel Elwayeed Mayor		1117600798
49	Mamdouh Gamal Elsayed	Monument awareness manager	rmo121219420@yahoo.com	1221219420
50	Mahmoud Ahmed AbdelDayiem	Kafr ElSokaria Mayor		1227567320
51	Ahmed Ezz Eldin	Electricity director – Shebien Elkoum		1007501828
52	Heba Farag ElKhouli	Environment inspector		1007501828
53	Omnia Mahmoud Eltalawi	Information center director	amina261156@yahoo.com	1001187626
54	Nagwa Geres gebrial	Environment inspector		1009575051
55	Hesham fathi Ahmed	Elfashn Mayor		
56	Alaa Eldin Elsayed Hashesh	Beshbeen Mayor		
57	Yasser Essa Zagloul	Monument department	ramsis.tomb@yahoo.com	1116387402
58	Osama Maud Douedr	Elmogies NGO	o_dewedat2010@yahoo.com	1004152138
59	Mohamed Elfaramaye abdelsalam	Social affair department		1022954566
60	Elsayed Ebrahim Rawan	Beshtina Elhagar Mayor		01281147079/ 01010505943
61	Osama AbdelMaqsoud	Middle East news agency	osama.mena2012@yahoo.com	1285282000
62	AbdelQafaar ElOuasi	Elmasar Newspaper		1006869138
63	Osama Kamal Shayeeb	Elmogies NGO	almaghtin-2005@yahoo.com	10062020006
64	Salem ElFaramayi	Governor's office general manager		
65	Ahmed AbdelAziem Nassar	Security office		
66	Abdelateef Abo Elnagar	Security office		
67	Abdelmoneem Kamal Eldin	Security office		

Serial	Name	job title / company	E-mail	Telephone
68	Mohamed Elhadad	Security office		
69	Mahdi Elshafee	Security office		
70	Abdellatif Elzogbi	Security office		
71	Reda AboElazm	Faculty of engineering	reda-aboela2m3@yahoo.com	1002649739
72	Khalid AbdelAziz negm	Environment researcher		1004272855
73	Faysal Abdelraouf	Environment researcher		01007457823/ 0482226926
74	Medhat Mahmoud abelela	Engineer – water authority		1064184205

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لنتائج دراسة تقييم التاثيرات البيئية والاجتماعية لمشروع توصيل الغاز الطبيعى فى ١١ محافظة

ديوان عام محافظة المنوفية– المنوفية

استمارة تسجيل الحضور
٢١ ديسمبر ٢٠١٣

مسلسل	الاسم	الوظيفة/ الجهة التابع لها	الايميل	التليفون	التوقيع
١	ك/ نادية خطاب	مساعد رئيس الشركة لحماية البيئة الشركة القابضة للغازات الطبيعية	nKhaltab@egas.com.eg	02-22642534	نادية خطاب
٢	الأمير ابراهيم البسيونى	مدير عام العلاقات الحكومية (ايجاس)	aIbrahim@egas.com.eg	01090020059	الأمير البسيونى
٣	عمرو عبد المنصف يسرى	مدير ادارة متابعة تنفيذ المشروعات	ayousry@egas.com.eg	٠١٠١١٤٨٥٩٩٠	[illegible]
٤	زينب محمد رضا	مدير ادارة بالعلاقات الحكومية (ايجاس)		٠١١٤٠٠٠٤٩٩٣	زينب
٥	ناصر محمد الفقى محمد	اخصائى ممتاز العلاقات الحكومية (ايجاس)		٠١٢٠١٠٠٥٧٧٦٧	ناصر [illegible]
٦	محمد محمد العشري	رئيس لوحة لحماية البيئة		٠١٢٢٦١٢٧٦٤٩	[illegible]
٧	علاء السيد [illegible]	مدير ادارة نظم مركز معلومات شبكات		٠١٠٠٥٧٢٨٧٦٧	[illegible]
٨	د/ أحمد أبو بكر محمد	[illegible]	ahmedchenzou[illegible]@yahoo	01007925139	[illegible]
٩	[illegible]	[illegible]	hamadm_ound2002@yHoo	01024396433	[illegible]
١٠	[illegible]	[illegible]		٠١٠٦٩٤٧٩١٤٥	[illegible]
١١	محمد عبد الفتاح [illegible]	[illegible]	mtahoun_f2c@Yaho..	٠١٠٠٩٠٤٠٩٩٩	[illegible]
١٢	[illegible]	[illegible]		١٠٩٤٦١٩٠٠٤	[illegible]
١٣	ابراهيم محمد [illegible]	[illegible]		٠١٠٠٧٣٤٤٧٦٧	[illegible]
١٤	أ/ [illegible]	[illegible]		٠١٠٦٠٤١٩٩١٤	[illegible]

جلسة الاستماع والمناقشة العامة

لنتائج دراسة تقييم التاثيرات البيئية والاجتماعية لمشروع توصيل الغاز الطبيعى فى ١١ محافظة

ديوان عام محافظة المنوفية – المنوفية

استمارة تسجيل الحضور

٢١ ديسمبر ٢٠١٣

مسلسل	الاسم	الوظيفة/ الجهة التابع لها	الايميل	التليفون	التوقيع
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جلسة الاستماع والمناقشة العامة

لنتائج دراسة تقييم التاثيرات البيئية والاجتماعية لمشروع توصيل الغاز الطبيعى فى ١١ محافظة

ديوان عام محافظة المنوفية – المنوفية

استمارة تسجيل الحضور

٢١ ديسمبر ٢٠١٣

مسلسل	الاسم	الوظيفة/ الجهة التابع لها	الايميل	التليفون	التوقيع
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جلسة الاستماع والمناقشة العامة

لنتائج دراسة تقييم التاثيرات البيئية والاجتماعية لمشروع توصيل الغاز الطبيعى فى ١١ محافظة

ديوان عام محافظة المنوفية – المنوفية

استمارة تسجيل الحضور

٢١ ديسمبر ٢٠١٣

مسلسل	الاسم	الوظيفة/ الجهة التابع لها	الايميل	التليفون	التوقيع
٤٥	[illegible]	[illegible]	ramsis.tamb@yahoo	[illegible]	
٤٦					
٤٧					
٤٨					
٤٩					
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جلسة الاستماع والمناقشة العامة

لنتائج دراسة تقييم التاثيرات البيئية والاجتماعية لمشروع توصيل الغاز الطبيعى فى ١١ محافظة

ديوان عام محافظة المنوفية– المنوفية

استمارة تسجيل الحضور

٢١ ديسمبر ٢٠١٣

مسلسل	الاسم	الوظيفة/ الجهة التابع لها	الايميل	التليفون	التوقيع
٧٥	عبد الغفار - العيسوي	جريدة المساء		٠١٠٠٦٨٦٩١٢٨	[illegible]
٧٦	[illegible]	جمعية [illegible]	Almoghelin_2005@yahoo	٠١٠٠٦٢٠٢٠٠٦	[illegible]
٧٧	سامح [illegible]	مدير عام مكتب المحافظ			
٧٨	محمد عبد العظيم نصار	مكتب الامن			
٧٩	عبد اللطيف ابو النجار	مكتب الامن			
٨٠	عبد المنعم كمال [illegible]	مكتب الامن			
٨١	محمد جاد	مكتب الامن			
٨٢	[illegible]	مكتب الامن			
٨٣	عبد اللطيف [illegible]	مكتب الامن			
٨٤	د/ رضا أبو العزم	د.ع كلية الهندسة	Reda_Aboelazm3@Yahoo.com	٠١٠٠٢٦٤٩٧٢٩	[illegible]
٨٥	خالد عبد العزيز [illegible]	باحث [illegible]		٠١٠٤٢٧٢٨٥٥	
٨٦					
٨٧					
٨٨					
٨٩					

Eco Con Serv
ENVIRONMENTAL SOLUTIONS

جلسة الاستماع والمناقشة العامة

لنتائج دراسة تقييم التأثيرات البيئية والاجتماعية لمشروع توصيل الغاز الطبيعي في ١١ محافظة

[redacted]

استمارة تسجيل الحضور

٢١ ديسمبر ٢٠١٣

مسلسل	الاسم	الوظيفة/ الجهة التابع لها	الايميل	التليفون	التوقيع
٣٠	[illegible]	[illegible]		[illegible]	
٣١	[illegible]	[illegible]			
٣٢	[illegible]	[illegible]	amina261156@yahoo	[illegible]	
٣٣	[illegible]	[illegible]		[illegible]	
٣٤	[illegible]	[illegible]			
٣٥	[illegible]	[illegible]			
٣٦	[illegible]	[illegible]			
٣٧	[illegible]	[illegible]	ramsis.Tomb@yah[illegible]	[illegible]	
٣٨	[illegible]	[illegible]	[illegible]	[illegible]	
٣٩	[illegible]	[illegible]		[illegible]	
٤٠	[illegible]	[illegible]		[illegible]	
٤١				[illegible]	
٤٢	[illegible]	[illegible]	osama.menaz012@yahoo.com	[illegible]	
٤٣					
[illegible]					

جلسة الاستماع والمناقشة العامة

لنتائج دراسة تقييم التاثيرات البيئية والاجتماعية لمشروع توصيل الغاز الطبيعي فى ١١ محافظة

ديوان عام محافظة المنوفية– المنوفية

استمارة تسجيل الحضور

٢١ ديسمبر ٢٠١٣

مسلسل	الاسم	الوظيفة/ الجهة التابع لها	الايميل	التليفون	التوقيع
٧٥	عبد الغفار – العيسوي	جريدة المساء		٠١٠٠٦٨٦٩١٢٨	[توقيع]
٧٦	بسيوني كمال عريشة	جمعية الغيث للتنمية والإعلام	Almoghetin_2005@yahoo	٠١٠٠٦٢٠٢٠٠٦	[توقيع]
٧٧	سامح الفرشاري	وزير ... مكتب ...			
٧٨	محمد عبد العظيم نصار	مكتب الامن			
٧٩	عبد اللطيف أبو النار	مكتب الامن			
٨٠	عبد المنعم كمال ابراهيم	مكتب الامن			
٨١	محمد الحداد	مكتب الامن			
٨٢	[illegible]	مكتب الامن			
٨٣	عبد اللطيف الزيني	مكتب الامن			
٨٤	د/ رضا أبو العزم	د.م كلية الهندسة	Reda_Aboelazm3@Yahoo.com	٠١٠٠٢٦٤٩٧٤٩	[توقيع]
٨٥	خالد عبد العزيز ...	باحث شئون بيئية بالوحدة المحلية		٠١٠٤٢٧٢٨٥٥	
٨٦					
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جلسة الاستماع والمناقشة العامة

لنتائج دراسة تقييم التاثيرات البيئية والاجتماعية لمشروع توصيل الغاز الطبيعى فى ١١ محافظة

ديوان عام محافظة المنوفية– المنوفية

استمارة تسجيل الحضور

٢١ ديسمبر ٢٠١٣

مسلسل	الاسم	الوظيفة/ الجهة التابع لها	الايميل	التليفون	التوقيع
٤٥	فيصل عبد الرؤوف	باحث شئون [illegible]	٠١٠٠٧٤٥٧٨٢٧	٠٤٨٢٢٢٦٩٢٦	
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ENVIRONMENTAL SOLUTIONS

جلسة الاستماع والمناقشة العامة

لنتائج دراسة تقييم التاثيرات البيئية والاجتماعية لمشروع توصيل الغاز الطبيعي في ١١ محافظة

ديوان عام محافظة الدقهلية – المنصورة

استمارة تسجيل الحضور

٢١ ديسمبر ٢٠١٣

مسلسل	الاسم	الوظيفة/ الجهة التابع لها	الايميل	التليفون	التوقيع
٦٠	[illegible]	موظف / شركة [illegible]		٠١٠٦٢١٨٤٠٠٥	
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Annex 8: Stakeholder Engagement and Public Consultation (Governorate of Monofeya 2017)

Brief Description

The public consultation for this ESMP aims to presenting the project to the community, official bodies, representatives of civil society and related parties, communicating and consulting with them to introduce the NG project, its objectives, its effects, components and stages, and to identify the perspectives of different parties. Environmental and social aspects, as well as the following:

- Availability of information during the lifetime of the project through the on-site customer service office, providing adequate and clear information
- Community following up where the citizen is pursuing various activities and inform the community development officer about any irregularities in order to take appropriate corrective action
- Encourage community, advocacy and advocacy to deliver natural gas and stimulate the community to support the poor.
- Designing a grievance handling mechanism that is easy to use and includes clear and accurate levels and responsibilities in terms of timing, as well as commitment to publish them at the local level.
- Communicate with local communities, including people affected by the project, to raise awareness of the project and implement the schedule.

Legal Framework

Public hearing activities for the natural gas delivery project for some areas in Monofeya Governorate (scope identification, interviews, focus group discussions, public hearings / consultations) were carried out with the various stakeholders and members of the host communities of the proposed project in accordance with the following laws and standards:

- WB policies and directives related to disclosure and public consultation, namely:
    - Directive and Procedure on Access to Information
    - Operational Policy OP 4.01 - Environmental Assessment.
    - The Bank's procedures for reporting projects .

- Egyptian regulations related to public hearing : Under the Egyptian Environment Law No. 4/1994 and its amendments No. 9/2009, amended by Ministerial Decisions 1095/2011 and 710/2012, Resolution No. 964/2015, a number of institutional bodies (representing EEAA and its regional branches, Governmental organizations concerned, the governorate where the project is located, local councils, affected groups, institutions and population) should be represented in the consultative process prior to approval of the proposed projects requiring environmental impact assessment and other parties such as NGOs and universities.

Public Consultation Methodology

As part of the implementation of the ESMP study, a team of Petrosafe implemented multiple levels of survey tools for the collection of various data as well as conducting field visits to the target sites in Monofeya Governorate (Shintina Al Hajar & Um Saleh, Tilbant Abshish, Salaka) in Feb 2017. The study team was able to collect sufficient information on the potential impacts of the project through consultation with governmental and non-governmental bodies, the local community, households, some vulnerable groups. During the visits, meetings were held with local unit officials, NGOs, health units, mayors and community leaders as well as Egypt Gas team. The consultation process was documented through photography as well as taking notes and reporting. Key social assessment methods used include observation, interviews, and surveys.

Assessment of the Consultation

In the following the results of the public consultation in Monofeya is described by outlining the comments and assessing their relevance for the ESMP.

Public consultation presentations and open discussion

As part of the implementation of the ESMP project for some of the targeted areas in Monofeya Governorate, a community consultation session was held to present the project and the results of the study to interested and decision-makers. The process of community consultation is a key part of the process of evaluating the positive and negative impacts of the project and All phases of the project. The meeting was announced in a newspaper - on 5th April 2017.

Session Management and Documentation:

1. The main objective of the community consultation session is to present the NG project plan for the target areas in Monofeya Governorate. Explain the results of the ESMP study to the project and discuss it with government officials, key stakeholders, potential clients, civil society representatives and citizens.

2. A file containing a copy of the summary of the ESMP study for the project was prepared and distributed to the attendees at the beginning of the meeting.
3. The meeting was prepared and managed by Petrosafe in coordination with the Egyptian Natural Gas Holding Company (EGAS) and Egypt Gas Company
4. The attendance was documented by signing a statement at the entrance to the hall (attached)
5. All the proceedings of the session were filmed with photographs and videos to document the discussions
6. All discussions and observations were recorded and presented in the report

Agenda

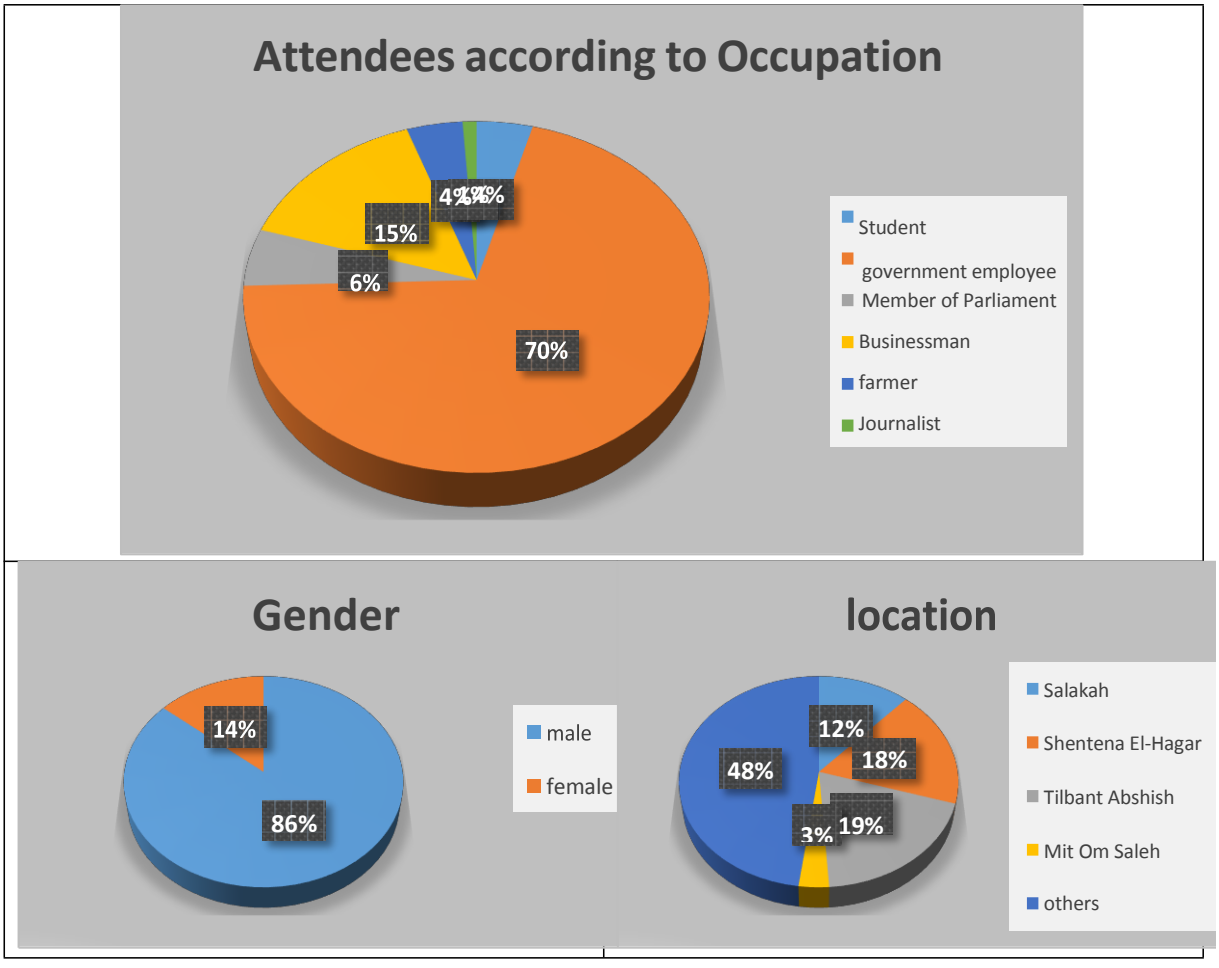
The community consultation session started at 10:30 am in the main hall of the Youth Hostel building of the Faculty of Agriculture, Monofeya University, and ended at 1:00 pm

The speech	Summary
Dr. Khaled Gamal Assistant president of Petrosafe	Welcoming the audience and presenting the objectives of the event and the agenda.
Eng. Ahmed Ragab General Manager of Environmental Department in the Governorate	Talk about the achievements of environmental affairs in the areas of improved fuel used, biogas production and the significant environmental improvement resulting from the changing in the used fuel in brick factories to natural gas.
Eng. Hany Megahed Area Manager at Egypt Gas	The most important information is that Monofeya occupies third place among the governorates of Egypt after Greater Cairo and Alexandria in the delivery of natural gas and that the number of clients in the province of Monofeya about 200 thousand customers
Eng. Ayman abed El Hafez Assistant Manager Petrosafe	Introduction about Petrosafe company, areas of work and services to support the oil and gas sector
Eng. Ahmed Farag EGAS Project manager	Presentation about the company and The project of connecting 1.5 customers in 11 governorates
Eng. Waleed Abed Al Nabe Eng. Mohamed Ibrahim EGYPT GAS	Presentation about the NG project in Monofeya, Gas line route, potential clients numbers, and the implementation stages of the project in the governorate of Monofeya
Dr. Mahmoud Ismail Petrosafe consultant	Presentation about the social impact study for the Gas project in Monofeya
Dr. Khaleed Al Sahy Environmental Department General manager at Petrosafe	Presentation of the environmental impact assessment study for the natural gas project in Monofeya
Dr. Khaled Gamal Assistant president of Petrosafe	He thanked the attendees, summarized the results and concluded the meeting

Participants Profile

Various social groups have attended the consultation meeting including; parliamentarians, citizens, farmers, students, businessmen, government officials and journalists.

- Total of 94 persons attended the consultation event; 14% of which are females
- 70% were residents affiliated local governmental units within the Markazs that will host the project.
- Participants include 5 parliament members, one journalist, 4 students, and 14 craftsmen and 66 governmental employees
- Six people working in EGAS and Egypt Gas attended the session. They provide detailed and clear information about the NG and its associated activities.



Phase One: Community Consultation (On-site) February 2017

Discussions during the period of community consultation in the targeted areas (Shintina Al Hajar, Um Saleh, Tilbant Abshish and Salaka)

Question	Answers
About the possibility of reduction or installment of the contracting cost , which is relatively high for citizens	There is an agreement with the National Bank of Egypt to pay the contracting cost through a payment plan - which is about 2160 pounds - for up to 7 years, and on the long term natural gas is considered an economically feasible, since the LPG cylinder gas current price is expected to increase. As it should be taken into account that risk of accidents resulting from NG installation is lower than the transportation, storage and installation of the LPG cylinders
About how to know the dates of the project implementation	Egypt Gas Company will set a timetable for implementing of the installation and lines connection works. The company stated that all information about the project will be published at the local level through the distribution of the World Bank publications, the announcement in the local units, the project website and the company contracting offices.
About how to find sufficient information about the project.	A recommendation was given to the Egypt Gas Company to make on-site large panels on which publishing the company data, implementation plan, and putting emergency numbers on all the company's cars
About the possibility of connecting the illegal/non eligible buildings with the Natural Gas, which do not have a license or outside the urban area	The main reference for Egypt Gas Company approval to consider the residential unit legally and technically qualified to install Natural Gas is the existence of an official electricity bill for the residential unit. For unlicensed units that have performed electricity work, an electricity bill must be submitted from the company with a copy of the rental or ownership contract. If the building is not eligible, Egypt Gas will not connect NG under any conditions for community safety.
The main complaint during all community meetings is the negative impact on traffic	The policy of Egypt Gas Company during the construction phase is that there is no drilling work after

Question	Answers
during the drilling operations and not returning of the streets (restoration) to their original status after the completion of the project	the end of the working day, thus significantly reducing the problems of traffic liquidity. Concerning the "street restoration" issue, it is the responsibility of the local units, sometimes occurs a delay in paving because of the existence of a paving plan in the local units for the area street as a whole (the city or the village), not only where the drilling was carried out.
About the situation of residential units and buildings not technically qualified for Natural gas installation	There are no exceptions with respect to the technical requirements that have been set in this regard, that is for lives preservation, buildings safety, and the security of the society as a whole.
About the situation in the case of connecting an uninhabited residential units	In case of the owner desire to connect an uninhabited residential unit, it is required to provide the equipment's (stove / heater) before completing the connection.
About the project provides job opportunities for the local community	The community benefits from the presence of the company staff during the project period by supporting the local businesses i.e. shops, cafes, restaurants, and houses rent in the region. For unskilled labor, the project or subcontractors may employ temporary employment as needed, but are considered temporary short term employment

Phase Two: Community Consultation Session in Monofeya governorate (April 16th 2017)

The open discussion with the participants is summarized in form of a table, which presents the comments and the respective answers to that comment from the side of the EGAS Company and the consultants.

Main questions/comments by the public	Response by the EGAS company /consultants
Mr.Mohamed Expressing the appreciation of all the citizens for the project of Natural Gas installation to the Monofeya governorate villages, which has great benefits on the society, especially the security and safety factor (explaining the example of explosion of a gas cylinders in the village of Meet Umm Saleh, and the death of some residents), also the positive impact of modifying the fuel used in the ovens to work With natural gas and the reflection on the low pollution in the air	Reply by Eng. Ahmed Farag Thanks were given, then emphasizing the policy of the Natural Gas Holding Company (EGAS), that interests in maximizing the positive benefits of the project and reducing or avoiding negative impacts.
Dr. Mahmoud Bassiouni, member of parliament - of Al-Bagour Emphasize the importance of the project and positive points in the Natural Gas installation to households and that the negative impacts, if any, will be few in comparison to the positive impacts of the project He added that there are many villages located on the route of gas lines were not included in the current plan, although it is high population density and to maximize the benefit of the community, he asked to include those villages during the implementation	Reply by Eng. Ahmed Farag, EGAS company. He confirmed that during the implementation phase there are some villages located on the pipeline route and the possibility of installation to these villages is being studied which requires that all the facilities are connected As for the carrying capacity of the pipes, are they enough for the new villages?. It is emphasized that the increasing in capacities resulting from these villages are taken into account in the future planning of the networks and also taking into account the expected population densities in the future

Main questions/comments by the public	Response by the EGAS company /consultants
Eng. Abdel Razek Head of the local unit in the village of Meselha The question is about securing the natural gas pipes in the streets and what is the safe depth for the placement of the pipes As well as the question of insuring that the drilling waste is not dumped in the roads and safely disposed	Reply by Eng. Ahmed Farag, EGAS company. The company is committed to the British drilling specifications, and the required depth to secure the pipes is at a depth of 120 cm with the addition of soft sand down and above the pipes and putting a warning tape before the covering for the safety and alert during any future drilling work. Concerning the drilling wastes it is unlikely to throw them by the contractor because of the existence of the control by Egypt Gas Company on all the work of contractors and they are responsible to all parties for implementation
Mr. Syed from the village Shentena El-Hagar He stressed the need to announce the project in detail in terms of the beginning, end, and stages of implementation. He suggested the formation of public committees of local village leaders to help the project for the good of the public	Engineer Hani Mujahid Director of Monofeya Region, Egypt Gas Company Confirmed the importance of community participation for the success of the project. The best evidence of interest in the local community is holding the public consultation session to identify the important points of the community
Director of the local unit village of Estanha He stressed the need to announce the contracts of subcontractors with Egypt Gas Company to help in control the implementation and coordination for the success of the project	Engineer Hani Mujahid Director of Monofeya Region, Egypt Gas Company confirmed that the changed contractor - whom the question is about - based on the announcement of his bankruptcy, withdrawal from the implementation, and therefore was re-offering to another contractor, it was agreed to hold a meeting,

Main questions/comments by the public	Response by the EGAS company /consultants
	gathering the local unit and Egypt Gas Company, and the new contractor
Mr. Ahmed Kotb - Village of Salka The question is about connecting households to the main sewage network in the streets before connecting natural gas lines to households and the cost of implementation	General. Ahmed Medani - member of parliament the connecting households till the inspection rooms was approved by the governor to reduce 50% of the implementation cost
Mr. Assem Mahmoud - Talbant Absheesh Village The complaint about the problem of random networks of infrastructure in the villages due to the random connections of the people on the networks of utilities and the expected damage of that on the natural gas network	Eng. Ayman Abdel Rasheed – Egypt Gas Company confirmed that any drilling work for connecting the natural gas network to connect any house, will be carried out after the connection with the water or drainage facility, to solve any problem in the houses should be done in coordination with the Egypt Gas Company. The presence of the company technical staff is required to follow the drilling and ensure that the gas lines are not affected by drilling
Dr. Sherine Abdel Aziz, member of parliament Question about villages not included in the current implementation plan but located near the currently implemented Natural Gas network	Reply by Eng. Ahmed Farag, EGAS company. He stressed the previous response in terms of studying the situation of these villages and determine the technical possibility for installation with existence of the economic feasibility in terms of population density and the expected customers
One of the attendees Emphasize the citizens pleasure of connecting Natural Gas to their households, which contributes to raising the burden on citizens and reduce the burden of energy subsidy from the state.	Thanks were given, and stressed the importance of the co-operation of all parties to make the project succeed, which has a positive impact at the national level

Photos of attending participants






Summary of Consultation Outcomes

The majority of consulted groups expressed their willingness to install the NG to their areas. Aside from the overwhelming acceptance, few concerns were raised during the consultation process. Traffic congestion and street rehabilitation were the main concerns raised. NG Safety measures were raised as a main concern. Sharing of information in full cooperation with the community stakeholders and NGOs was strongly recommended by most of the consulted groups.

Site-specific consultation efforts included all concerned stakeholders – be they persons/households affected by the project activities, civil society organizations representing the interest of the community, or regulatory and governmental bodies who will play a role in facilitating or regulating the implementation of site-specific project activities.

While WB safeguards and regulations state that a minimum of two large-scale, well-publicized public consultation sessions are a must for projects classified as category „A" projects like the one at hand, additional consultation activities (for example through focus group discussions, in-depth meetings, and interviews) were implemented to reach the most vulnerable and hard to reach community members. Additionally, in order to obtain larger scale and more quantifiable information, the consultant has conducted surveys in the different project sites.

ESIA Disclosure

The site specific ESIA after being approved by the World Bank and EEAA, the final report will be disclosed on the WB website, EGAS and Egypt Gas websites. An executive summary in Arabic will be disclosed in EGAS and Egypt Gas websites. A copy of Monofeya Site specific reports will be disclosed in EEAA and in the Governorate level

Attached
List Of attendees

وزارة البترول والثروة المعدنية
الشركة المصرية القابضة للغازات الطبيعية "إيجاس"

THE WORLD BANK

EGAS

أسماء السادة الحاضرين
جلسة التشاور المجتمعي الخاصة بدراسة تقييم الأثر البيني لمشروع توصيل الغاز للمنازل بمحافظة المنوفية
يوم الأحد الموافق ٢٠١٧/٠٤/١٦

رقم	الاسم	الوظيفة	الجهة	المنطقة	البريد الإلكتروني	رقم التليفون	التوقيع
١							
٢							
٣					Fathy Eagles-egy.Com.	01222337794	
٤						01096682228	
٥						٠١٢٨٨٥٤٥٤٧	
٦						٠١٠٠١٧١٩٥١٥	
٧						٠١٠٦٥٢٧١٢٥٧	

بتروسيف

وزارة البترول والثروة المعدنية
الشركة المصرية القابضة للغازات الطبيعية "إيجاس"

أسماء السادة الحاضرين
جلسة التشاور المجتمعي الخاصة بدراسة تقييم الأثر البيئي لمشروع توصيل الغاز للمنازل بمحافظة المنوفية
يوم الأحد الموافق ٢٠١٧/٠٤/١٦

رقم	الاسم	الوظيفة	الجهة	المنطقة	البريد الإلكتروني	رقم التليفون	التوقيع
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	د/ أميرة الأمير	مدير إدارة	إيجاس			٠١٢٢٧٩٠٤١٧٨	
	[illegible]	[illegible]	[illegible]	[illegible]		٠١٠٠٧٧١٩٤٧٦	

وزارة البترول والثروة المعدنية
الشركة المصرية القابضة للغازات الطبيعية "إيجاس"

THE WORLD BANK

EGAS

أسماء السادة الحاضرين
جلسة التشاور المجتمعي الخاصة بدراسة تقييم الأثر البيئي لمشروع توصيل الغاز للمنازل بمحافظة المنوفية
يوم الأحد الموافق ٢٠١٧/٠٤/١٦

رقم	الاســــم	الوظيفة	الجهة	المنطقة	البريد الإلكتروني	رقم التليفون	التوقيع
	شويكار احمد خضر	محاسب	القاهرة تلبيشة	الناصر		٠١١٤٦٠٩٠٠٩٩	[illegible]
	محمد سعيد محمد	فني بشركة خالد	تلبيشة	مطروح		٠١٢٨٧٦٨٦٦٥٥	[illegible]
	رجب محمود البسيوني	مدير شركة الإبراهيمية	تلبيشة [illegible]	القاهرة		٠١١١٨١٤٢٥٠٤٦	[illegible]
	عاصم محمد زكي [illegible]	[illegible]	تلبيشة ابشيش				
	صابر عزت محمد	[illegible] فلاح	تلبيشة ابشيش				
	ايمن محمد ابراهيم	مهندس [illegible]	شركة غاز مصر	المنوفية	HSE_egat hotmail...	٠١٠٩٩٩٠١٨٥١	[illegible]
	وليد محمد حمدي	مدير ادارة	غاز مصر	التجمع الخامس			

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وزارة البترول والثروة المعدنية
الشركة المصرية القابضة للغازات الطبيعية "إيجاس"

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أسماء السادة الحاضرين
جلسة التشاور المجتمعي الخاصة بدراسة تقييم الأثر البيئي لمشروع توصيل الغاز للمنازل بمحافظة المنوفية
يوم الأحد الموافق ٢٠١٧/٠٤/١٦

رقم	الاســـــم	الوظيفة	الجهة	المنطقة	البريد الإلكتروني	رقم التليفون	التوقيع
	إسماعيل إبراهيم [illegible]	طالب	قرية تلبنت ابشيش	مركز الباجور		٠١٢٢٢٨٥٥٧٦٨	[signature]
	صلاح مسعد [illegible]	طالب جامعي	قرية تلبنت أبشيش	مركز الباجور	salah.mose852@gmail.com	٠١١١٧٧٠٣٤٠	[signature]
	أحمد محمود الغزاوي	طالب	//	//		٠١١٣١٤٤١٥١	[signature]
	ربيع محمد السيد	تاجر	تلبنت ابشيش	الباجور منوفية		٠١٠٦٩٨٦٨٠٤١	[signature]
	[illegible]	مدير منطقة منوفية	شركة غاز مصر			٠١١٠٥٤٥٠٠٥	
	م/ أحمد فرج	مدير المشروع	إيجاس	القاهرة	amfarrag@egas.com.eg	01226669097	[signature]
	د. [illegible]	بحوث بالماكث	نساطا			٠١١٤١١٠٣٠١	

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وزارة البترول والثروة المعدنية
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يوم الأحد الموافق ٢٠١٧/٠٤/١٦

رقم	الاسم	الوظيفة	الجهة	المنطقة	البريد الإلكتروني	رقم التليفون	التوقيع
١							

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يوم الأحد الموافق ٢٠١٧/٠٤/١٦

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١	طلعت أحمد نصيب	مهندس بالمعاش	سكان	شبين الكوم		٠١٠٠٧٤٧٥٠٢٣	[signature]
	محمد الغزالي نور	السلامة المهنية				٠١٠٠٥٥٦٢٤٧	[signature]
	رؤوف مصطفى [illegible]	رئيس وحدة محلية بالمعاش	سكان الجهة	بركة السبع		٠١٢٢٩٨٢٩٦٣٠	[signature]
	عاصم عبد المنعم [illegible]	مدير السلامة	بتروجاس	قويسنا		٠١٠٠٣٠١٧٠٢	[signature]
	[illegible]	باحث [illegible]	غاز [illegible]	الجزيرة أبو [illegible]		٠١٠٢٧٩٩٤٨٤	
	أحمد محمد البدراوي	مراسل	مركز المدينة	شبين الكوم (الحالي)			
	[illegible]	مدير الإدارة	مركز [illegible]	شبين الكوم [illegible]			

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وزارة البترول والثروة المعدنية
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رقم	الاســــم	الوظيفة	الجهة	المنطقة	البريد الإلكتروني	رقم التليفون	التوقيع
	سعيد محمد [illegible]	مدير عام بالمعاش	شنشنا الحجر	بركة السبع		٠١٢٠١٩٢٧٢٩٢	[illegible]
	محمد محمد أبو ليلة	شابع جلبا الدريش	شنشنا الحجر	بركة السبع		٠١٢٠٠٢٠٧٠٢	[illegible]
	[illegible]	[illegible]	شنشنا الحجر	بركة السبع		٠١٢٩٩٥٦١٠	[illegible]
	حسين عبدالله غنيم	محام	سلكا	سلكا		٠١٠٣٣٧٠١٣٤	حسين غنيم
	سامر [illegible] إبراهيم	رئيس قسم [illegible] شركة غاز منف	الباجور	الباجور		٠١٠٠٩٠٩١٦٧	[illegible]
	حامد عبدالحليم علام	فورمان حوارنا	بركة السبع	شبين الكوم		٠١٠٠٦٤٢٢٠٥١	حامد علام
	شاهر [illegible]	موظف	جامعة شبشير الحصة			٠١٠٩٦٦١٠٤٦٢	

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وزارة البترول والثروة المعدنية
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	سعيد محمد [illegible]	رئيس قسم الشئون بالوحدة المحلية بشنشا الحجر	شنشا الحجر			٠١٢٠٠٠٢٠٧٠٢	
	هبه السيد [illegible]	رائدة ريفية	شنشا الحجر			٠١٢٧٤٦٧٥١٢٩	هبه
	زينب [illegible] ابراهيم	كاتب رابع محو الأمية	[illegible] الحجر			٠١٢٧٥٧٥٠٣٤٢	زينب
	محمد عبد المنعم [illegible]	مهندس مدني	[illegible]			٠١٠٦٦٨٩٤٤٤٨	[illegible]
	سامح [illegible]	العمال	شنشا الحجر			١٧٠٠١٩٢٩	[illegible]

وزارة البترول والثروة المعدنية
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رقم	الاسم	الوظيفة	الجهة	المنطقة	البريد الإلكتروني	رقم التليفون	التوقيع

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رقم	الاســـــم	الوظيفة	الجهة	المنطقة	البريد الإلكتروني	رقم التليفون	التوقيع
١	محمد شحاته الصاوي	مدير عام بالمعاش	شنشا الحجر	بركة السبع		٠١٢٢٤٦٩٤٩٦٥	[illegible]
٢-	عبد ربه سرحيش	رئيس قرية [illegible] وحدة شنشا الحجر	شنشا الدير	بركة السبع		٠١٢٧٦٠٨٠٧٠٤	[illegible]
	شيماء صبحي عبد العال	محو امية	شنشا الحجر	بركة السبع		٠٤٢٨٨١٠٠٤٩٢	شيماء
	شروق صبحي صالح	محو امية	شنشا الحجر	بركة السبع		٠١٢٢١٩٨٤٦٣٦	شروق
	حسام يوسف ابو [illegible]	اداري شركة بترول [illegible]	سلكا	شبين الكوم		٠١٠٠٩٨٩٠٨٠٩	[illegible]
	يوسف علي عبد الحميد	رئيس قسم غاز مصر	اسطحو ٣	اسطحو ٣		٠١٠٠١٥٩٢٧٥٤	[illegible]

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وزارة البترول والثروة المعدنية
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يوم الأحد الموافق ٢٠١٧/٠٤/١٦

رقم	الاسم	الوظيفة	الجهة	المنطقة	البريد الإلكتروني	رقم التليفون	التوقيع

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يوم الأحد الموافق ٢٠١٧/٠٤/١٦

رقم	الاسم	الوظيفة	الجهة	المنطقة	البريد الإلكتروني	رقم التليفون	التوقيع

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يوم الأحد الموافق ٢٠١٧/٠٤/١٦

رقم	الاســـــم	الوظيفة	الجهة	المنطقة	البريد الإلكتروني	رقم التليفون	التوقيع
	د/ عائشة عبدالله [illegible]	مسئول سلامة مهنية ادارة شبين	ادارة شبين الكوم الصحية	شبين الكوم	Uosha-2008@Yahoo.Com	0106 3339579	عائشة [illegible]
	[illegible]	مدير المركز الاعلامي [illegible]	مجلس مدينة شبين الكوم	شبين الكوم	shimaa_amr@yahoo[illegible]	٠١٠٦٢٠٠٧٥٠٦٨	[illegible]
	أحمد عزت [illegible]	مدير مكتب عضو مجلس النواب	د/ محمود بسيوني			٠١٢٠٨٥٨٦٠٢٩	[illegible]
	أحمد عبد العزيز	طالب	شبين الكوم	سلكا	[illegible]	٠١٠٩٧٥٢١٧٦٧	أحمد عبد العزيز

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Annex 9: Equipment Used and Emission Measurements

1										1			قلاب
4												4	كمبوروسر
8												8	شاكوش
7			4	1								2	١١٠ مولد
21		2	5								7	7	٢٢٠ مولد
11			4	1								6	كمبيوتر لحام
2			2										٢٥٠ اسكويز
16			14	2									١٨٠ اسكويز
3			2	1									ماكينة لحام
3			1	1								1	مقصلة
2												2	دكاك
13		3	6	2								2	٢٤ ستيلسون
13		4	7	1								1	١٨ ستيلسون
10											10		ماكينة قلاوظ
9											9		ماكينة قطعية
32									5		25	2	هيلتى دريل
32			4					1			25	2	منجله
13			4								9		سلم فردتين
18								4			10	4	تست بامب
19			4		1			4			10		مقياس زنبق
260											260		سقالات
45											45		سقالات SP
60			6								54		شنطة تركيبات
16			4				12						شنطة تحويلات
8									8				شنطة مداخن

7	السادات

2			2										سوزوكى
2			2										سنجل
1		1											دبل
2												2	لونج

نموذج قياس الضوضاء

المنطقة : المؤسسة .. المحلة ..   التاريخ ٢٩ / ٢ / ٢٠١٧

م	المكان	سنة الصنع	نتائج القياس (ديسيبل)	الحد القانوني: المعدات المصنعة قبل ٢٠١١	الحد القانوني: المعدات المصنعة بدء من ٢٠١١	حالة المطابقة	ملاحظات
١ـ	جرعة ٢٠١ أحمد عبد الغني		٨٦,٨	٩٠	٨٥	مطابق طبقا للحدود المسموح	
٢ـ	جرعة ٢٠١ أحمد عبد الغني		٨٥,٥	٩٠	٨٥	مطابق طبقا للحدود المسموح	
٣ـ	جرعة ٢٠ عماد عبد الرازق		٨٤,٢	٩٠	٨٥	ـــ ـــ ـــ	
٤ـ	جرعة ٢٠ عماد عبد الرازق		٨٦,٢	٩٠	٨٥	ـــ ـــ ـــ	
				٩٠	٨٥		
				٩٠	٨٥		
				٩٠	٨٥		
				٩٠	٨٥		
				٩٠	٨٥		
				٩٠	٨٥		
				٩٠	٨٥		
				٩٠	٨٥		
				٩٠	٨٥		
				٩٠	٨٥		
				٩٠	٨٥		
				٩٠	٨٥		

الاسم : ياسر البرلسي

التوقيع : [illegible]

F(30-4)

... - sper scientific I.22731

نموذج قياس ...

المنطقة ١٠ ...

الأمن الصناعي

المحلة + المنصورة

testo c632.0307

عناية م/ ... /الأستاذ م ...

شركة غاز مصر

نموذج قياس العادم
(المعدات التى تعمل بالديزل)

التاريخ ١٣/ ٣/ ٢٠١٧

المنطقة السادات (شبكات)

م	نوع المعدة	رقم المعدة	سنة الصنع	المكان	نتائج القياس (يتم القياس عند أقصى تعجيل) Bacharach	نتائج القياس Opacity (درجة اعتام) %	الحد المقبول للمعدات ما قبل ٢٠٠٣ طبقا لمتطلبات الشركة Bacharach	الحد المقبول للمعدات ما قبل ٢٠٠٣ Opacity (درجة اعتام) %	الحد المقبول للمعدات بدءا من عام ٢٠٠٣ طبقا لمتطلبات الشركة Bacharach	الحد المقبول للمعدات بدءا من عام ٢٠٠٣ Opacity (درجة اعتام) %	حالة المطابقة	ملاحظات
١-	[illegible]	C33	غير واضح	السادات	٣	٩,٦	٨	% ٢٥,٦	٧	% ٢٢,٤	مطابق	
							٨	% ٢٥,٦	٧	% ٢٢,٤		
							٨	% ٢٥,٦	٧	% ٢٢,٤		
							٨	% ٢٥,٦	٧	% ٢٢,٤		
							٨	% ٢٥,٦	٧	% ٢٢,٤		
							٨	% ٢٥,٦	٧	% ٢٢,٤		
							٨	% ٢٥,٦	٧	% ٢٢,٤		
							٨	% ٢٥,٦	٧	% ٢٢,٤		
							٨	% ٢٥,٦	٧	% ٢٢,٤		

• الحد القانوني طبقا لقانون البيئة رقم ٤ لسنة ١٩٩٤م و لائحته التنفيذية الصادرة بقرار رئيس مجلس الوزراء رقم ٣٣٨ لسنة ١٩٩٥م و المعدلة بالقرار رقم ١٠٩٥ لسنة ٢٠١١م هو ٣٠% درجة اعتام للمركبات المصنعة قبل عام ٢٠٠٣ و ٢٥% درجة اعتام للمركبات المصنعة اعتباراً من عام ٢٠٠٣م.

• للتحويل من Bacharach إلى opacity (درجة الإعتام) : ١ Bacharach = ٣,٢ % درجة إعتام

نظرا لأن أعلى قياس متاح للجهاز المستخدم (٩ Bacharach) فإنه تم إعتبار القياس رقم (٨) هو الحد الأعلى للقياس المقبول

الاسم / محمد ...

التوقيع / ...

F(30-F)

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نموذج قياس الضوضاء

المنطقة: السادات (الموقع) التاريخ ١٣/ ٣/ ٢٠١٧

م	المكان	سنة الصنع	نتائج القياس (ديسيبل)	الحد القانوني: المعدات المصنعة قبل ٢٠١١	الحد القانوني: المعدات المصنعة بدءً من ٢٠١١	حالة المطابقة	ملاحظات
١	تركيبات السادات	بعد عام	٩٠	٩٠	٨٥	مطابق طبقا لمدة التشغيل	ماكينة طراز [illegible]
	مجمع م/ إبراهيم	٢٠١١	٨٩	٩٠	٨٥		رقم ٢٥٤٤١٢٦ ٤١
	فوزي		٨٤	٩٠	٨٥	مطابق طبقا	مولد رقم ٤١٤٠
			٨٨	٩٠	٨٥	لمدة التشغيل	مولد رقم ٤١٣٩
				٩٠	٨٥		
				٩٠	٨٥		
				٩٠	٨٥		
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				٩٠	٨٥		

الاسم:

التوقيع:

F(30-4)

TECHNICAL SPECIFICATION

PE Pipe Cutter 32 mm, 63-125 mm, 180-250 mm and PE Pipe Cutter 315 mm

1. Scope:

1.1 This specification covers the minimum requirements for design, manufacture, inspection, testing, and supply of Pipe cutting tools to be used in natural gas transmission and distribution systems for Egypt Gas Co.

PE Pipe Cutter 32 mm
PE Pipe Cutter 63-125 mm
PE Pipe Cutter 180-250 mm
PE Pipe Cutter 315 mm

2 General

2.1 Pipe cutting tools shall be capable of correct operation at ambient temperatures between −5 °C and 60 °C, with pipes and fitting spigot outlets at extremes of diameter and ovality tolerances specified in GIS/PL2-1, GIS/PL2-2, GIS/PL2-5 and GIS/PL2-8.

2.2 Pipe cutting tools shall be capable of withstanding a single drop test, in accordance with Procedure 1 of BS EN 60068-2-32 from a height of 1 m without subsequent malfunction.

2.3 The supplier shall specify the composition of the component material to be used for any cutting tools and shall demonstrate that it is suitable for the intended application.

2.4 Pipe cutting tools shall be capable of simple and easy operation. Tools and equipment shall not cause damage or cause distortion to the pipes or fittings. Outside diameter/bore dimensions and ovalities shall conform to GIS/PL2-2and GIS/PL2-8.

2.5 Pipe cutting tools should be constructed from corrosion-resistant materials, or be otherwise suitably protected. Particular consideration should be given to shafts and fastenings.

2.6 Pipe cutting tools shall be capable of being installed and operated within trench conditions.

2.7 pipe cutting tools shall be suitable for use with PE pipes SDR 11 and SDR 17.6.

3. Design

3.1 The design of pipe cutting tools shall require only minimum maintenance of cutter blades, and replacement shall be incapable of incorrect positioning.

3.2 Pipe cutting tools shall be capable of being set up and removed in a trench.

3.3 The pipe cutting tool shall not damage or deform the pipe remote from the actual cutting action.

3.4 Test shall be according with GIS/PL2-5.

3.5 PE Pipe Cutter should meet the requirements of GIS / PL2-5.

TECHNICAL SPECIFICATION

Alignment Clamp 250 mm

1. Scope:

1.1This specification covers the minimum requirements for design, manufacture, inspection, testing, and supply of Alignment clamp 250 mm to be used in natural gas transmission and distribution systems for Egypt Gas Co.

2. General

2.1 Alignment clamp used for jointing 250mm electro fusion couplers hinged with pins for ease of pipe positioning in trench

2.2 Alignment clamp 250 mm shall be capable of correct operation at ambient temperatures between −5 °C and 60 °C, with pipes and fitting spigot outlets at extremes of diameter and ovality tolerances specified in GIS/PL2-4, GIS/PL2-8 and GIS/PL2-2.

2.3 Alignment clamp 250 mm shall be capable of withstanding a single drop test, in accordance with Procedure 1 of BS EN 60068-2-32 from a height of 1 m without subsequent malfunction.

2.4 The supplier shall specify the composition of the component material to be used for any Alignment clamp and shall demonstrate that it is suitable for the intended application.

2.5 Alignment clamp 250 mm shall be capable to meet the requirements of GIS/PL2-2, GIS/PL2-4, GIS/PL2-6 and GIS/PL2-8.

2.6 Alignment clamp 250 mm should be constructed from corrosion-resistant materials, or be otherwise suitably protected. Particular consideration should be given to shafts and fastenings.

2.7 Alignment clamp 250 mm shall be capable of being installed and operated within trench conditions.

3. Design

3.1 Alignment clamp shall be designed to stop axial and rotational movement and aid alignment of adjoining pipes during the jointing/cooling process, but shall not preclude free movement of the electro fusion fitting.

3.2 Alignment Clamp should meet the requirements of GIS / PL2-5

3.3 Alignment Clamp with is belt not accepted.

TECHNICAL SPECIFICATION

Multi kit Clamp (90mm-180 mm)

1. Scope:

1.1This specification covers the minimum requirements for design, manufacture, inspection, testing, and supply of Multi kit clamp (90mm-180 mm) to be used in natural gas transmission and distribution systems for Egypt Gas Co.

2. General

2.1 Multi kit clamp (90mm-180 mm) shall be designed to strain the PE pipe from 90 mm to 180 mm prior to carrying out the electro fusion jointing process on PE pipe work in accordance with GIS/PL2-5 with accessories sets (180*125 mm) and (125*90 mm) .

2.2 Multi kit clamp (90mm-180 mm) shall be capable of correct operation at ambient temperatures between −5 °C and 60 °C, with pipes and fitting spigot outlets at extremes of diameter and ovality tolerances specified in GIS/PL2-4, and GIS/PL2-8.

2.3 Multi kit clamp (90mm-180 mm) shall be capable of withstanding a single drop test, in accordance with Procedure 1 of BS EN 60068-2-32 from a height of 1 m without subsequent malfunction.

2.4 The supplier shall specify the composition of the component material to be used for any Multi kit clamp (90mm-180 mm) and shall demonstrate that it is suitable for the intended application...

2.5 Multi kit clamp (90mm-180 mm) shall be capable to meet the requirements of GIS/PL2-2, GIS/PL2-4, GIS/PL2-6 and GIS/PL2-8.

2.6 Multi kit clamp (90mm-180 mm) shall be constructed from corrosion-resistant materials, or be otherwise suitably protected. Particular consideration should be given to shafts and fastenings.

2.7 Multi clamp (90mm-180 mm) shall be capable of being installed and operated within trench conditions

3. Design

3.1 Multi kit clamp (90mm-180 mm) shall be designed to stop axial and rotational movement and aid alignment of adjoining pipes during the jointing/cooling process, but shall not preclude free movement of the electro fusion fitting.

3.2 Multi kit clamp (90mm-180 mm) should meet the requirements of GIS / PL2-5

3.3 Multi kit clamp (90mm-180 mm) Main set shall be metal.

TECHNICAL SPECIFICATION

Window Clamp 63 mm

1. Scope

1.1This specification covers the minimum requirements for design, manufacture, inspection, testing, and supply of Window clamp 63 mm to be used in natural gas transmission and distribution systems for Egypt Gas Co.

2. General

2.1 Window clamp 63 mm used for jointing 63mm electro fusion couplers for ease of pipe positioning in trench

2.2 Window clamp 63 mm shall be capable of correct operation at ambient temperatures between −5 °C and 60 °C, with pipes and fitting spigot outlets at extremes of diameter and ovality tolerances specified in GIS/PL2-4, and GIS/PL2-8.

2.3 Window clamp 63 mm shall be capable of withstanding a single drop test, in accordance with Procedure 1 of BS EN 60068-2-32 from a height of 1 m without subsequent malfunction.

2.4 The supplier shall specify the composition of the component material to be used for any Window clamp 63 mm and shall demonstrate that it is suitable for the intended application.

2.5 Window clamp 63 mm shall be capable to meet the requirements of GIS/PL2-2, GIS/PL2-4, GIS/PL2-6 and GIS/PL2-8.

2.6 Window clamp 63 mm should be constructed from corrosion-resistant materials, or be otherwise suitably protected. Particular consideration should be given to shafts and fastenings.

2.7 Window clamp 63 mm shall be capable of being installed and operated within trench conditions.

3. Design

3.1 Window clamp 63 mm shall be designed to stop axial and rotational movement and aid alignment of adjoining pipes during the jointing/cooling process, but shall not preclude free movement of the electro fusion fitting.

3.2 Window clamp 63 mm should meet the requirements of GIS / PL2-5

3.3 Non metal Window clamp 63 mm is not accepted.

TECHNICAL SPECIFICATION

Strap Loader 63-400

1. Scope

1.1This specification covers the minimum requirements for design, manufacture, inspection, testing, and supply of Strap Loader 63-400 mm to be used in natural gas transmission and distribution systems for Egypt Gas Co.

2. General

2.1 The Strap loader 63- 400 mm is designed for the installation of top loading electro – fusion branch saddles and tapping tees.

2.2 The Strap loader 63-400 mm shall be capable to meet the requirements of GIS/PL2-2, GIS/PL2-4, GIS/PL2-6 and GIS/PL2-8.

2.3 The Strap loader shall be capable of installation and removal in a cross main trench.

2.4 The Strap loader 63-400 mm shall be capable of withstanding a single drop test, in accordance with Procedure 1 of BS EN 60068-2-32 from a height of 1 m without subsequent malfunction.

2.5 The supplier shall specify the composition of the component material to be used for any The Strap loader 63-400 mm and shall demonstrate that it is suitable for the intended application.

2.6 The Strap Loader 63-400 should be constructed from corrosion-resistant materials, or be otherwise suitably protected. Particular consideration should be given to shafts and fastenings.

2.7 The Strap Loader 63-400 mm shall be capable of being installed and operated within trench conditions.

3. Design

3.1 The Strap Loader tool shall be so designed that, when used with either straight pipe or coiled pipe, the load on the fitting shall follow the centre line of the stack, down through the centre line of the pipe, and be not less than 95 % of the indicated value.

3.2 A method of indicating that the correct load is achieved shall be permanently provided on the tool. The application of the correct load shall be easily detected by the operator.

3.3 Any screw action shall not apply a turning motion to the fitting.

3.4 The strap Loader tool shall meet the requirements of GIS/PL2-5

3.5 Strap loading tool shall be suitable for use with PE pipes SDR 11 and SDR 17.6.

TECHNICAL SPECIFICATION

Barometer

1. **Pressure media:** compatible with non. Corrosive gages
2. **Presser Range:** up to 2 bar absolute
3. **Display overload:** instrument capable of nominal 110% full scale (F.S), error code will flash
4. **Resolution:** 0.01 mbar
5. **Temperature range:** operating (-10 °C to 50 °C)
6. **Power supply:**
    - Alkaline **AA** batteries
    - Rechargeable **Ni cad** batteries & external power adaptor / charger
7. **Carrying case**
8. **Operating, calibration & service manuals**
    a. Note: the supplier shall guarantee repair & service for at least (five years) starting from date of supplying
    b. Test certificate
9. **Test certificate**

TECHNICAL SPECIFICATION

Mercury Gauge

1. **Type**: Solid acrylic vertical manometer
2. **Pressure Range**: 0 to 500 mbar
3. **Resolution:** 2 mbar
4. **Scale length:** 510 mm
5. **Width:** 54 mm
6. **Indicating liquid:** metallic mercury
7. **Connector**: 6mm i.d. push on
8. **backing board**
9. **carrying case**
10. **Test certificate**

TECHNICAL SPECIFICATION

BUTT FUSION MACHINES

Item		specification	Units
Input supply	220V Units	195-260	Vac
Diameter range	Gator 250	63~250	mm
	Gator 315	125-315	
	Gator 400	180-400	
SDR range	Typical	7.25, 7.4, 9, 11, 13, 17, 17.6, 26, 32 plus Capability for special SDR	
Operating temperature	Range	0 ~ +45	°C
Storage temperature	Range	-15 ~ +50	°C
Environmental protection		IP54	
Sequence details	Trim	Automatic	
	Check (Slippage)	Automatic	
	Check (Alignment)	Manual visual inspection	
	Bead-up phase	Automatic	
	Soak phase	Automatic	
	Heater removal	Automatic	
	Pressure build-up	Automatic	
	Fusion phase	Automatic	
	Cooling phase	Automatic	
Heater removal time		< 3	Seconds
Database	Capacity	> 600	Records
	Retrieval	Data Socket	
	Lifetime	>10	Years
	Fusion data	Active	
	Traceability	Active	
Printer		Available	
Fast Data Transfer		Available	
Welding standard	Gas BG standard		
	Water standard		

Document Required

- Operating manual
- Full schematic diagrams
- Full circuit and wiring diagrams
- Calibration manual
- Electronic manual describe the operation of each Ic
- Any password needed for every level of encryption required to maintain the machine
- Full list of tools required to maintain and calibrate the machine
  The supplier shall send a confirmation that he will supply any required spare parts during 5 years at least starting from the date of delivery
- The supplier shall send a warranty certificate for each machine
- All document shall be hard and soft copy in English language

Special requirement

Technical and commercial offer shall include

- Spare parts that is sufficient to repair the machine (chassis, trimmer, etc.) for 3 years.
- Complete 3 sets of calibration tools
- Each machine shall be complete with 2 combatable generators

TECHNICAL SPECIFICATION

Electro fusion Control Box

1. SCOPE:

1.1 All control box shall be made in accordance with the British Gas specifications GBE/ECE1 or equivalent, if the control box is made in accordance to another specification. So a copy of this specification shall be sent.

1.2 Control box must be able to joint to all electro fusion fittings approved to British Gas specification PS / PL2 PART 4.

1.3 All documentations shall be in English language.

2. TECHNICAL SPECIFICATIONS:

2.1 **Operating mode:** manual

2.2 **Input voltage:** 230 ± 20% **volts**

50 ±20% **Hz**

2.3 **Output voltage:** 39.5 volts ± *0.5* volts AC RMS

2.4 **Operating Temp.:** 0 °C to *+45°C*

2.5 **Timer range:** >3000 sec

2.6 **Input Protection:** Circuit Breaker

2.7 **Display:** Back-Light LCD

2.8 **Interface Language:** English

2.9 **Input cable length:** 5 meter

2.10 **Output cable length:** 3 meter

2.11 **Degree of protection:** *1P٥٤*

2.12 The control box shall be equipped with Emergency Stop Push Button

2.13 Output power shall be sufficient to fuse all fittings up to 315 mm

3. DESIGNAND CONSTRUCION:

3.1 Control box, frame and associated input & output cables shall not be heavier than 30 kg.

3.2 The control box should be designed to allow ease of operation, calibration and maintenance.

3.3 The control box shall be designed and constructed in such a manner to afford protection against electric shock in accordance with BS *2754.*

3.4 The control box enclosure shall be in accordance with BS 5420 1P54 with the socket - outlet exposed.

3.5 The input cable shall be flexible 3-core with overall screening.

3.6 The input cable / insulation shall be PVC to BS 6746, type Til with a PVC sheath to type TM1 and flexible conductors to BS 6360.

3.7 Input cable shall be permanently attached to the control box.

3.8 The input cable supply source end shall terminate at a 3-pin 220V, 32 A plug.

3.9 The output cable / insulation shall be PVC to BS 6746, type TIl with a PVC sheath to type TM1 and flexible conductors to BS 6360.

3.10 Overload protection shall be fitted to the input side of the control unit in an accessible position.

3.11 The control box shall be designed to operate from a nominal earthed 220V, 50Hz sinusoidal supply.

Special requirement

Technical and commercial offer shall include

4.1) Complete spare parts for repair the control boxes for 3 years

4.2) 3 complete sets of calibration tools

PORTABLE AIR COMPRESSOR SPECIFICATIONS

1) COMPRESSOR:

- Oil injected rotary screw compressor.
- Single–stage.
- Nominal effective working pressure (rated operating Pressure not less than (7 Bar).
- Minimum effective pressure not less than (4Bar).
- Free air delivery not less than 392 cfm
- Cooling and lubricating by injected oil.

2) ENGINE:

Compressor driven by:

- Four stroke diesel engine.
- 4-Cylinders in-line engine.
- Output according to SAEJ 1995 at normal shaft speed 113 BHP.
- Mechanical direct injection fuel system.
- With turbocharger "after/intercooler".
- Fuel consumption at full load not more than 17.5 Kg/hr
- Emission Tier level: Tier2 or Tier3.

3) FRAME AND AXLE:

- Heavy – duty frame prefer galvanize iron sheet
- Provide easy opining and easy access for serviceability and maintenance.

"Prefer separated parts for easy handling during maintenance operations"

- Adjustable drawbar with parking brake and safety chain.

- With lifting eye provide easy and safety hoisting.

4) SAFETY DEVICES:

- All safety devices needed for safe operation like "thermal Shutdown switch, receiver safety valve, low engine oil Pressure, high coolant temperature ….etc".

5) CONTROL PANEL:

- The control panel grouping with "working pressure gauge – compressor outlet tempreture gauge – engine oil pressure indicator - coolant temperature indicator- hour meter – battery charge indicator.

6) GENERAL REQUIRMENTS:

- All technical specifications for all components.
- All drawings, catalogues for operation, maintenance, Spare parts, circuits and diagrams must be supplied in English language.
- Warranty certificate for not less than one year from first operate.
- Training in your premises for ten persons as will as training for operation and maintenance for the com-presser.
- Availability of spare parts.
- After sales service center.
- Must be local agent for compressor.

PORTABLE AIR COMPRESSOR SPECIFICATIONS

1) COMPRESSOR:

- Oil injected rotary screw compressor.
- Single–stage.
- Nominal effective working pressure (rated operating Pressure not less than (14 Bar).
- Minimum effective pressure not less than (4Bar).
- Free air delivery not less than 335 cfm
- Cooling and lubricating by injected oil.

2) ENGINE:

Compressor driven by:

- Four stroke diesel engine.
- 4-Cylinders in-line engine.
- Output according to SAEJ 1995 at normal shaft speed 141 BHP.
- Mechanical direct injection fuel system.
- With turbocharger "after/intercooler".
- Fuel consumption at full load not more than 21.5 Kg/hr
- Emission Tier level: Tier2 or Tier3.

3) FRAME AND AXLE:

- Heavy – duty frame prefer galvanize iron sheet
- Provide easy opining and easy access for serviceability and maintenance.

"Prefer separated parts for easy handling during maintenance operations"

- Adjustable drawbar with parking brake and safety chain.

- With lifting eye provide easy and safety hoisting.

4) SAFETY DEVICES:

- All safety devices needed for safe operation like "thermal Shutdown switch, receiver safety valve, low engine oil Pressure, high coolant temperature ….etc".

5) CONTROL PANEL:

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6) GENERAL REQUIRMENTS:

- All technical specifications for all components.
- All drawings, catalogues for operation, maintenance, Spare parts, circuits and diagrams must be supplied in English language.
- Warranty certificate for not less than one year from first operate.
- Training in your premises for ten persons as will as training for operation and maintenance for the com-presser.
- Availability of spare parts.
- After sales service center.
- Must be local agent for compressor.

specifications of rotary hammer

Rated input power	850 W
Dust removal module	TE DRS - Y (optionnal)
Rotation speed gear 1 under no load	700 ~ 800 rpm
Single impact energy	3 ~ 4 J
Weight according to EPTA Procedure 01/2003	4 ~ 5 Kg
Full hammering frequency	not less than 4000 impacts / minute
Working mode	Hammer drilling , Drilling only
Prefer Hammer drilling with active vibration reduction (AVR)	
Quick release chuck	
Warranty	2 years
spare parts & after sales services	Availability of spare parts
	After sales service center
Must be local agent	

specification of combihammer

Rated input power	not less than 1500 w
Dust removal module	TE DRS - Y (optionnal)
Max Rated speed	not less than 300 rpm
Single impact energy	11 ~ 12 J
Weight according to EPTA Procedure 01/2003	not more than 8.3 Kg
Full hammering frequency	not Less than 2700 impacts / minute
Working mode	Hammer drilling , Drilling only , Chisel-ling,Chisel setting
Chiselling function	yes
Chiselling intensity	No chiselling , Corrective chiselling in masonre / brick , Corrective chiselling in concrete , Penetrations / openings in concrete
service indicator	yes
Prefer Hammer drilling with active vibration reduction	
Warranty	2 years
spare parts & after sales services	Availability of spare parts
	After sales service center
Must be local agent	

specification of pipe vice M/C

Pipe Capacity		Weight Kg
Inch	mm	
⅛ - 6	10 - 168	Less than 25

Warranty : NOT LESS ONE YEAR

spare parts & after sales services	Availability of spare parts
	After sales service center
Must be local agent	

specification of bending M/C (Electro-hydraulic)

capacity inch	**pump force KN**	**Motor**	weight kg
3/8 ~ 2	80 ~ 90	220V -- 1.4 kw	100 ~ 110

Tip-up wing benders

Warranty : NOT LESS ONE YEAR

spare parts & after sales services	Availability of spare parts
	After sales service center
Must be local agent	

specification of generator

AC frequency	50 HZ
AC output voltage	220 V
MAX. AC output	5.5 KVA
Rated AC output	5.0 KVA
AVR	with capacitor NOT cartage
DC output	12 V - 8.3 A
Electric starter	yes
starting system	Recoil
operating time at rated	8h
Effictive fuel tank capacity	24 liters
Dimensions (L x W x H)	680**x**530x570 mm
Dry mass	84.0Kg
warranty	Not Less One Year
spare parts & after sales services	Availability of spare parts
	After sales service center
Must be local agent	

specification of Fusion generator

AC frequency	50 HZ
AC output voltage can be selected	110 or 230 V by using external switch
Net power / speed	8 - 9 Kw / 3600 RPM
AVR	with capacitor NOT cartage
Engine type	;
Displacement	389 cm^3
engine oil capacity	1 - 1.5 L
Effictive fuel tank capacity	15 - 20 liters
Dimensions (L x W x H)	380**x**460x450 mm
Dry mass	30 - 32Kg
Electric starter	yes
warranty	Not Less One Year
spare parts & after sales services	Availability of spare parts
	After sales service center
Must be local agent	

specification of threading M/C 1/4"~2"

_ Threading machine for stanless steel and steel gas pipes

_ Threading capacity **¼" ~ 2"**

_ Weigt **not more than 44 Kg**

_ Spindle speed **40 (rpm) (No Load)**

_ Motor **220 Volt 750 WATT 50/60HZ**

_ Dimensions **not more than (L) 550mm x (w) 450 x (H) 350mm**

_ Standard Accessories **Manual Die - Head: 1/2" ~ 2"**

Dies : BE 1/2" ~ 3/4" BE 1"~ 2"

Threading oil White 4L (1Can)

* spare parts & after sales services

- Availability of spare parts
- After sales service center

* Must be local agent

*warranty : Not Less One Year

Technical specification of welding generator

Rated welding output	**600 A , 40 VOLT DC , 40% DUTY CYCLE**
Amperage range	**45 - 600 A**
MAX. Open-circuit voltage DC	**95 V**
Auxiliary power rating	**single-phase , 3 kVA/KW , 25A , 120V AC , 60 Hz**
Engine	**diesel engine air-cooled 40 HP**
Fuel capacity	**23 gal (87 L)**
Sypplier and origin	**Europe - USA - japan**
warranty	**Not Less One Year**

*** Must be local agent for welding generator**

*** spare parts & after sales services**

- Availability of spare parts
- After sales service center