Ras Shukier
Environmental Statement
2004
No Damage To Environment
Everybody who works for GUPCO is responsible for getting HSE right. Good HSE performance and the health, safety and security of everyone who works for use are critical to the success of our business. Our goals are simply stated- no accidents, no harm to people and no damage to the environment.

We will continue to drive down the environmental and health impact of our operations by reducing waste, emissions and discharges, and using energy efficiently.

We will:
- Consult, listen and respond openly to our customers, employees, neighbors, public interest groups and those works with us.
- Work with others – our partners, suppliers, competitors and regulators- to raise the standards of our industry.
- Openly report our performance, good and bad.
- Recognize those who contribute to improve HSE performance.

Our business plans include measurable HSE targets. We are all committed to meet them.

__________________________________________
Introduction

We are proud of our achievements over the year 2004

This externally verified statement will give you and understanding of what GUPCO has been achieved at GOS operations.

Background

GUPCO was formed on July 31, 1965 after the discovery of EL-Morgan offshore oil field. GUPCO mission as defined by the concession agreement is to carry out all oil and gas exploration, Development and production operations in Egypt as a non profit Egyptian Operating Company, and as an agent whose activities add value to the principle shareholders; the Egyptian General Petroleum Corporation (EGPC) and Amoco-Egypt Oil. Amoco started operating in the Gulf of Suez (GOS) in 1964 before establishing GUPCO. On Jan. 1999 merging occurred between Amoco and British Petroleum Company producing one Company named BP Amoco. On 2000, BP Amoco name changed to be “bp”.

GUPCO-GOS cumulative oil production reached 4074 Millions BBLS of oil in Dec. 2000 and current production rate is over 100,000 BOPD from all fields in Gulf of Suez.

GUPCO-GOS employs a total of approximately 1500 personnel assigned to Ras Shukheir working on a rotation schedule. An average of 3300 foreign and Egyptian contractor personnel are also assigned to Ras Shukheir.

J-10 Complex
GUPCO – Ras Shukier District
Commitment to Health, Safety and Environmental Performance

GUPCO – GULF OF SUEZ DISTRICT
Health, Safety and Environmental (HSE) Statement

Our Commitment: We are fully committed to the achievement of the highest standards of HSE performance in all of our operations. This commitment covers the management and operation of the offshore and onshore activities at GOS district.

In line with GUPCO Policy, we have set three simple goals that require all personnel working within GUPCO Gulf Of Suez District operations either as employee, contractor or third party to strive towards. The Goals are that within GUPCO Gulf Of Suez District operated activities:

There will be NO accidents
There will be NO harm to people
There will be NO damage to the environment

Assessment and Compliance: We will assess the impact of our operations using recognized risk assessment processes for all new and existing operations. These will be used to identify and implement appropriate controls to reduce the impact on the environment, including the prevention of pollution, and to improve health and safety. We will at all times strive to exceed regulatory compliance and work according to accepted best practices within the industry.

Improvement and Reporting: To achieve continual health, safety and environmental improvement, we will develop an action plan, incorporating annual targets against which our performance will be reviewed. The findings of this will be openly reported in our annual HSE statement.

Personnel: Everyone working for and with us will be accountable for HSE Performance. We will work closely with our contractors, third parties and suppliers to ensure safe operations are realistically achievable at all times.

We will ensure competence of GOS personnel through selection, placement, training and assessment. A prime motivator for our contractor selection process will be to work only with organizations that are committed to working with us in pursuit of the superior HSE performance standards we set ourselves.

We will recognize good and exceptional HSE performance, encourage openness and invite the participation of everyone in decisions, which impact on safe operation and demonstrate the belief that HSE performance is genuinely held as a primary priority.

Everyone is expected to give their full commitment to the achievement of these goals.

Environmental Commitment: We will maintain an EMS which will meet the highest environmentally recognized standards.

Ras Shukheir – August 2004

Ahmed Aboud
GOS District General Manager

Fawaz Bitar
GOS District General Manager
Ras Shukheir maintains ISO-14001 as externally assessed environmental management system. Clearly focused environmental management can reduce environmental impacts, helping us to achieve our goal of no damage to the environment.

ISO 14001 is an International Standard for Environmental Management System (EMS). It provides a set of management principles for use by a wide range of sectors. The emphasis is on continual improvements in environmental performance.

The process within our environmental management system are cyclical, most occurring annually. The diagram on the right represents the various processes and stages that are within our environmental management system.
Processes and Activities
The main process of GUPCO-GOS District is to safely produce crude oil and gas from offshore wells. Meanwhile, a group of correlated processes and activities takes place. Processes and activities that are handled in GOS district could be classified into the following types:

1- Oil production process:

Crude oil is produced from a total of 100 platforms at different fields. All these wells are offshore and naturally or artificially producing, by gas lifting, water injection or by submersible pumps.

Produced oil is transferred from satellites / complex platforms to onshore facilities through pipelines.

Oil processing facilities are different from field site to another according to produced oil specifications and stage of processing needed. The main objective of oil process plant is to remove water and salt from crude oil.

The oil produced from process plant is stored in storage tanks. Some oil pumped to PPC and some to tankers for export. Figure (1) illustrates an overview on oil production process.

2- Official works:

Official works take place in the Head Office activities and within the site managing direction offices to plan and follow up site activities.

3- Housekeeping & Residence activities:

All Residence areas at GOS sites are well designed and furnished to be comfortable for employees. Green areas are taken into consideration and well maintained. The housekeeping is maintained to a high standard. Health care is available at site clinic center.

4- Material storage process:

Adequate storage areas are provided for each type of material / product. Stores for facilities, spare parts, chemicals, materials, lube oil and diesel fuels are available. All storing operation inputs are safe as materials are supplied in secured containers or packages.

5- Workshops and maintenance activities:

General service workshops are available at Ras Shukheir site to provide maintenance and repair services of facilities and equipment. Workshops for mobile vehicles, equipment, instruments, mechanical works, electrical works, turbines, pumps, wire lines and construction works are established at Ras Shukheir.

6- Domestic Water Treatment process:

This operation exists at Ras Shukheir site for the purpose of providing the required amount for domestic and industrial water uses. Reverse Osmosis units are available for brackish water treatment operation (approximately 12,000 bbl/day).
7- **Power generation process:**

A large power station is available at Ras Shukheir to generate electric power needed for operating all production and services facilities and for residence activities at onshore (210 M Watt/day). Electric power for operating offshore complex facilities is supplied from a minimum of two generators on each complex.

8- **Contracted operations:**

Contractor companies through agreement protocols, such as exploration and drilling works, resource some activities and operations of GUPCO-GOS District. Some other operations are achieved by contractors such as construction, catering, house keeping and fuel supply works. Those contractors are working in GUPCO-GOS sites and have their assigned areas of work, storage and residence.

9- **Shipment process:**

Crude oil is transferred through pipelines, from offshore complexes to Ras Shukheir oil process plant for processing works. Crude oil is exported from Ras Shukheir tank farm, through pipelines, for internal national use or to tankers through two sea berths for sale outside Egypt.

10- **Transportation operations:**

GUPCO has about 230 mobile vehicles for staff and material transportation purposes in GOS different sites. Production employees are transported daily to / from offshore locations by helicopter or marine vessels, also transportation from/to Cairo by fixed wing planes and buses.
Figure (1) an overview of the oil production process
Layout and location

GOS District is located at Gulf of Suez at Red Sea and about 450 km south of Cairo. The nearest community is Ras Gharib that is lie about 30km to the north and Hurghada from south about 120km.

GOS daily production is approximately 100,000 BOPD produced from approximately 305 artificially lifted (water injection/gas lift/electric submersible pumps) and flowing wells located offshore on 100 platforms. GUPCO's production in the Gulf of Suez extends in a north/south direction approximately 160 kilometers (Figure 2).

All fluids (oil, gas and water) produced flow from the offshore platforms via submarine pipelines to the Ras Shukheir, Ras El Ush and Ras Bakr shore production facilities on the west coast of the Gulf of Suez.

Production operations in the Gulf of Suez have been divided into three areas: North (July, Ramadan, October Field and onshore Ras Bakr), Central (Badri and Morgan Fields) and South (Shoab Ali, Hilal Fields and Sedki, and onshore Ras El Ush).

Fig. (2) GUPCO-GOS locations
MANPOWER

All sites work force is recruited from all regions of Egypt, and they are transported to R/Sh according to weekly shifts system.
Total manpower: 1775 persons
HSE personnel: 77 persons
Managers: 77 persons

There is also a large contingent of International Contract companies that work in the GOS district. These companies employ both national Egyptian and international workforces.

How we Identify and Manage Important Environmental Impacts

HSE General Manager assembles a cross-functional team to perform the evaluation. The team may include representatives from HSE, operations, maintenance, or other functions as appropriate. Separate teams may be formed to evaluate particular groups of processes, activities and services. The team may call upon other individuals in GUPCO, as needed.

The team considers each of the focused area of GOS’s processes, services or activities, including (where appropriate):

- Process / service inputs (material, energy, ancillary…)
- Process / service operations (start-up, working, shut-down & emergency conditions)
- Process / service outputs (products, wastes)
- Process / service accompanied activities (residence, logistic, waste disposal…)

Each process, service or activity is analyzed / evaluated for environmental impacts in each of these areas.

Form # (GOS-HSEMS-F-01) is used to screen inputs / outputs of each process / activity. All environmental aspects are listed in form # (GOS-HSEMS-F-02), however, processes, services or activities may be "grouped” such that those with similar characteristics can be evaluated concurrently. The team rates the identified environmental aspects (or groups of it) against the factors shown on form # (GOS-HSEMS-F-03) to identify those that may result in significant impacts.

The evaluation method will be established through the following two stages

Stage-1: Aspect Criteria Determination
In this stage the aspect of each location will be evaluated in a separate sheet. The aspect criteria will be high, medium or low criteria. The following definitions illustrate the meaning of each one:

High Criteria
- Aspect is regulated and current management and / or operational control is not sufficient to ensure compliance.
- Aspect has the potential to cause a significant local or regional environmental impact.
- Aspect has particular concern to a stakeholders (regulator, community, neighbors, corporate/shareholders, or onsite staff employees)
**Medium Criteria**
- Aspect is regulated and current management and/or operational control is sufficient to ensure compliance but emissions are close to the limit.
- Aspect has limited potential to cause a significant local or regional environmental impact.
- Aspect is of limited concern to stakeholders.

**Low Criteria**
- Aspect is regulated and current management and/or operational control is sufficient to ensure compliance but emissions meet relevant best practice.
- Aspect has no potential to cause a significant local or regional environmental impact.
- Aspect is of no concern to stakeholders.

**Stage-2 Aspect Category Determination**
In the same sheet of aspect criteria, the determination of the aspect category will be evaluated upon the following two categories.

**Significant**
Aspect category will be significant if at least one of the three criteria was high or medium significant. The significant aspect will be classified into high or medium depending on the following criteria:
- The significant aspect will be high if at least one of the three criteria was high.
- The significant aspect will be medium if at least one of the three criteria was medium.

**Not Significant**
Aspect category will be not significant if all the three criteria were low significant.

Results of team findings are documented. If the team determines that additional information is needed to evaluate a particular process or activity, the Team Leader assigns the responsibility for collecting that information to an appropriate team member.

The HSE manager is responsible for working with site management to ensure that significant environmental aspects identified by the team are considered in setting GOS’s environmental objectives & targets / measurement & monitoring plan and/or operational control methods, as appropriate.

The results of the most recent environmental aspect/impact identification are reviewed as part of the Management Review process (See Procedure # GOS-HSEMS-P-14). Based on this review, the GOS District Management determines the need to update the environmental impact evaluation. Factors such as improved assessment methodologies, or major changes to the GOS’s mission, products, and processes are considered in determining the need to update the assessment.
## Our impacts and performance

### Issue
- Oil Spill (onshore/offshore)

### Impact
- Biodiversity
- Land contamination

### Management
GOS operations have a documented oil spill contingency plan that facilitates controlling of oil spill incidents through many drill scenarios. Most notifications of offshore oil spills incidents accomplished through daily helicopter flights during offshore complexes platforms crew changes. GOS operations have a branched oil spill-combating center in R/S for combating of oil spill incident less than 100 tons if the weather is suitable. R/S branched combating center coordinate with Hurgada and Ras Gharib main oil spill combating centers in oil spill incidents between 100-1000 tons and with external center (South Hampton-UK) in oil spill incidents more than 1000 tons. Oil spill incidents more than 1 bbls being recorded and reported to EGPC and EEAA. There is a long-term plan for replacement of bad conditions pipelines though smart pigging to avoid unexpected oil spills. Major Drills and exercises has take very important part from our activities and we conduct 2 exercise this year at process area and beach clean-up operation to be ready for any real cases.

### Performance

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<th>Onshore</th>
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<td>1</td>
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<td>Feb</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Mar</td>
<td>1</td>
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<td>Apr</td>
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<tr>
<td>Dec</td>
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</table>

#### Future plans
- Continue smart pigging for the oil pipelines and long-term preventive maintenance plan.
- Conduct Training with Cooperation of PESCO Co. to be cope with IMO I, II requirements. Also a plan to conduct a major Drill with cooperation of EGPC, EEAA.
**Issue**

- Halocarbon

**Impact**

- Ozone depletion
- Climate changes

**Management**

Use of halocarbon in new projects is prohibited. All the current halocarbon sources in R/Sh district were catalogued and their usage will be eliminated through a long-term plan for replacement. All portable firefighting extinguishers were removed and stored in the material yard; CO2 extinguishers replaced these extinguishers. All halon fire fighting extinguishers will be transport by a third party contractor to the halon bank in EEAA. There is no leak of halocarbon in R/Sh district since it is kept in a closed system during maintenance operations by an especial machine and recycled again in the unit to be maintained.

**Performance**

- All halocarbon sources in R/Sh district were catalogued and their usage will be eliminated through a long-term plan for replacement. All portable firefighting extinguishers (26 EA X 4kg) were removed and stored in the material yard; CO2 extinguishers replaced these extinguishers.

  - List of Freons /Halons Available in R/Sh District

1- Type and annual consumption of Freons

<table>
<thead>
<tr>
<th>Freons Type</th>
<th>Commercial Name</th>
<th>Formula</th>
<th>Consumption Annual</th>
<th>Used in</th>
<th>Type of equipment</th>
<th>Number of units</th>
<th>Quantity per Unit (Kg)</th>
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<tr>
<td>CFC</td>
<td>R-12</td>
<td>CCl_{2}F_{2}</td>
<td>940 (lb/yr)</td>
<td>Water cooler</td>
<td>Normal</td>
<td>175</td>
<td>0.5</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 FT</td>
<td>50</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11 FT</td>
<td>184</td>
<td>0.5</td>
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<td>3 Ton</td>
<td>15</td>
<td>3</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Refrigerator</td>
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<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
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<td>262</td>
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<td></td>
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<td></td>
<td></td>
<td>12000 BTU</td>
<td>1450</td>
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<td></td>
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<td></td>
<td>18000 BTU</td>
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<td></td>
<td></td>
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<td></td>
<td>19000 BTU</td>
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<td>2</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>24000 BTU</td>
<td>30</td>
<td>2</td>
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<tr>
<td>HCFC</td>
<td>R-22</td>
<td>CHClF_{2}</td>
<td>3600 (lb/hr)</td>
<td>Air Condition</td>
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<td></td>
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<td>1920</td>
<td>4675</td>
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<td></td>
<td></td>
<td>26 FT</td>
<td>17</td>
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<tr>
<td>HFC</td>
<td>R-134a</td>
<td>CF_{3}CH_{2}F</td>
<td>30 (kg/yr)</td>
<td>Refrigerator</td>
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<td>16</td>
<td>0.5</td>
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<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>33</td>
<td>17</td>
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<tr>
<td>HC</td>
<td>R-502</td>
<td>CHClF_{2} + CF_{3}CClF_{2}</td>
<td>120 (lb/yr)</td>
<td>Central Refrigerator</td>
<td></td>
<td>5</td>
<td>5</td>
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<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td>34</td>
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<tr>
<td>GRAND TOTAL</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>2397</td>
<td>4988</td>
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(1) Environmentally friend Freons
(2) Long term plan for replacement R-12 and R-502 with R-134a.

- All new refrigerant/ conditions work with environmentally friendly types.
- During maintenance of equipment the halocarbon being sucked by a special machine and recycled again to the equipment.
2- Halon Cylinders At R/Sh Turbine Facilities

<table>
<thead>
<tr>
<th>S.N</th>
<th>Location</th>
<th>No. of Packages</th>
<th>Original Fire System Type</th>
<th>Existing Fire System</th>
<th>No of Halon Cylinder</th>
<th>Quantity (lb.)</th>
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<tbody>
<tr>
<td>1</td>
<td>M # 8</td>
<td>6</td>
<td>Hallon</td>
<td>Hallon</td>
<td>12</td>
<td>864</td>
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<td>2</td>
<td>M # 36 Ph-4</td>
<td>5</td>
<td>Hallon</td>
<td>CO2</td>
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<td>-</td>
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<tr>
<td>3</td>
<td>M # 36 Ph-5</td>
<td>2</td>
<td>Hallon</td>
<td>CO2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Oct.</td>
<td>3</td>
<td>Hallon</td>
<td>Hallon</td>
<td>6</td>
<td>1116</td>
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<tr>
<td>5</td>
<td>Trans Gulf</td>
<td>3</td>
<td>CO2</td>
<td>CO2</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>S/Ali</td>
<td>3</td>
<td>Hallon</td>
<td>Hallon</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>R # 6</td>
<td>4</td>
<td>Hallon</td>
<td>Hallon</td>
<td>5</td>
<td>360</td>
</tr>
<tr>
<td>8</td>
<td>J # 10</td>
<td>9</td>
<td>Hallon</td>
<td>Hallon</td>
<td>10</td>
<td>948</td>
</tr>
<tr>
<td>9</td>
<td>MWF &amp; JWF</td>
<td>11</td>
<td>Hallon</td>
<td>Hallon</td>
<td>22</td>
<td>4092</td>
</tr>
<tr>
<td>10</td>
<td>Hilal</td>
<td>2</td>
<td>Hallon</td>
<td>CO2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>11</td>
<td>Power House</td>
<td>9</td>
<td>7 hallon + 2 CO2</td>
<td>4 hallon + 5 CO2</td>
<td>12</td>
<td>864</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>57</td>
<td></td>
<td></td>
<td></td>
<td>71</td>
<td>8892</td>
</tr>
</tbody>
</table>

- 30.35% of total Turbines replaced to CO2.
- 69.65% of total Turbines still with Halon system.
- MWF and JWF turbine will be replaced by Hi-Fog System

3- Portable fire fighting extinguisher is 26 units*4kg and all of them is out of service now and stored in the material yard.

**Future plans**

- Complete replacement study of turbine fire fighting system from halon to other system by special team and vendor.
- Set long term plan for replace all halon cylinders at turbine packages by end of 2007

**Issue**

- Greenhouse Gas Emissions

**Impact**

- Global Warming

**Management**

Green house gas emission being calculated and tracked on quarterly bases. During 2004 the greenhouse gas emissions were reduced due to extensive maintenance work also due to stop of turbine on 1Q at M8. In the same year maintain the flare lit at JWF&MWF reduced emission form this platform. Again flared gas was reduced be achieving flare repairing of J#10 and Morgan-8. Air emissions monitored by an external body (Elbibin institute in Egypt), the limits measured against are regulatory limits. So far, all results are within limits. Also during this year, Self Inspection audit was conducted by DNV to assure from GHG policy and its implementation at all work sites.

**Performance**

- GUPCO 2004 target 2,444 ktonnes, being met through flare repairs, valve inspection plan.
- GUPCO PU (BP Equity) target 1.023 ktonnes.
- Offshore flare repairs being carried out at BP expense with no monetary benefit to BP (no equity in gas).
- 30 Acre green area cultivated for assistant in consuming CO2 emission.
Future plans

- Greenhouse gas emissions will be reduced 10% versus the 1990 baseline by 2010. Continuous improvement towards this goal will be achieved annually through setting specific targets for individual business units.
- Venting and Flaring: continuous venting will be eliminated by 2001 and flaring will be eliminated by 2003. Eliminate all routine, non-emergency flaring.
- Energy efficiency 15% improved from 2000 baseline by 2010.
- To offset the impact of greenhouse gas emissions will be encouraged and supported in conjunction with the internal emissions trading program.
- Increase the green areas in R/S 5% per year
- Apply PM schedule for all R/Sh operating area for decreasing fugitive emission.

Issue

- Discharge to the Gulf (Process / offshore sewage wastewater)

Impact

- Biodiversity

Management

The main sources of discharge to the Gulf are, onshore oil processing plant, offshore complex platforms, the offshore rigs, barges and boats. Onshore wastewater plant receive all drains form onshore processing plant and treat them before discharge to the gulf through 36” P/L in a point away form the coastline by 500 meter. No discharge to the gulf is allowed for offshore complexes, rigs, barges or boats accept the treated sewage. All manned offshore facilities equipped with compact unit for treatment of sewage treatment. So far, the limits of the treated sewage comply with the regulatory limits as per the annual monitoring being carried out by Eltibbin Institute.

Performance

- Discharge to the gulf through the process plant or offshore complex platform is within regulatory limits as indicated through sampling results. No discharge to sea from the drilling operations.
- All marine units (boats, barges) has sewage unit to treat it before dumping at the gulf. Periodically audit conducted by HSE team to ensure from compliance with Env. Law.
Future plans
- Improve offshore sewage treatment units performance.

Issue
- OBM/Drilling cuttings

Impact
- Biodiversity
- Land contamination

Management
During 2004, all rigs still equipped with vortex dryers to reduce the TPH% (Total Petroleum hydrocarbon percent) in the cutting to 6-15%. All drilling cutting and reject OBM being shipped to onshore for further treatment. Dry cutting resulted from the vortex dryers being dumped in the form of piles at the disposal area away from R/S by 10 kilometers in specified places. The rejected OBM was dumped at lined pit of capacity 14,700 cubic meter which can be further treated by bioremediation or thermal de-sorption, also from time to time we suck the oil from the pit and back it to the ballast. The accumulated OBM/drilling cutting is being treated by bioremediation and thermal de-sorption techniques. United environmental services company complete treatment of 17,000 cubic meters of OBM/drilling cuttings by bioremediation technique and they succeed in reduce TPH content from over 35% to less then 5% which is used as fertilizer in some areas. Sea Harvest/Brandit Company are working in treatment of all OBM cutting pits by thermal de-sorption and they treated about 50,000 tones until end of Y2004, and this method succeeded in reduce TPH level from over 60% to less then 1% while we can disposed treated ash safely and designed area.

Performance
- Ship 100% of OBM/ cuttings to onshore.
- The impact of waste disposal was addressed through drilling of 10 bore holes at the disposal area at depths more than 20m and samples were collected at these depths then analyzed. The result was no off site migration of hydrocarbons at the disposal area.
- Cuttings dryers fitted to all GOS area operated rigs. All hydrocarbon removed at lined storage.

- Ras Shukier was received cutting from Abu Quier and Happy operation which is dumped as per our waste management rule.

**Future plans**

- Continue Ship 100% of OBM/ cuttings to onshore
- Continue treatment by Bioremediation or thermal De-sorption.
- Using Water Base Mud (WBM) as possible during drilling.
- Control the quantity of liquid mud that was dump at new pit with cooperation of drilling.
- Conduct field trial for utilizing treated soil from bioremediation as fertilizer.

**Issue**

- Discharge to the land (Treated onshore sewage wastewater)

**Impact**

- Health impacts

**Management**

Since 1996 R/S district constructed an onshore sewage treatment oxidizations pond for GUPCO camps and national contractor’s camps. The plant capacity is 450 cubic meter/day. All the treated sewage resulted form the plant used in irrigation of non-edible plants. There is a working instruction in R/S Environmental management system for operational control of the plant. One of our environmental targets during 2002 is to isolate any drain form the workshop to the sewage network and this target has been achieved by 100%. During 2002 the AUC (American University in Cairo) studied the performance of the plant. The parameters for discharge of treated sewage are with in the regulatory limits for disposal to the land accept the coliform group of bacteria. Hence, one of our 2004 objective /target is to construct a baffles as recommended by AUC study to increase the retention time in the plant and then decrease the coliform group of bacterial. The sewage of all remote areas is treated by septic tanks. Due to the unfavorable conditions the septic tanks of the international contactors area, new sewage plant for international contractor was constructed utilizing oxidation ponds system and the effluent will be used in irrigation.
Performance

- Flushing of the sewage network system in R/S (completed 2002)
- Study the performance of the plant by AUC (completed 2002)
- Complete construction of New International Contractor Sewage Plant (Complete during 2004)
- Isolate any drains from work shops to the sewage net work system (completed 2002)
- All water uses in irrigation of non vegetation plants.

Future plans

- Construct a concrete baffles for the R/Sh sewage plant to improve the plant efficiency.
- Install discharge pump and extend irrigation network from new sewage plant.
- Upgrade Collection Tank for R/Sh Mess Hall and re-use effluent water in the irrigation.

Issue

• Disposal to the land

Impact

• Growth of harmful animals
• Bad odor
• Land contamination

Management

All wastes generated at R/Sh district being disposed in a specified area away from R/Sh by 10 Km and no disposal is allowable in other areas. There is no plan for minimizing generated wastes. Food wastes are being land filled and will be incinerated after complete fixing the new incinerator specified for that purpose and the vendor start in fixing it on Dec. 2004. Waste segregation is in place, sorting of wastes will also be conducted for complete assurance of waste segregation. In addition, evaluating the possibility for getting rid of all wastes through a contractor specialized in this field. Reuse and recycle/recovery of wastes being conducted for wood, scrap metals. Disposal of hazards wastes is allowable only in lined pits. R/S has two incinerators for burnable wastes and one incinerator for medical wastes. Emissions form these incinerators are within the regulatory
limits. Solid waste management being controlled by application of the working instruction and procedure in Environmental Management System. No allowed for dumped any oily fluid from pipeline cleaning or from temporary drain pits unless it’s completely lined to avoid land contamination.

During 2004, Tank farm cleaning was carried out for T#308 and T#303 by using new technique “Flex-Smart” and operated by UNITED Company. The resulted sludge’s (about 4000 m3) transferred to bioremediation area and treated also by UNITED Co.

As a part of our plans is to have benefits from our waste, a new chipper machine purchased to cut the agriculture waste and hence we can mix it with sewage water and utilize it as fertilizer.

As a result of DNV audit concerning discharge of effluent to temporary pit inside ballast, we completed cleaning of de-ballast pond which is polluted with oil (950 tonnes) and NORM scale (450 tonnes) to final disposal area.

Performance

- All generated wastes in R/S area being tracked monthly the following figure represent the annually generated wastes in R/S area.
- Extend our segregation system to include all onshore area via 4 color labeled drums and we have future pans to apply it over our PF’s.
- Any generated waste dumped through waste management plan procedure which is a past of EMS documentation system.
- Maximize the benefits of garbage through re-use or recycle systems.
- No allowed for discharge any polluted fluid to the ground unless its contain in lined pits.

Cleaning of the De-ballast Pond

T-308 Cleaning Using “Flex-Smart” Technology
Future plans

- Complete installation of food waste incinerator.
- Purchase compactor and shredder machine for metallic and plastic wastes.
- De-contamination of 20% of tools and equipments polluted with NORM.
- Construct a shelter for flammable chemicals, Construct a bund around storage ground and fill the space with cement.
- Construct a new area for storing NORM scales as per AEA regulations.
- Construct a new Ash pit to be ready for receiving ash from food waste incinerator.
- Cleaning and Lining of FWKO drain pit.
- Construct a dike around diesel tanks to contain any spillage during emergency.

Feedback

Tell us what you think. Are our statements easy to understand, not detailed enough or perhaps too complicated?

Is there any further information in which you are interested? Let us know what you think so we can improve our environmental reporting. If you have any queries about this report or general operations, please write or telephone us and we will be happy to assist.
Contact Guide

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Jimmy Gin (HSE Gen. Mgr. & Mgt. representative)  
Mohamed Arafa (Env. Prot. Assist. Gen. Manager)

The next site name Ras Shukheir District- GOS Operation Environmental Statement will be issued by Health, Safety Environmental General Department and will cover the period January 2005- December 2005.
Verification Statement

Together with the requirements for ISO14001, independent verification is a requirement for all major sites within BP. For such sites, a simple attestation statement is shown below:

"We have independently reviewed site Ras Shukier Environmental Statement and conclude it represents a true and fair reflection of the environmental programmes and performance within Year 2004. We have found no statements in this report which we have been unable to substantiate and verify through observations, visits and review of the appropriate systems."

Signed: ________________________   Date: _______________

[Alternately, a verifier may provide additional information as to the process used to verify the statement, and supporting statements that the Environmental Policy is well understood, that data appear reliable, the Environmental Management System is operational, and effective internal audit system is in place, etc....]
## Objectives and Targets Programs

### Year: 2004

<table>
<thead>
<tr>
<th>Objective</th>
<th>Targets</th>
<th>Actions</th>
<th>Responsibility</th>
<th>End Date</th>
<th>Follow Up</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cultivate a Superior oil spill Emergency Response Capability</strong></td>
<td>Conduct a full equipment deployment emergency drill</td>
<td>Conduct onshore exercises</td>
<td>HSE Process</td>
<td>3Q 2004</td>
<td>Drill was conduct at process plant and stimulate oil spill from oil line</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Conduct ODU exercise</td>
<td>HSE PAS</td>
<td>4Q 2004</td>
<td>Exercises will conduct by using ODU</td>
</tr>
</tbody>
</table>
| **Enhancing environmentally friend disposal method for petroleum hydrocarbon based drilling cuttings and sludge** | Treated 15,000 m³ of OBM (Spilled Area) | On going treating the cutting using bioremediation technique | HSE United Co. | 4Q 2004 | - Closure report received from UNITED &TPH concentration between 2-3%  
- UNITED co. start in bioremediation process for sludge resulted from T308 cleaning |
| | | Treating of 50,000m³ of Drilling Cutting at old pit | HSE Sea Harvest | 4Q 2004 | - About 46,000 tones of OBM cuttings treated until 3Q 2004 and follow-up the treatment process  
- Carryout weekly TPH test by RETORT at Env. Lab. (TPH < 1%) |
| **Increase emission of air pollutants** | Treated 15,000 m³ of OBM (Spilled Area) | Treating drilling cutting using thermal desorption technique by sea harvest co. | HSE Sea Harvest | 4Q 2004 | - Maintain the existed green area at GOS Dist.  
- New nursery constructed near sewage plant |
| | | Improve and maintain the green areas at GOS Dist. | Env. Prot. | 4Q 2004 | - Quarterly air emissions report issued to Cairo  
- Annual Monitoring survey by El-Tebben was conducted |
- New nursery constructed near sewage plant |
| **GOS district to maintain the ISO14001 Certificate** | Maintain ISO 14001 system implementation at GOS Dist. | Replacement of Freon with Other environmentally type | E&I | 4Q 2004 | Set Long Term plan for replacement of Freon 12 used with other environmentally types (Freon 134A) |
| | | EMS Audit | HSE | 4Q 2004 | - Re-certification DNV audit will conduct on Oct. 2004  
- 2 Cross-function audits was conduct at GOS Dist  
- Complete 65% of planned EMS internal audit |
| | | Environmental training for 25% of employees | HSE | 4Q 2004 | Complete about 83% of target for Env. Awareness course |
| | | Conduct Management Review Meeting Periodically | HSE | 4Q 2004 | 1Q, 2Q and 3Q 2004 meeting was conducted and minutes of meeting distributed to all concerned div. |
| | | Complete non conformities raised during DNV, Cross Function and internal audits | HSE All | 4Q 2004 | - Quarterly CAR tracking report sent to concerned division  
- Close 4 non conformities was raised from last DNV audit  
- Close 95% of total CAR’s raised from system start |
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<tr>
<td>Decrease Soil Contamination by oil</td>
<td>Remove polluted pits and construct dikes/ lined drain pits</td>
<td>Cleaning De-ballast polluted pit at ballast plant</td>
<td>Process</td>
<td>3Q 2004</td>
<td>Contractor was removing all polluted sand from pit and covered it by clean sand (oily sand sent to waste area)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Construct Dike around Diesel tank</td>
<td>HSE Const.</td>
<td>2Q 2005</td>
<td>- Budget was approved for const. the dike (GUG 6/05) - FCP approved by Dist. Eng. and wait executing the work</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Construct lined pit for FWKO drain system</td>
<td>Process Const.</td>
<td>3Q 2005</td>
<td>- Include the pit in the new budget and its approved</td>
</tr>
<tr>
<td>Improve Waste Management Plan for all Generated Waste at R/Sh</td>
<td>Have a benefits from solid wastes</td>
<td>Plan for safe handling of solid waste and apply 4R rule</td>
<td>HSE Materials</td>
<td>2Q 2004</td>
<td>Old solid waste pit was burnt and new pit constructed for storing new solid waste</td>
</tr>
<tr>
<td></td>
<td>Upgrade main Waste Disposal Area</td>
<td>Construct a new pit for incinerator ash</td>
<td>HSE Construction</td>
<td>1Q 2005</td>
<td>-Budget was approved for construction pit (GUG 16/05) -Will prepare FCP for the project and review it</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Purchase chipper machine for recycle of agriculture waste</td>
<td>HSE</td>
<td>3Q 2004</td>
<td>Operate chipper machine beside main sewage plant and resulted chips used as fertilizer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Directly extend shagger water line from water maker to waste area</td>
<td>HSE Const.</td>
<td>1Q 2005</td>
<td>- Budget was approved for const. the dike (GUG 17/05) - FCP approved by Dist. Eng. and wait executing the work</td>
</tr>
<tr>
<td></td>
<td>New method for disposal of food waste</td>
<td>Purchase new food waste incinerator</td>
<td>HSE PETROJET</td>
<td>4Q 2004</td>
<td>- PETROJET will supply the incinerator by end of Y2004 - We receive approval from EEAA by open dumping of waste at waste area</td>
</tr>
<tr>
<td>Handling of Hazardous Waste</td>
<td>Improve NORM Handling and obtain licence from AEA</td>
<td>Complete requirements for obtain NORM license</td>
<td>HSE AEA</td>
<td>3Q 2004</td>
<td>- File contains all documentation and maps prepared and sent to Cairo for approval. - Employees deal was NORM make medical check - Some Employees received their training at AEA</td>
</tr>
<tr>
<td></td>
<td>Construct a new pit for NORM scale as per new specification design set by AEA</td>
<td>HSE Construction</td>
<td>4Q 2004</td>
<td>- Include construction pit within new budget - Resolution memo sent to AEA for technical drawing of the pit to store about 500tonne for 5years</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improve chemical handling &amp; storage</td>
<td>Construct new area for storing of expired chemicals</td>
<td>HSE Construction</td>
<td>4Q 2004</td>
<td>-Budget was approved for construction pit (GUG 19/05) -Will prepare FCP for the project and review it</td>
</tr>
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</tr>
<tr>
<td>Handling of Hazardous Waste</td>
<td>Disposal of used lube oil</td>
<td>Dump of used lube oil to ballast or recycle it by third party</td>
<td>HSE Material</td>
<td>4Q 2004</td>
<td>Material to contact “MISR Petroleum” for take the lube oil again</td>
</tr>
<tr>
<td>Onshore sewage systems maintaining and upgrading</td>
<td>Solve the problem of International Contractor septic tank carry-over</td>
<td>Construct Sewage Plant for Internat. Contractor Camps</td>
<td>HSE Project</td>
<td>3Q 2004</td>
<td>ECONTO finishing from all plants facilities, sewage network, pump station earth work and wait instrumentation and 2&lt;sup&gt;nd&lt;/sup&gt; pumps.</td>
</tr>
<tr>
<td></td>
<td>Upgrade &amp; cleaning of Onshore Sewage Plant.</td>
<td>AUC to evaluate the system and conduct study</td>
<td>HSE Contractor</td>
<td>4Q 2004</td>
<td>- Appropriation approved for installing baffles (GUG 70/03</td>
</tr>
<tr>
<td></td>
<td>Upgrade accumulation tank of Mess hall</td>
<td>Study for solving the problem of Mess hall accumulation Tank</td>
<td>Dist. Eng. Constr.</td>
<td>3Q 2004</td>
<td>- Contract Dept. held a tender for this project and wait for contractor selection</td>
</tr>
</tbody>
</table>
