الاتحاد العربي للأسمدة

Arab Int'l Organization هيئة عربية دولية

Arab Fertilizer Association

Since 1975

Health , Safety and Environment (HSE)

Best Practise in AFA Member Companies

2013

Introduction

Under Arab Fertilizers Association umbrella, Health, Safety, and Environment committee members collaborate in preparing HSE Best practices. The HSE committee believes that one of the powerful tools to promote best HSE management system within member companies is by knowledge, information and experience sharing which is a basis for continual improvement . The committee raise a slogan ' We work together to keep not only our workplaces but also communities safe, healthy and environmentally clean. '

Appreciation to all AFA HSE Committee Members for their share and effort to issue the HSE Best Practices booklet.

Definition of HSE Best Practice

Is a method or technique that has consistently show results superior to those of other means and that is used in the benchmark.

Or a program, activity, or strategy that has been show to work effectively and produce successful out-comes & supported to some degree by subjective or objective data resources.

Objective of this Exercise

In order to share the best practices in HSE among all AFA members to promote & enhance HSE performance within the AFA companies.

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Gulf Petrochemical Industries Co.
GPIC

2013

1. Applicant Company Info

Company Name:--**Gulf Petrochemical Industries Co**.--- Country:----**Bahrain**--------

Establishment Date:---**1979**------ Number of plants:--**3**--- Production capacity:-**4200 T/D**--

Activity/Product: X **Urea** X **Ammonia** X **Methanol**

Number of Manpower: Employees:--**578**---- Permanent Contractors:----**200**-------

2. Name of Applicant

Name:--------**Jassim Darwish**----------

Cell Phone:-**00973 39677277**-- Work Phone:---**00973 17733456**---

Email Address:--**jdarwish@gpic.net**----------

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HSE Best Practice - GPIC

1. Behavior Based Safety

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Behaviour Based Safety

2. The Common Practice Known

Behaviour Based Safety(BBS) is an evolving subject emphasizing on the attitude and behavior of each personnel in driving a positive safety culture. Usually few companies implement a comprehensive Behaviour Based Safety programmes through external agencies and are limited to annual or such periodic BBS surveys and improvement programmes.

3. The Best Activity(ies) adopted

GPIC had adopted BBS as a part of its SHE Management system and has launched a comprehensive and inhouse routine BBS survey programme. BBS surveys are done by the SHE Department employees more or less on a daily basis for specific activities. BBS survey is a part of SHE Department KPI and covers employees and contractors. A total of 147144 BBS observations were made in the year 2012.The BBS observations, once done are recorded and are mostly rectified immediately at site by the observers. The observations are analysed for percentage of safe and unsafe behaviours and are included in various reports. The behavior improvement programmes are driven through training and awareness sessions.

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☐

Specify:----------

6.2 More Assurance of Risk Control: ☑

Specify:- Helped to monitor and reduce the unsafe behavior of workforce and improve the commitment towards safety. This has ultimately resulted in controlling unsafe acts and human errors and hence in risk control.

6.3 Communication, Leadership and Accountability : ☑

Specify: Helped to improve the communication between the observers and the work force. The on-site observations, remedial actions and pep talks conducted as a part of BBS survey has developed safety leadership and the feel of accountability towards safety in workforce.

6.4 Occupational Health Enhancement: ☑

Specify: BBS Surveys helped to improve the safe behaviors and reduce number of accidents. BBS Survey also emphasize on the use of correct PPE in correct way. This has led to a steady enhancement in occupational health

6.5 Minimizing Environmental Impact: ☐

Specify:----------

6.6 Improved HSE Control on Contractors (Service Providers): ☑

Specify: The commitment and accountability towards safety has increased with more number of BBS surveys and improved the interaction and improved control on contractors.

6.7 Economical and Social Impact ☑

Specify: BBS has helped in improving the safe behavior of workforce and hence in reduction of total incidents. Hence the economic burden caused by incidents could also be improved drastically with the BBS audits.

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2. Conducting SHE Family Night every year involving the family members of every employee, and that focus on creating awareness on Safety, Health & Environment among family members

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Conducting SHE Family Night every year involving the family members of every employee, and that focus on creating awareness on Safety, Health & Environment among family members.

2. The Common Practice Known

Such a common practice of getting together all family members of every employee for the cause of SH&E is not known.

3. The Best Activity(ies) adopted

The workforce involvement extends to each employee's family via the company annual SH&E week and family evening. A total of 1300 personnel including employees, wives and children attended the family night in 2012. During SH&E week numerous competitions and events are arranged for the employees and their families including children. All are encouraged to participate and thereby advancing awareness of SH&E issues to a wider audience.

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☐

Specify:----------

6.2 More Assurance of Risk Control: ☑

Specify:- Helped to disseminate the information on SH&E among the family members of each employee that play an important role in

moulding the safety culture in every employee. More awareness on SH&E in every family will make the employee more committed to SH&E.

6.3 Communication, Leadership and Accountability : ☑

Specify: Helped to cascade the information on SH&E to every family member of each employee. This helps in increase in commitment, leadership and accountability by the employee towards safety.

6.4 Occupational Health Enhancement: ☑

Specify: More awareness on SH&E, among each employee and his family, created through such family nights and competitions will lead to enhancement of awareness in Occupational Health & Safety.

6.5 Minimizing Environmental Impact: ☐

Specify:----------

6.6 Improved HSE Control on Contractors (Service Providers): ☐

Specify:----------

6.7 Economical and Social Impact ☑

Specify: The awareness created among family members do not stop only within family but we believe will spread to the other members of the society through children and family interactions.

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3. Cross Functional SH&E Audits by Superintendents complying with an annual schedule issued by Executive Management.

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Cross Functional SH&E Audits by Superintendents complying with an annual schedule issued by Executive Management.

2. The Common Practice Known

Even though such practises exist in other industries, very few of them will be have a periodic cross functional SH&E auditing by Superintendents/Managers as per schedule issued by Executive Management.

3. The Best Activity(ies) adopted

In every year, GPIC Executive Management issues a schedule for all Superintendents for cross functional SH&E Audits. The audits are conducted strictly as per the schedule and the observations are entered in the intranet database. These observations can be viewed by any employee and the concerned section close out the recommendations. The 100 % close out of cross functional SH&E periodic audits is one of the KPIs for all sections.

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☐

Specify:----------

6.2 More Assurance of Risk Control: ☑

Specify:- Helps to develop commitment to SH&E among the managers, superintendents and the workforce. Gives more emphasis that safety is a part of line function and it is every bodies' responsibility to ensure a

safe work place. This enhancement of commitment towards safety through the cross functional audits helps to identify hazards through fresh eyes and eliminate the risks arising out of these hazards.

6.3 Communication, Leadership and Accountability : ☑

Specify: Helps to enhance the interaction between the superintendents and the workforce .The involvement of superintendents in SHE audits send out the message of safety leadership to every employee. The cross functional audits are important to develop the accountability towards safety by the auditors as well as the auditees.

6.4 Occupational Health Enhancement: ☑

Specify: Cross functional audits ensure more identification of hazards through fresh and different eyes. The more hazards identified and most of them being addressed will lead to the elimination of concerned risks and enhancement in Occupational Health & Safety.

6.5 Minimizing Environmental Impact: ☑

Specify: : Cross functional audits also focus on identifying the environmental aspects and control measures

6.6 Improved HSE Control on Contractors (Service Providers): ☑

Specify: : Cross functional audits are field based audits and hence will also emphasize on evaluation of activities being performed by the contractors on safety front. The observations made on contractors are also included in the reports and are addressed by the concerned sectional head.

6.7 Economical and Social Impact ☐

Specify:----------

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4. Safe Management of Hazardous Chemicals

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1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Safe Management of Hazardous Chemicals

2. The Common Practice Known

One of the main element of Management Of Hazardous Chemicals is the awareness on Material Safety Data Sheet(MSDS) and ensuring its availability to all concerned. The common practice is to maintain the MSDS datas at specific places only as hard copies.

3. The Best Activity(ies) adopted

In GPIC, the MSDS of each chemical being handled in the complex is made available in the Lotus Note Enabled intranet application for MSDS Databank. Apart from the hard copies available at strategic locations, this system enables every employee to access the MSDS of any chemical at any time.

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☐

Specify:----------

6.2 More Assurance of Risk Control: ☑

Specify:- Helps in more efficient retrieval of information regarding the chemical from MSDS. The system helps in easy availability of information and helps in creating more awareness about hazardous chemicals. This ensures more assurance of risk control with respect to chemicals being handled in GPIC.

6.3 Communication, Leadership and Accountability : ☐

Specify:----------

6.4 Occupational Health Enhancement: ☑

Specify: Easy availability of information related to a chemical from MSDS will help in controlling the risks associated with the hazards of chemical spill during handling.

6.5 Minimizing Environmental Impact: ☑

Specify: : The MSDS databank in intranet help to retrieve the information on handling and disposing chemicals, easily and immediately. This helps in understanding the environment impact in case of any spillage and act immediately to minimize the environmental damage by ensuring the measures in MSDS concerned with handling spillage and safe disposal.

6.6 Improved HSE Control on Contractors (Service Providers): ☐

Specify:----------

6.7 Economical and Social Impact ☐

Specify:----------

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5. Knowledge Capture and Sharing portal that also covers Safety, Health & Environment.

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Knowledge Capture and Sharing portal that also covers Safety, Health & Environment.

2. The Common Practice Known

There are few companies and systems where any employee is free to upload and share his knowledge and information on subjects including SH&E and spread the awareness on a specific subject to any person of interest within the company.

3. The Best Activity(ies) adopted

GPIC has a unique intranet application which is known as 'Knowledge Capture and Sharing' portal that enables any employee to share any information including SH&E.

The objective of the programmes is to make GPIC a knowledge based company by developing a culture which enables capturing, sharing and putting knowledge into action to add value to business, by:

1. Effective capture and management of knowledge by knowledge capturing interviews with subject matter experts, presentations by external subject matter experts and effective Knowledge capture system.

2. Nourishes and promotes Information and Knowledge sharing culture by knowledge contribution to the system, volunteer staff knowledge sharing lectures and knowledge sharing publicity activities.

3. Suggest relevant External awards and International Benchmarking.

4. Facilitate putting knowledge into action by case study / Book reviews and volunteer workshops.

The user who would like to share his knowledge, will login in to this database and uploads his message. Once he enters the details and submits ,the information goes to the Knowledge Management Team, who reviews the relevance of the information before circulating the message to all users .

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☐

Specify:----------

6.2 More Assurance of Risk Control: ☐

Specify:----------

6.3 Communication, Leadership and Accountability : ☑

Specify: The knowledge and sharing portal helps to communicate the latest and advanced information on specific subjects that also includes SH&E.

6.4 Occupational Health Enhancement: ☑

Specify: Availability and dissemination of information related to a specific subjects on SH&E helps in enhancement of awareness and Occupational Health.

6.5 Minimizing Environmental Impact: ☐

Specify:----------

6.6 Improved HSE Control on Contractors (Service Providers): ☐

Specify:----------

6.7 Economical and Social Impact ☐

Specify:----------

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6. Training and Involvement of employees as Auxiliary Fire Men.

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Training and Involvement of employees as Auxillary Fire Men.

2. The Common Practice Known

There are many companies that train their employees in firefighting but is mostly limited to basic firefighting knowledge and less involvement during emergency responses.

3. The Best Activity(ies) adopted

GPIC has an auxillary firemen training programme and their involvement during emergency response.

The objective of the programmes is to ensure availability of trained firefighting personnel during an emergency.

The selected employees are given Level-1 advanced firefighting training for one week with Bahrain Civil Defence department.

Apart from this, a weekly auxillary firemen training is conducted every Thursday for refreshment training and drills on fire fighting and rescue. This training also emphasize on introducing new equipments in firefighting to the auxillary team. In 2012 a total attendance of 139 auxillary firemen was recorded for the weekly trainings.

The auxillary firemen have specific role in case of any emergency whereby they will relieve and assist SHE department fire operators in their roles.

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☑

Specify: The auxillary firemen act as reinforcement for the dedicated firefighting team in case of emergency and thus helps in enhancement of application of Complex Emergency procedure of the company

6.2 More Assurance of Risk Control: ☑

Specify: The auxillary firemen are not only trained in firefighting but also in identification and evaluation of fire hazards. This helps them to identify the fire hazards and control the risks during their normal roles and duties and hence helps in assuring more assurance of risk control.

6.3 Communication, Leadership and Accountability : ☑

Specify: The identification ,training and referesher training sessions improve the communication between the fire team and other auxillary fire men from different sections in the complex. The assignment of specific emergency related roles to the auxillary firemen develops a feel of leadership and accountability towards fire safety.

6.4 Occupational Health Enhancement: ☐

Specify:----------

6.5 Minimizing Environmental Impact: ☐

Specify:----------

6.6 Improved HSE Control on Contractors (Service Providers): ☐

Specify:----------

6.7 Economical and Social Impact ☐

Specify:----------

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7. Participation of Labour Union (LU)and Workforce in SHE Management

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Participation of Labour Union (LU)and Workforce in SHE Management

2. The Common Practice Known

The participation of workforce and labour union is limited to representation in safety committee.

3. The Best Activity(ies) adopted

GPIC has a strong foundation of participation of work force and LU in important decision making with respect to SH&E. Apart from the representations in SHE Council, Safety Committee, Health Committee, Environment Committee and Social Activity committee, the LU is empowered to select and finalise the personal protective equipments (PPEs) as per specifications. LU finalizes the PPEs from the samples by conducting survey among the workforce which may also include in site usage of samples for a specific period of time.

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☐

Specify:----------

6.2 More Assurance of Risk Control: ☑

Specify: The participation of LU in important decision making in SH&E ensure the participation and involvement of workforce. They also feel as an integral part of SH&E Management system and hence will show more commitment to SH&E.

6.3 Communication, Leadership and Accountability : ☑

Specify: The participation of LU will ensure that the SH&E information is communicated to the workforce. The sense of belongingness of LU and the workforce in day to day SH&E management system will develop leadership and accountability among the workforce.

6.4 Occupational Health Enhancement: ☐

Specify:----------

6.5 Minimizing Environmental Impact: ☐

Specify:----------

6.6 Improved HSE Control on Contractors (Service Providers): ☐

Specify:----------

6.7 Economical and Social Impact ☐

Specify:----------

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8. Off the Job Incidents Reporting and Investigation

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Off the Job Incidents Reporting and Investigation

2. The Common Practice Known

There are few companies that emphasize on reporting and investigating the incidents involving employees during their hours off job.

3. The Best Activity(ies) adopted

GPIC encourages the report and investigation of any incident occurring to an employee off the job hours. The President of GPIC has issued a memo encouraging the employees to report the incidents off the job and a Standard Operating Procedure is issued for employees regarding the importance and way by which the off job incidents can be logged, reported and investigated.

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☐

Specify:----------

6.2 More Assurance of Risk Control: ☑

Specify: Encouraging employees to report the incidents happening outside complex during off job hours helps to inculcate and reinforce a positive safety culture not only during official hours but also in personal life. This ultimately lead to more awareness on hazard identification ,control measures and more assurance of risk control.

6.3 Communication, Leadership and Accountability : ☑

Specify: The above mentioned initiative will ensure better communication regarding incidents happening outside work hours where the employee himself takes the lead to identify a hazard or report an incident. It also develops a sense of accountability among employees for the safety of self and his family even outside the company.

6.4 Occupational Health Enhancement: ☑

Specify: Encouraging employees to report the incidents happening outside complex during off job hours helps to inculcate and reinforce a positive safety culture not only during official life but also in personal life. This ultimately leads to more awareness on hazard identification ,control measures and more enhancement in occupational health

6.5 Minimizing Environmental Impact: ☐

Specify:----------

6.6 Improved HSE Control on Contractors (Service Providers): ☐

Specify:----------

6.7 Economical and Social Impact ☐

Specify:----------

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9. Involvement of society in SH&E Training

2013

AFA HSE Best Practices Application Form

Part 1 : <Introduction>

Definition of HSE Best Practice

Is a method or technique that has consistently show results superior to those of other means and that is used in the benchmark.

Or a program, activity, or strategy that has been show to work effectively and produce successful out-comes & supported to some degree by subjective or objective data resources.

Objective of this Exercise

In order to share the best practices in HSE among all AFA members to promote & enhance HSE performance within the AFA companies.

Part 2: <To be completed by applicant>

1. Applicant Company Info

Company Name:--**Gulf Petrochemical Industries Co**.--- Country:----**Bahrain**--------

Establishment Date:---**1979**------ Number of plants:--**3**--- Production capacity:-**4200 T/D**--

Activity/Product: X **Urea** X **Ammonia** X **Methanol**

Number of Manpower: Employees:--**578**---- Permanent Contractors:----**200**-------

2. Name of Applicant

Name:--------**Jassim Darwish**----------

Cell Phone:-**00973 39677277**-- Work Phone:---**00973 17733456**---

Email Address:--**jdarwish@gpic.net**----------

3. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Involvement of society in SH&E Training

4. The Common Practice Known

There are few companies that conduct regular training sessions on SH&E for important sections of society like school children.

5. The Best Activity(ies) adopted

GPIC sets out targets for the employees and Graduate Engineers to conduct regular sessions on Safety, Health and Environment to school children. This activity is undertaken to spread awareness on SH&E to one of the most important part of our society i.e. the school children. The sessions cover training on basic firefighting, road safety, environment protection and other relevant topics.

6. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☐

Specify:----------

6.2 More Assurance of Risk Control: ☑

Specify: Helps to inculcate and reinforce a positive safety culture among the school children and from them to their family. This ultimately leads to more awareness on hazard identification ,control measures and more assurance of risk control not only inside the company but in the society.

6.3 Communication, Leadership and Accountability : ☐

Specify:----------

6.4 Occupational Health Enhancement: ☐

Specify:----------

6.5 Minimizing Environmental Impact: ☐

Specify:----------

6.6 Improved HSE Control on Contractors (Service Providers): ☐

Specify:----------

6.7 Economical and Social Impact ☑

Specify: Increasing awareness on SH&E among school children will ultimately cascade the SH&E message to different levels of the society and lead to increase in societal awareness in safety and environment protection.

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10. Permit To Work Audits

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Permit To Work Audits

2. The Common Practice Known

There are many companies that follows the periodic auditing of permits to ensure compliance to PTW Procedure.

3. The Best Activity(ies) adopted

GPIC sets out targets for the employees of SHE Department and Superintendents with regard to conducting PTW Audits, that forms one of the KPIs for the concerned personnel. PTW audits have become one of the routine activities of SHE Department and has helped immensely in the improvement of the system. Any deviation observed is logged as an incident under PTW violation classification and is monitored for remedial actions for rectifying the observations.

A total of 2091 PTW audits were conducted in the year 2012 which is about 6 audits conducted per day. All PTW audits are reported and recorded for follow up and close outs.

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☑

Specify: The routine PTW audits have immensely improved the implementation of PTW system and the procedure. The audits have not only helped to find out the deviations but also is instrumental in understanding the deficiency if any in the existing PTW procedure for the continual improvement of the system and the procedure.

6.2 More Assurance of Risk Control: ☑

Specify: More PTW audits have helped to find out the deviations or violations of PTW System. The observations have gradually come down and proves that the process of identification and control of risks associated with jobs as per PTW procedure has matured.

6.3 Communication, Leadership and Accountability : ☐

Specify:----------

6.4 Occupational Health Enhancement: ☑

Specify: PTW audits involves at site cross checking of the level of compliance of work force with the issued PTW system. The results show that the violations reported are minimal and have drastically come down with the increase in PTW audits. This includes the compliance to PPEs and other control measures that may affect the personnel executing the job. Hence more audits means more compliance to PTW procedure and better occupational health of work force.

6.5 Minimizing Environmental Impact: ☐

Specify:----------

6.6 Improved HSE Control on Contractors (Service Providers): ☐

Specify:----------

6.7 Economical and Social Impact ☐

Specify:----------

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11. Modulised Emergency Response Training (MERT) Programme

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Modulised Emergency Response Training (MERT) Programme

2. The Common Practice Known

There are few companies that follows the periodic training on Emergency Response .

3. The Best Activity(ies) adopted

Training for emergency response is a crucial necessity for emergency response personnel, to protect life and equipment in more proficient and confident manner. The GPIC SHE Department provides the information and training to ensure that Operations personnel are able to cope with an emergency on site. This is achieved in the Modulised Emergency Response Training (M.E.R.T) program, by both theoretical and practical sessions.

The theoretical sessions covers emergency preparedness, emergency situation management and mitigation, and in addition general Health & Safety presentations are delivered as refresher training based on evolving circumstances.

The practical sessions shall depend on pre-planned scenarios used Generic Emergency Procedure, using standard fire suppression techniques or hazardous materials (HAZMAT) protection techniques and equipment

6.The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☐

Specify:----------

6.2 More Assurance of Risk Control: ☑

Specify: MERT programme aims in training GPIC Operational personnel in both theoretical and practical response to an emergency in the complex. It also provides refresher training and enhance the practical skills required in case of emergency. This leads to more assurance of risk control in case of any emergency

6.3 Communication, Leadership and Accountability : ☐

Specify:----------

6.4 Occupational Health Enhancement: ☑

Specify: MERT imparts attendees with the confidence and make them familiar with various emergency situations and related emergency mitigation equipments. It ensures that attendees receive training in Health & Safety to keep themselves safe in their normal day to day routine

6.5 Minimizing Environmental Impact: ☐

Specify:----------

6.6 Improved HSE Control on Contractors (Service Providers): ☐

Specify:----------

6.7 Economical and Social Impact ☐

Specify:----------

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12. External Bench Marking Audits for SHE Management System

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

External Bench Marking Audits for SHE Management System

2. The Common Practice Known

There are many companies that follows the periodic external audits of SHE management systems with relevant standards

3. The Best Activity(ies) adopted

GPIC has gone further ahead by employing British Safety Council(BSC) for auditing the SHE management system with respect to the existing best practices being followed in the world by different companies. The Five Star Audit as it is called is not only for achieving Five Stars but to benchmark itself among the world leaders and enhance the SHE Management system. BSC evaluate the existing system in GPIC and recommends for complying with best practice.

6.The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☐

Specify: Evaluation of existing SHE Management system with world best practices enable GPIC to continually improve its system and enhance procedures.

6.2 More Assurance of Risk Control: ☑

Specify: Evaluation of existing SHE Management system with world best practices enable GPIC to ensure more assurance of Risk Control

6.3 Communication, Leadership and Accountability : ☐

Specify:----------

6.4 Occupational Health Enhancement: ☑

Specify: Evaluation of existing SHE Management system with world best practices enable GPIC to ensure enhancement in Occupational Health.

6.5 Minimizing Environmental Impact: ☐

Specify:----------

6.6 Improved HSE Control on Contractors (Service Providers): ☐

Specify:----------

6.7 Economical and Social Impact ☐

Specify:----------

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13. Inhouse Incident Reporting intranet application based on Lotus Notes

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Inhouse Incident Reporting intranet application based on Lotus Notes

2. The Common Practice Known

Many companies still have incident reporting systems based in MS Excel Software or hard copies.

3. The Best Activity(ies) adopted

GPIC has a unique intranet application which is developed in house for reporting of incidents and updating their close out status .

The objective of the programmes is to develop a culture which enables capturing, sharing and putting incidents and investigation recommendations into action to add value to business, by:

1. Effective capture and management of incidents and learn lessons from them to prevent recurrence.

2. Share the lessons learnt with people of interest

3. Update the status of the recommendations.

4. Facilitate putting lessons learned into action by case study / accident investigation recommendations.

6.The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☑

Specify: This intranet application has helped in more and easy reporting of incidents and effective follow ups for the close out of investigation recommendations.

6.2 More Assurance of Risk Control: ☐

Specify:----------

6.3 Communication, Leadership and Accountability : ☑

Specify: The incident reporting system is viewable to any employee, where the person of interest can retrieve all historical datas about incidents and the current status of the recommendations. This improves the quality and effectiveness of communication with respect to learning points. The recommendations are logged against the concerned persons for action and close out. This enhances the accountability of the concerned personnel towards safety and prevent recurrence of similar incidents under his supervision.

6.4 Occupational Health Enhancement: ☐

Specify:----------

6.5 Minimizing Environmental Impact: ☐

Specify:----------

6.6 Improved HSE Control on Contractors (Service Providers): ☐

Specify:----------

6.7 Economical and Social Impact ☐

Specify:----------

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14. Adoption of International standards beyond statutory compliance

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Adoption of International standards beyond statutory compliance

2. The Common Practice Known

The common practice of companies are to comply with statutory standards

3. The Best Activity(ies) adopted

GPIC has adopted numerous international standards and guidelines (like NFPA,ASME etc.) as best practice. Apart from Integrated Management System (IMS)certification incompliance with PAS 99:2006, the company has adopted the Responsible Care (RC) 14001:2008 that made it the first company to achieve this certification in GCC. GPIC was recently certified by BSI for its compliance with all the requirements ISO 31000:2009-Risk Management-Principles and Guidelines.

6.The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☑

Specify: The adoption of international standards and guidelines including the Management Standards, has continually improved procedures related to SH&E

6.2 More Assurance of Risk Control: ☑

Specify: The adoption of international standards and guidelines including the Management Standards, has continually improved Risk Control And Management.

6.3 Communication, Leadership and Accountability : ☑

Specify: The adoption of international standards and guidelines including the Management Standards, has led to development of internal resources including the Internal auditors and has improved the team's communication leadership and accountability.

6.4 Occupational Health Enhancement: ☑

Specify: The adoption of international standards and guidelines including the Management Standards, has continually improved Occupational Health and performance within the company

6.5 Minimizing Environmental Impact: ☑

Specify: The adoption of international standards and guidelines including the Management Standards such as IMS and RC, has continually improved the identification, evaluation, assessment and control of environment aspects and impacts.

6.6 Improved HSE Control on Contractors (Service Providers): ☑

Specify: The adoption of international standards and guidelines including the Management Standards, has continually improved the participation of workforce including contractors and their involvement in SHE Management System.

6.7 Economical and Social Impact ☑

Specify: The adoption of international standards and guidelines including the Management Standards, such as IMS and RC, has continually improved the identification, evaluation, assessment and control of various social impacts.

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15. Annual Schedule of Emergency exercises/drills with specific scenarios

2013

AFA HSE Best Practices Application Form

Part 1 : <Introduction>

Definition of HSE Best Practice

Is a method or technique that has consistently show results superior to those of other means and that is used in the benchmark.

Or a program, activity, or strategy that has been show to work effectively and produce successful out-comes & supported to some degree by subjective or objective data resources.

Objective of this Exercise

In order to share the best practices in HSE among all AFA members to promote & enhance HSE performance within the AFA companies.

Part 2: <To be completed by applicant>

1. Applicant Company Info

Company Name:--**Gulf Petrochemical Industries Co**.--- Country:----**Bahrain**--------

Establishment Date:---**1979**------ Number of plants:--**3**--- Production capacity:-**4200 T/D**--

Activity/Product: X **Urea** X **Ammonia** X **Methanol**

Number of Manpower: Employees:--**578**---- Permanent Contractors:----**200**-------

2. Name of Applicant

Name:--------**Jassim Darwish**----------

Cell Phone:-**00973 39677277**-- Work Phone:---**00973 17733456**---

3. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Annual Schedule of Emergency exercises/drills with specific scenarios

4. The Common Practice Known

Even though such practices exist in other industries, most of them will be have emergency drills as per the scheduled numbers with the scenarios decided mostly before the date of drills/exercises

5. The Best Activity(ies) adopted

GPIC has introduced a system of issuing an annual schedule of specific exercise/drill scenarios for each month. The scenarios are based on the major hazards in the plant and covers all areas including the office buildings. Accordingly each of three shifts in SHE Department has to conduct exercises on specific scenarios as in the schedule for that month. This is apart from the monthly drills that are conducted by the production section for each plant.

6.The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☑

Specify: The schedule and clarity in specific scenarios for the drill will help in covering all areas including the office buildings and sets out a target for the achievement of KPI and mainly the purpose of Emergency Procedure.

6.2 More Assurance of Risk Control: ☑

Specify: The schedule covers all areas and major identified hazards in the plant. This ensures that the exercises are conducted every month cover all areas including the office buildings. The level of preparedness in case of any emergency will be improved and hence will ensure more assurance to risk control

6.3 Communication, Leadership and Accountability : ☐

Specify:----------

6.4 Occupational Health Enhancement: ☐

Specify:----------

6.5 Minimizing Environmental Impact: ☐

Specify:----------

6.6 Improved HSE Control on Contractors (Service Providers): ☐

Specify:----------

6.7 Economical and Social Impact ☐

Specify:----------

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HSE Best Practice

Petrochemical Industries Co.
PIC

2013

1. Applicant Company Info

Company Name: Petrochemical Industries Company **Country:** Kuwait

Establishment Date: 1960 **Number of plants:** 4

Production capacity: Urea : 3150 Ton /Per /day Ammonia : 1880 Ton / Per /Day

Activity/Product: ☐ Phosphate ☐ Nitrogen ☐ Potash

Number of Manpower: **Employees:** 610 **Permanent Contractors:** 1290

2. Name of Applicant

Name: Marzouq Al Shammary – Team Leader (Env & OH)

Cell Phone: + 965 99435918 **Work Phone:** +965 23261040

Email Address: Marzouq_AlShammary @pic.com.kw

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HSE Best Practice - PIC

16. Recommendation Tracking

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Recommendation Tracking

2. The Common Practice Known

There was no clear mechanism / system in practice to track / follow up the implementation of recommendations duly issued after an audit, drills, incident, accidents and near misses promptly.

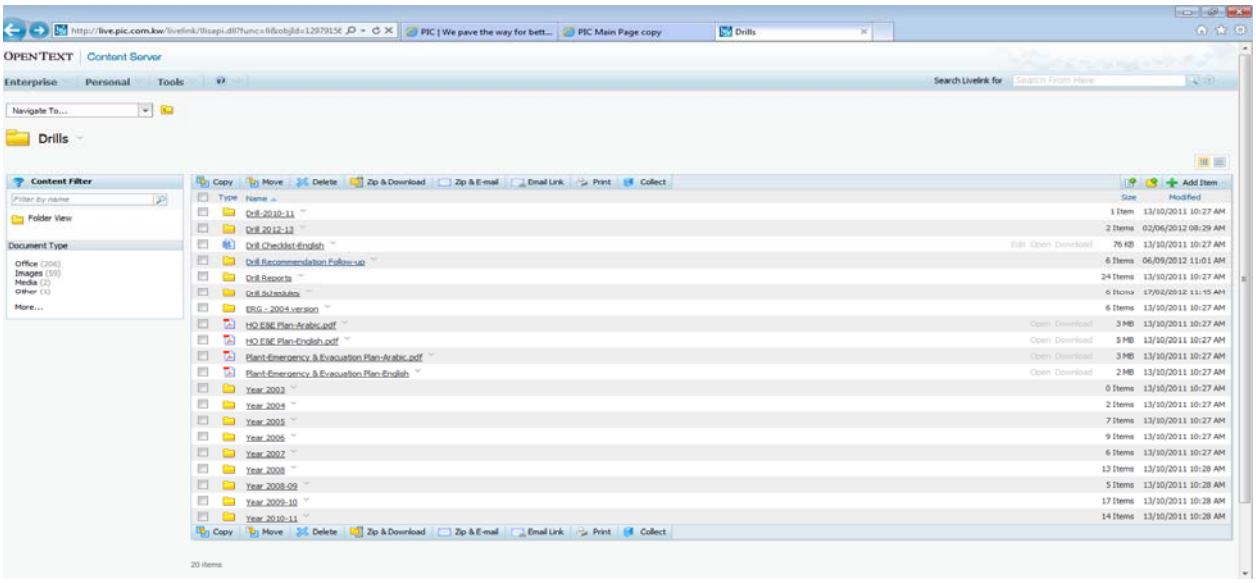
3. The Best Activity(ies) adopted

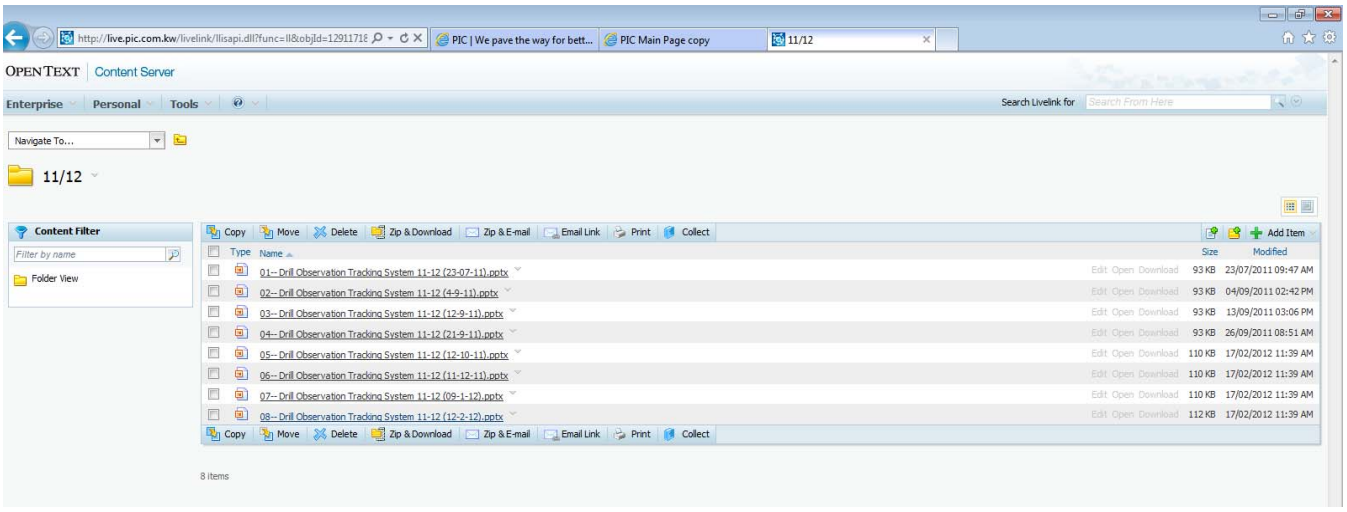
The recommendation system is a manually designed format it comprise Description of recommendation, Responsibility, Due date and status. If any recommendation issues that will be manually enter in to the format and it will be communicated through e-mail and reminders, weekly staff meeting, monthly CHSEC meeting to all concern section. The Recommendations tracking and follow System helps to implement the recommendation on time.

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure Enhancement: ☐

Specify: This best practice has been adopted as part of implementation of tracking & follow up of recommendations.





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17. Health Priority for Air Sampling

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Health Priority for Air Sampling

2. The Common Practice Known

Generally, Risk control will be based on the Job risk assessment (JRA) & its register.

3. The Best Activity(ies) adopted

In addition to that, we have developed an OH Risk register. This health priority OH risk register is derived based on the considerations of The nature of the hazard and route of entry into the body, acute or chronic health effects, numbers of persons engaged, Amount Used, Warning properties, Odor threshold, Amount of Exposure, Physical factors everything will be considered to develop OH risk register. Based on the rating, Exposure sampling will be prioritized.

.

4. The Added Value of the Best Practice: <please tick as applicable>

6.2 More Assurance of Risk Control: ☐

Specify: This best practice has been adopted as part of implementation of Health Priority Programme

PIC Product Pg 1 of 1

Occupational Health Priorities Score Sheet

Name of Chemical	Total Score	Samp Reqd Y/N	Toxic Route Code				Acute Toxicity Classification				Chronic Toxicity Classification			Odor Threshold				Physical factors				Codes for Amount (To/Yr)				Codes for No of Employees				Degree of Exposure		
			L&S	L	S	E/M	ET	HT	MT	ST	D	MH	SH	>3xE	E<3x	0.1E>E	0.1xE	G	RP	L	S	>50T	5-50 T	0.5-5 T	<0.5T	>125	25-124	5-24	1-4	OP	CP	EP
			8	4	2	1	8	4	2	1	8	4	2	8	4	2	1	8	4	2	1	8	4	2	1	8	4	2	1	16	8	1
Ammonia	39	N	8							1		4					1	8				8				8						1
Urea	23	N				1				1			2				1				1	8				8						1

Abbreviation							
	L&S - Lung & Skin	ET - Extremely Toxic	D - death	>3xE - 3 x EL	G - Gas	Amount = >50 Ton	No of person > 125	OP - Open process
	L - Lung	HT - Highly Toxic	D - Carcinogen	E<3x - > EL, but < 3 x EL	R - Respirable	Amount = 5 > 50 Ton	No of person = 25 - 124	CP - Closed process
	S - Skin	MT - Moderately Toxic	MH - Major Hazard	0.1E>E - > 0.1 x EL, but < EL	L - Liquid	Amount = 0.5 > 5 Ton	No of person = 5 - 24	EP - Enclosed process
	E/M - Eye / Mouth	ST - Slightly Toxic	SH - Slight Hazard	0.1xE - 0.1 x EL	S - Solid	Amount = < 0.5 Ton	No of person = 1 - 4	

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HSE Best Practice - PIC

18. Training & Awareness

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Training & Awareness

2. The Common Practice Known

HSE Competency among the employees are being raised / updated through HSE passport trainings which is scheduled once in a three years for all employees and contractors. The refresher trainings will be scheduled after three years only; hence, there is a possibility for the lack of awareness and knowledge on HSE.

3. The Best Activity(ies) adopted

To overcome from this issue, we have developed and established an online HSE awareness programmes through PIC intranet (AL Mallah) which is communicated to every individuals through mass mail (IBM – LOTUS). Every employee has to open, study and understand the training programme and must answer for the questions duly asked at the end of the programme.

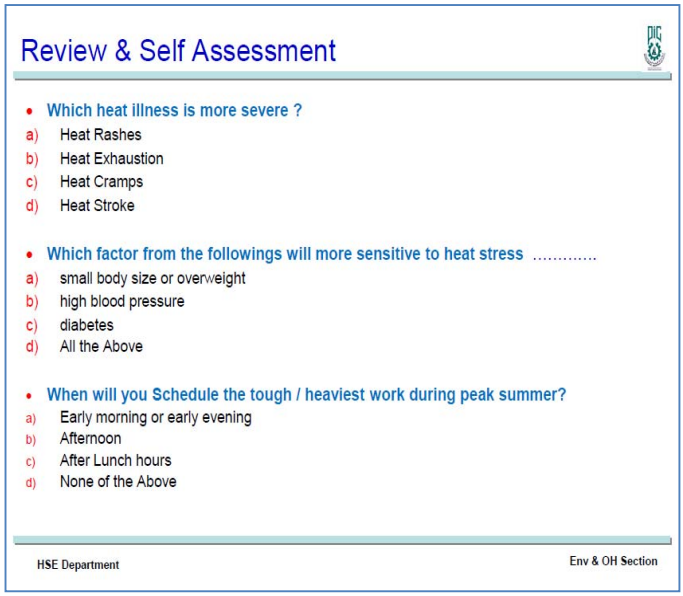
This remainder communication will done for a duration of 07 days on daily basis. The score obtained from this awareness is integrated with Annual performance appraisal of the individual. These presentations are scheduled once in a quarter on bilingual (English & Arabic).

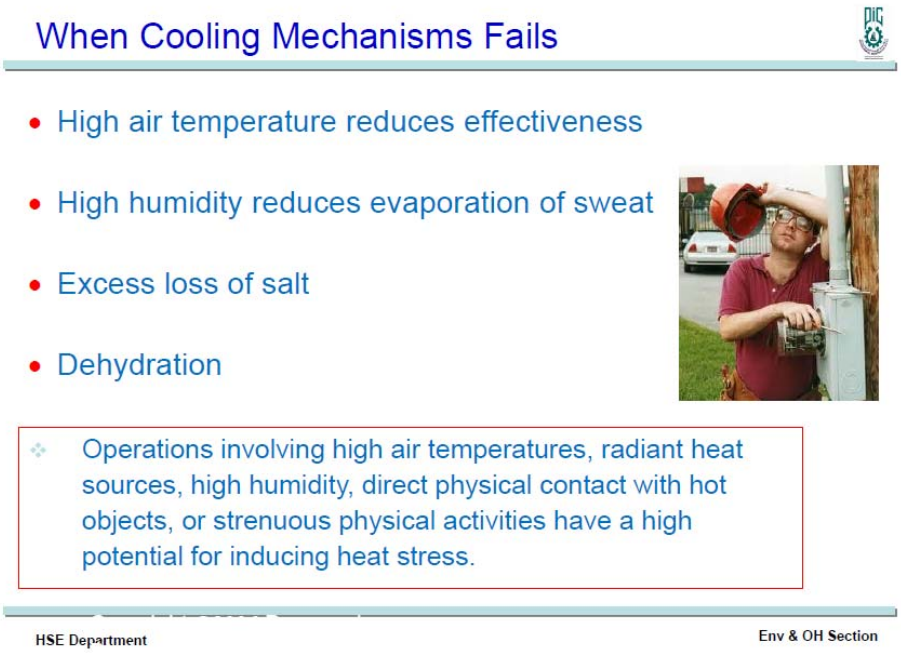
By implementing this, we have ensured active participation and attendance tracking of individual, Time saving, Flexible time frame, Evaluation of understanding and knowledge

4. The Added Value of the Best Practice: <please tick as applicable>

6.3 Communication, Leadership and Accountability: ☐

Specify: This best practice has been adopted as part of implementation of Effective HSE training & Awareness.





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HSE Best Practice - PIC

19. HAZARD COMMUNICATION (HAZCOM)

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

HAZARD COMMUNICATION (HAZCOM)

2. The Common Practice Known

Generally, Material safety data sheets (MSDS) may be available as a printed hardcopies at the Site for the references of employees who are all working with it. But there are possibilities for missing, outdated information, damages and loss of MSDS from the site. Also Employee may face difficulties to get the MSDS file for reference on time.

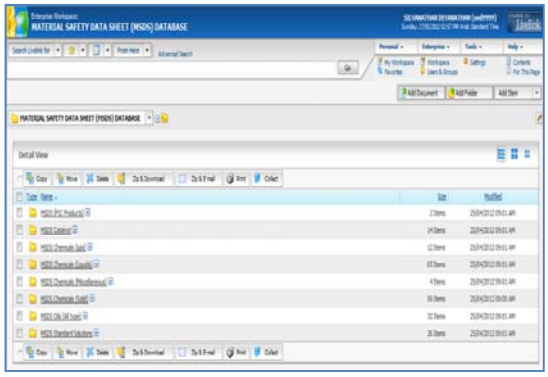
3. The Best Activity(ies) adopted

These MSDS have provided by the manufacturers / suppliers and all the MSDS are having all essential data and information in 16 sections. All MSDS have been uploaded in PIC data management system (livelink) after the review & acceptance of Env & OH section under fertilizer sector which is accessible to all employees and contractors on 24x7 basis. Hence, they can refer any MSDS on anytime from Anywhere from PIC..

4. The Added Value of the Best Practice: <please tick as applicable>

6.4 Occupational Health Enhancement:

Specify: This best practice has been adopted as part of implementation of effective Hazard Communication (HAZCOM) programme.



شركة صناعة الكيماويات البترولية (ش.م.ك)

Petrochemical Industries Company (K.S.C.)

MATERIAL SAFETY DATA SHEET

AMMONIA ANHYDROUS

SECTION 1:- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

SUPPLIER'S NAME : PETROCHEMICAL INDUSTRIES COMPANY (K.S.C.)
SUPPLIER'S ADDRESS : P.O.BOX 1084, 13011 SAFAT, KUWAIT

SUBSTANCE: AMMONIA, ANHYDROUS

TRADE NAMES/SYNONYMS:
MTG MSDS 4; ANHYDROUS AMMONIA; AMMONIA GAS; AMMONIA; NITRO-SIL; R 717; SPIRIT OF HARTSHORN; STCC 4904210; UN 1005; H3N; MAT01050; RTECS BO0875000

CHEMICAL FAMILY: Inorganic, gas

CREATION DATE: Jan 24'1989
REVISION DATE: June 22' 2009

SECTION 2:- COMPOSITIONS, INFORMATION ON INGREDIENTS

COMPONENT: AMMONIA, ANHYDROUS
CAS NUMBER: 7664-41-7
EC NUMBER (EINECS): 231-635-3
EC INDEX NUMBER: 007-001-00-5
PERCENTAGE: 100.0

SECTION 3:- HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=3 FIRE=1 REACTIVITY=0

EMERGENCY OVERVIEW:
COLOR: Colorless
PHYSICAL FORM: Gas
ODOR: Pungent odor
MAJOR HEALTH HAZARDS: Mucous membrane burns, respiratory irritation (possibly severe), skin irritation (possibly severe), eye irritation (possibly severe)
PHYSICAL HAZARDS: Containers may rupture or explode if exposed to heat.

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HSE Best Practice - PIC

20. Waste Management

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

HAZARD COMMUNICATION (HAZCOM)

2. The Common Practice Known

Generally, Material safety data sheets (MSDS) may be available as a printed hardcopies at the Site for the references of employees who are all working with it. But there are possibilities for missing, outdated information, damages and loss of MSDS from the site. Also Employee may face difficulties to get the MSDS file for reference on time.

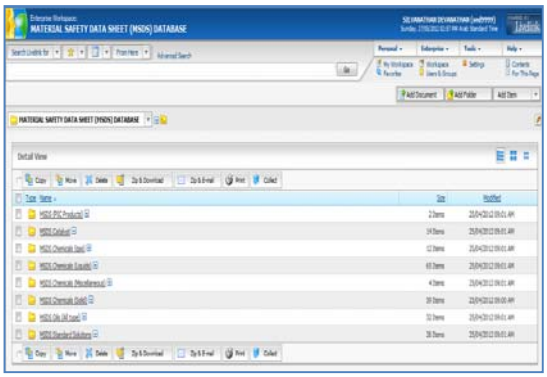
3. The Best Activity(ies) adopted

These MSDS have provided by the manufacturers / suppliers and all the MSDS are having all essential data and information in 16 sections. All MSDS have been uploaded in PIC data management system (livelink) after the review & acceptance of Env & OH section under fertilizer sector which is accessible to all employees and contractors on 24x7 basis. Hence, they can refer any MSDS on anytime from Anywhere from PIC..

4. The Added Value of the Best Practice: <please tick as applicable>

6.4 Occupational Health Enhancement: ☐

Specify: This best practice has been adopted as part of implementation of effective Hazard Communication (HAZCOM) programme.



شركة صناعة الكيماويات البترولية (ش.م.ك)

Petrochemical Industries Company (K.S.C.)

MATERIAL SAFETY DATA SHEET

AMMONIA ANHYDROUS

SECTION 1:- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

SUPPLIER'S NAME : PETROCHEMICAL INDUSTRIES COMPANY (K.S.C.)
SUPPLIER'S ADDRESS : P.O.BOX 1084, 13011 SAFAT, KUWAIT

SUBSTANCE: AMMONIA, ANHYDROUS

TRADE NAMES/SYNONYMS:
MTG MSDS 4; ANHYDROUS AMMONIA; AMMONIA GAS; AMMONIA; NITRO-SIL; R 717; SPIRIT OF HARTSHORN; STCC 4904210; UN 1005; H3N; MAT01050; RTECS BO0875000

CHEMICAL FAMILY: Inorganic, gas

CREATION DATE: Jan 24'1989
REVISION DATE: June 22' 2009

SECTION 2:- COMPOSITIONS, INFORMATION ON INGREDIENTS

COMPONENT: AMMONIA, ANHYDROUS
CAS NUMBER: 7664-41-7
EC NUMBER (EINECS): 231-635-3
EC INDEX NUMBER: 007-001-00-5
PERCENTAGE: 100.0

SECTION 3:- HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=3 FIRE=1 REACTIVITY=0

EMERGENCY OVERVIEW:
COLOR: Colorless
PHYSICAL FORM: Gas
ODOR: Pungent odor
MAJOR HEALTH HAZARDS: Mucous membrane burns, respiratory irritation (possibly severe), skin irritation (possibly severe), eye irritation (possibly severe)
PHYSICAL HAZARDS: Containers may rupture or explode if exposed to heat.

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21. Personal Protective Equipment

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Waste Management

2. The Common Practice Known

Generally, a common waste bins are provided for the occupants in the facilities to collect the wastes then and there. All employees will dispose the waste duly generated by them are disposed in the common bins which is difficult to segregate the recyclable wastes for recycling.

3. The Best Activity(ies) adopted

A set of colour coded waste bin were provided to the occupants of all buildings as well as in the plant areas and the employees were trained and encouraged to dispose the recyclable wastes in relevant waste bins. Such segregated recyclable wastes are being sent to the recycling companies to reproduce them into new useful products.

4. The Added Value of the Best Practice: <please tick as applicable>

6.5 Minimizing Environmental Impact: ☐

Specify: This best practice has been adopted as part of implementation of Solid waste management programme.

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HSE Best Practice - PIC

22. Socio Responsibilities

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Socio Responsibilities

2. The Common Practice Known

Generally, an awareness message banners, Brousher may be displayed / distributed to the communities as part of developing awareness without any participation of community / public.

3. The Best Activity(ies) adopted

This event ended with Seaside Cleanup Campaign in co operation with community.

We strongly believe that the Effective changes are possible if it is initiated in childhood and thus we have encouraged the active participation of students in such Awareness programme.

4. The Added Value of the Best Practice: <please tick as applicable>

6.7 Economical and Social Impact: ☐

Specify: This best practice has been adopted as part of implementation of Environmental Socio Responsibilities

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HSE Best Practice

Ruwais Fertilizer Industries (FERTIL)

2013

1. Applicant Company Info

Company Name:-RUWAIS FERTILIZER INDUSTRIES-- Country: UNITED ARAB EMIRATES

Establishment Date:----OCT 1980------- Number of plants:---TWO--- Production capacity:-- AMMONIA 1300 TPD & UREA 2200 TPD

Activity/Product: ☐ Phosphate ☐ Nitrogen ☐ Potash

Number of Manpower: Employees:-----500------- Permanent Contractors:------300-------

2. Name of Applicant

Name:------HASHIM MOHAMED LARI----------

Cell Phone:---------- Work Phone:--0097126026657----------

Email Address:---H.LARI@FERTIL.COM----------

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HSE Best Practice - FERTIL

23. Permit To Work

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Permit to work system revision

Comprehensive review of PTW was undertaken by an internal committee and external consultants; the recommendations were incorporated and revised permits were implemented. Generic risk assessments were enlarged /enhanced & implemented rigorously for critical or risky activities. The outcomes were near NIL near misses / incidents from hot work activities, confined space entries and critical maintenance activities.

2. The Common Practice Known

Permit to work is developed at the early stages of operations and it is not usually revised. Moreover, when it is revised, the revision is done by the HSE department or consultant without involving the end users.

3. The Best Activity(ies) adopted

Comprehensive review of PTW was undertaken by an internal committee involving members from concerned department. Incidents highlighting PTW system weaknesses were reviewed. Best practices in fertilizers and oil and gas industries were reviewed.

External consultant was engaged to produce the system. PTW forms were reviewed, additional PTW was introduced for energized electrical works, generic risk assessment form was introduced and three PTW audit categories were introduced.

Concerned employees were trained on the new system. User friendly pocket booklet was distributed.

PTW assessment is conducted before authorizing issuers/receivers.

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☐

Specify:-

Gaps identified in the previous procedure were incorporated. Desktop, site and comprehensive PTW audits were introduced.

6.2 More Assurance of Risk Control: ☐

Specify:

Generic risk assessment assists the PTW issuer and receiver to identify and control the risks. Energized electrical PTW identified strict controls for working on live equipment.

6.3 Communication, Leadership and Accountability: ☐

Specify:

All in-progress PTW are displayed on plant plot plan.

6.4 Occupational Health Enhancement: ☐

Specify:

Specific OH controls were incorporated, example confined space entry temperature and duration limits were included.

6.5 Minimizing Environmental Impact: ☐

Specify:

Controlling the risks associated with permit to work reduces the risks from accidents which has direct impact in environment protection.

6.6 Improved HSE Control on Contractors (Service Providers): ☐

Specify:

Comprehensive competency assurance is in place to ensure the competency of the contractors before authorizing them to handle permit to work.

6.7 Economical and Social Impact

Specify:

Reducing the risks reduces the financial impacts from accidents.

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HSE Best Practice

Alexandria Fertilizer Co. (ALEXFERT)

2013

1. Applicant Company Info

Company Name: **Alexandria Fertilizers Co."AlexFert"** Country: **Egypt.**

Establishment Date: **11 Oct.,2003**. Number of plants: **1** Production capacity: **1920 ton/day**

Activity/Product: ☐ Phosphate ☒ Nitrogen ☐ Potash

Number of Manpower: Employees: **455** Permanent Contractors: 70

2. Name of Applicant

1. Name: **Ashraf Abd Elmohsen.**

   Cell Phone: **+2 01002224859.** Work Phone: **+203 5603238.**

   Email Address: ashraf_abedelmohsen**@yahoo.com**

2. Name:- Sherif Hassan Fayed

   Cell Phone:- +2 01117070948 Work Phone:- +2035603238

   Email Address:- sherifhfayed@yahoo.com

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HSE Best Practice –ALEXFERT

24. Selection of contractors "for especial high risk activities"

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Selection of contractors "for especial high risk activities"

2. The Common Practice Known

1. Contractors Selection Procedures applied is adhered to API 2220 – (Appendix G – contractor safety check list) as a guide for evaluating the effectiveness of contractor safety performance.

2. HSE assessment depend on contractors' questionnaire which contain (HSE policy, staff, training, KPI's records, P.T.W system ,manuals, etc.)

3. Contractors should submit complete medical check for their workforce before starting the contractual activities, which are subject to review. (if the contract was on annually-base complete annually medical re-check should be executed every year after contract renewal).

4. Contractors should submit HSE LOG for all workforce which were reviewed through company proper channel – finally the contractor work force selected are accepted upon the a/m check.

3. The Best Activity(ies) adopted

In addition to above procedures applied for contractors selection the existing workforce contractors shall subject to the following procedures for improvement and to reduce risk associated with such activities. Where, there is a plane for critical high risk activity (specially during shut down), the following should be applied as an additional measure control :

1- Not only J.H.A shall be executed for critical high risk activities but it is followed by TRA" Task Risk assessment"

2- As an output to such assessment , the selection of contractors workforce for such critical activities shall subject to especial medical examination, (as drug test, ECG, Spirometry,

Audiometry, etc. & finally medical recommendation are issued to assure that the workplace selected are able to execute that activities without facing any problem.

3- One of the following is the doctor opinion for final recommendation :

a. *Able, without restriction, to undertake Duties ,wear breathing apparatus, work in confined spaces and undertake emergency response duties.*

b. *Able to undertake Duties ,wear breathing apparatus, work in confined spaces and undertake emergency response duties, subject to restrictions listed below:*

1……

2……

c. *Requires further medical assessment before a recommendation can be given.*

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☐

Specify: The adding procedures for especial medical check a/m. for selected contractor manpower –to execute high risk activities such as entry inert confined space with full breathing system as OSHA approved- enhance the choice of contractors manpower.

6.2 More Assurance of Risk Control: ☐

Specify: The above mentioned procedures assured that the additional control were applied to reduce risk, where medical recommendation improve manpower fitness for such critical activities.

6.6 Improved HSE Control on Contractors (Service Providers): ☐

Specify: All the a/m. improve the HSE control on the contractors manpower selection and activities.

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HSE Best Practice –ALEXFERT

25. PTW " High risk cutting/welding process for (W.H.B)bottom disk."

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

PTW " High risk cutting/welding process for WASTE HEAT BOILER (W.H.B)bottom disk."

2. The Common Practice Known

-Job hazard analysis JHA was executed followed by task risk assessment TRA.

-Certificates for all lifting equipment, all hand tools, etc. were reviewed as per company policy.

-All procedures for cooling down, isolation, purge, according to P&I were reviewed.

-Gas sampling from system process by lab and HSE was monitored several times.

-Preparation for all needed PPE(Air breathing trolley - Aluminized suit) as control measure.

3. The Best Activity(ies) adopted

To make sure there is no gas pocket inside the system process, two methods for N_2 purge were executed as:-

a- Continuous reverse direction purge process for the whole train executed for 36 hrs.

b- The last 3hrs.pressurizing/de-pressurizing process was executed several times.

During Continuous reverse direction purge process, lab analysis was executed every 2hrs. and finally the reading reached 0.1%vol. H_2 gas.

Where the lab gas chromatograph instrument can't read the presence of H_2 gas less than 0.1%vol, HSE shift started measuring the LEL% H_2 gas by using the explosimeter (calibration was done before starting the monitoring session).

During the pressurizing/de-pressurizing purge process the measurement of LEL% H_2 gas was monitored every 15min. until the reading fixed at 5% LEL H_2 gas and the cutting procedure started.

(Note: As above mentioned, the purged process system was monitored from different points distributed on the whole train.)

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement:

Specify:- The procedure used for N_2 gas purge was enhancement through the pressurizing/de-pressurizing steps that result in safe maintenance activities without any loss.

6.2 More Assurance of Risk Control:

Specify:- Not only the using of the two purging methods but also the increasing of monitoring points for gas test assured that the train was completely cleared from any gas pocket may constitute potential hazard during welding / cutting activities that leading to assurance of risk control.

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HSE Best Practice

Saudi Arabian Fertilizers Co. (SAFCO)

2013

1. Applicant Company Info

Company Name: **Alexandria Fertilizers Co."AlexFert"** Country: **Egypt.**

Establishment Date: **11 Oct.,2003**. Number of plants: **1** Production capacity: **1920 ton/day**

Activity/Product: ☐ Phosphate ☒ Nitrogen ☐ Potash

Number of Manpower: Employees: **455** Permanent Contractors: 70

2. Name of Applicant

Name: **Ashraf Abd Elmohsen.**

Cell Phone: **+2 01002224859.** Work Phone: **+203 5603238.**

Email Address: ashraf_abedelmohsen**@yahoo.com**

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HSE Best Practice –SAFCO

26. Department EHSS KPI Procedure.

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

Department EHSS KPI Procedure.

2. The Common Practice Known

Unique innovative approach to improve and sustain EHSS performance by implementing Department EHSS KPI Procedure which was developed and implemented in line with recognized industry (SABIC), national and international metrics. EHSS KPI was developed and implemented for individual departments at SAFCO.

The purpose of this procedure is to quantitatively measure the EHSS Performance of each department as per the approved EHSS Key Performance Index. EHSS KPI was developed based on EHSS criteria and its applicability for a particular department. The departments are grouped based on similar functions like operations, maintenance, supporting departments. The criteria points are provided in excel sheet format for simple and easy computing up the relevant data against each criteria. Each department reviews EHSS KPI in their monthly department EHSS Meeting and submits the same to safety section, for record keeping and to track performance. EHSS KPI target is set as one of the annual EHSS goals every year. The departments are audited once in six month to verify and confirm for compliance of department KPI with the supporting documents.

This EHSS KPI serves dual purpose as to measure the individual department EHSS performance and helps in close monitoring for taking corrective actions to achieve the target The best performed departments in their respective divisions / groups are recognized. To motivate and maintain healthy competitive environment among the employees, department which obtains the highest score (more than 90%) in the final audit are recognized.

To motivate and maintain healthy competitive environment among the employees, department which obtains the highest score (more than 90%) in the final audit are recognized. SAFCO has achieved continual improvement in EHSS performance after implementing this procedure and serves as best tool to monitor and enhance EHSS performance. Above mentioned divisions are audited once in six month to confirm the compliance, score achieved and to select the best performers.

3. The Best Activity(ies) adopted

The departments are engaged to comply with EHSS KPI criteria requirements to meet the target set as one of the EHSS goals for company.

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☑

Specify: EHSS KPI procedure is one of the tools to enhance Organization EHSS culture and intended to improve organization performance.

6.2 More Assurance of Risk Control: ☑

Specify: The criteria is covering risk control programs like PHA, Mechanical Integrity.

6.3 Communication, Leadership and Accountability: ☑

Specify: After conducting KPI compliance and verification audit, the departments are recognized for achieving high score by Senior Management Team.

6.4 Occupational Health Enhancement: ☑

Specify: The criteria's are included Hearing conservation Program and Compliance to SHEM 12 procedures.

6.5 Minimizing Environmental Impact: ☑

Specify: The criteria is covering potable water consumption, waste management and regeneration and compliance to other Environment procedure requirements.

6.6 Improved HSE Control on Contractors (Service Providers): ☑

Specify: The criteria is included to prevent contractor incidents, trainings to contractor's employee and involvement and participation in awareness program.

6.7 Economical and Social Impact ☐

Specify: NA

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HSE Best Practice –SAFCO

27. Confined space simulator as physical training method

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

- Confined space simulator as physical training method

2. The Common Practice Known

Confined space training using simulator is designed for personnel exercise who are responsible for safe working practices and who are required to identify confined spaces. The aim of this training is to provide the candidate with an awareness of the current legislation, safe work practice in confined space, hazards relating to confined spaces operations and handling emergency situations when working in confined space.

3. The Best Activity(ies) adopted

Physical training in confined space using simulator will be followed by theoretical class. The objective of the practical training using simulator is to

offer a structured familiarization spectacle to practical job tasks in confined space and give the candidates the ability to apply their skills and knowledge in practice. Another aim is to combine theory with practice and give the candidates a realistic view on the demands and practices of the field.

Confined space simulator is designed as a pilot model similar to a chemical storage tank with capacity for 4 to 5 persons to work inside with man hole for entry and exit. Specific activity for each employee to be carried out in the confined space will be identified .NFPA label is there in the simulator for hazard communication. Communication system, lighting and emergency alarm system are provided which can be operated from outside panel. And also a facility to watch the confined space inside activity by video is available.

Practical training in confined space will be demonstrated by assuming a real work situation in confined space. The candidate who has completed 4 hours theoretical training in confined space safety will be given practical training in confined space by using the simulator. Each individual will have his own role play.

From the training group, one person will be assigned as permit issuer, another as work permit acceptor and another as stand by man. Two or three persons will be assigned as workers. Work permit procedure will be followed for issuing and accepting the permit. While the persons are inside, one of the emergency scenarios will be demonstrated and the actions of people will be watched by using video monitor. The emergency scenario will be surprise and it will not be informed to them in prior. The trainer will explain their actions and correct if there is any deviations.

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☑

Specify: Confined space training procedure has been revised to give practical oriented training followed by theoretical class

6.2 More Assurance of Risk Control: ☑

Specify:- The candidates are trained in handling emergency situation in confined space , identification of risks in confined space and safe work practices in confined space . So the risk control mechanism is well assured because of this physical training.

6.3 Communication, Leadership and Accountability: ☑

Specify: Candidates are trained in communication system, leadership and accountability with respect to confined space activity. Based on the type of confined space, different mode of communication system such as radio, video or telephone system will be adopted. Emergency alarm system, reporting of emergency, rescue of people are also part the training. Responsibility and accountability of work permit issuer, work permit acceptor, gas tester, confined space entrants and manhole watch are well demonstrated in the training.

6.4 Occupational Health Enhancement: ☑

Specify:- The following areas are well explained during the training to enhance occupational health

- Identification of Hazards in confined space such as oxygen deficiency , toxic gases and flammable gases
- Importance of gas test
- Entrants are insisted to carry pocket size gas meter
- Importance of ventilation in confined space
- Occupational health effects (acute and chronic effects)
- Symptoms to recognize the hazards in confined space
- Use of Personal protective equipments

6.5 Minimizing Environmental Impact: ☑

Specify: Preparation of equipment including Isolation of confined space is a part of Safe work practice. While preparing the equipment for maintenance, draining of chemicals, venting of gases will be done in a safe manner without affecting the environment. During the confined space training, all these aspect are discussed.

6.6 Improved HSE Control on Contractors (Service Providers): ☑

Specify: All required employees including contractors are trained in confined space activities. Only the trained and authorised employees can accept the work permit and work as manhole watch for confined space job.

6.7 Economical and Social Impact ☑

Specify:-

- Employees get the practical experience in confined space safety and are familiarized with safe work practice to be followed during such kind of works
- Employees are trained with the hazards and requirements of 'safe confined space entry'.
- Since different emergency scenarios such as gas leak, fire, lighting failure etc.are demonstrated in the training, employees can handle the similar or other situation if it arises during real work in the plant.
- Employee's confident level of working in confined space will be improved after attending this practical training
- Incidents related to confined space will be minimized

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HSE Best Practice –SAFCO

28. Confined World Environment Day and Exhibition 2011

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

World Environment Day and Exhibition 2011

✓ Public awareness

✓ Tree plantation of approximately 3,000 trees at Jubail City.

2. The Common Practice Known

This exhibition is part of SAFCO's commitment to social responsibility and a strong reflection of its efforts to preserve the environment and create community awareness.

3. The Best Activity(ies) adopted

- Heat Stress
- Hearing Conservation Program
- Chemical Exposure Sampling

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☐

Specify:

- Industrial Hygiene Procedure
- Environment Procedure
- Emergency Response Procedure

6.2 More Assurance of Risk Control: ☐

Specify:

6.3 Communication, Leadership and Accountability: ☐

Specify:

- EHSS Communication Procedure

6.4 Occupational Health Enhancement: ☐

Specify: General Awareness for the community in the following fields:

- NFPA
- Waste Management (Reduce, Reuse, Recycle)
- General information about ammonia
- Communicating company EHSSQ policy and perspective of stakeholders

6.5 Minimizing Environmental Impact: ☑

Specify: Proper disposal of waste materials and minimizing the use of materials which were commonly produced from nature (e.g. promoting of paperless practices).

6.6 Improved HSE Control on Contractors (Service Providers): ☐

Specify:_____

_____

6.7 Economical and Social Impact ☐

Specify:

- Improvement of company's relationship/communication to the community.
- Enhancement of company's social responsibility.

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HSE Best Practice

Saudi Arabian Mining Co. (Maaden)

2013

1. Applicant Company Info

Company Name:-----MAADEN PHOSPHATE COMPANY------ Country:-SAUDI ARABIA

Establishment Date:---------- Number of plants:----6--- Production capacity:----------

Activity/Product: ☒ Phosphate ☐ Nitrogen ☐ Potash

Number of Manpower: Employees:1318 Permanent Contractors:1702

2. Name of Applicant

Name:------LOTFI MUSTAFA KLABI

Cell Phone:+966506955528 Work Phone: +96633426100

Email Address:----klabil@mpc.maaden.com.sa

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HSE Best Practice –MAADEM

29. PERMIT TO WORK SYSTEM
30. INHOUSE TRAINING AND SHE INDUCTION
31. LIFTING EQUIPMENT INSPECTION
32. WORKING AT HEIGHT-SCAFFOLDING

2013

HSE Best Practice - Maaden Phosphate Company – MAADEN

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

- PERMIT TO WORK SYSTEM
- INHOUSE TRAINING AND SHE INDUCTION
- LIFTING EQUIPMENT INSPECTION
- WORKING AT HEIGHT-SCAFFOLDING

2. The Common Practice Known

- HSE WALKTHROUGH FOR WHOLE MPC
- MANAGEMENT PLANT TOUR
- INHOUSE TRAINING
- RISK ASSESSMENT
- JOB SAFETY ANALYSIS
- NEAR MISS REPORTING
- ACCIDENT INVESTIGATION
- MANAGEMENT OF CHANGE
- CAMPAIGN
- AWARENESS TO EMPLOYEES

3. The Best Activity(ies) adopted

- **Achieved IMS Certification for MPC to ISO9001, ISO14001, OHSAS18001 and ISO50001, the first site they have ever awarded 4 certification in one time.**

- **Following OSHA & NFPA, API etc.**

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☐

Specify: SHEM PROCEDURE IS IN PLACE AND IT IS IMPLEMENTED.

6.2 More Assurance of Risk Control: ☐

Specify: We have done a complete risk assessment for all plant and implement the corrective measure

6.3 Communication, Leadership and Accountability : ☐

Specify: Weekly senior management meeting, monthly HSE senior management meeting, monthly department meeting.

6.4 Occupational Health Enhancement: ☐

Specify: We are having yearly employee monitoring.

6.5 Minimizing Environmental Impact: ☐

Specify: WE are following the Royal Commission requirement, we are monitoring air emission, seawater, ground water etc.

6.6 Improved HSE Control on Contractors (Service Providers): ☐

Specify:--- SHEM-05 CONTRACTOR SHE COMMITTEE IS IN PLACE, WEEKLY SAFETY OFFICER'S MEETING IN PLACE TO GUIDE THE CONTRACTORS ABOUT HAZARDS AND INCIDENTS.

6.7 Economical and Social Impact ☐

Specify:----------

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HSE Best Practice

Oman-India Fertiliser Co. (OMIFCO)

2013

1. Applicant Company Info

Company Name: **OMAN INDIA FERTILISER COMPANY SAOC** Country: **OMAN**

Establishment Date:7/2005 Number of plants:02 Production capacity: 5060 MT/day

Activity/Product: ☐ Phosphate ■ Nitrogen ☐ Potash

Number of Manpower: Employees: 550 Permanent Contractors: 250

2. Name of Applicant

Name: **MOHAMMED SAID AL MASRORI**

Cell Phone:-0096899238572 Work Phone: **+968 25532161**

Email Address: **masrori@omifco.com**

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HSE Best Practice –OMIFCO

33. use seawater for cooling purpose

2013

1. HSE Area of Practice. (ex.: PTW, Lifting, Working at height,……..etc.)

As per the local legal requirements for those plants which use seawater for cooling purpose, three spots should be measured in order to monitor/control the effect of the thermal plume on the marine environment. Those are the ambient seawater, discharge point and the 300 m radius from discharge point. The weekly average temperature difference between the ambient seawater and the seawater temperature at discharge point should not be more than 10 ◦C increase. Also, the weekly average temperature difference after 300 m radius area from the discharge point (300m RADP) and Sea water ambient temperature should be within 1 ◦C increase.

2. The Common Practice Known

OMIFCO has being monitoring the three spots as follows:

- **Ambient seawater temperature was being measured online at the seawater intake pit inside the plant. This seawater was being pulled out by gravity from the sea at around 18 meter depth.**
- **Seawater temperature discharge point was being measured online at the last spot of the seawater outfall channel at the plant prior being flown in the undersea pipeline.**
- **Seawater temperature at 300 m radius was being measured online under the jetty structure.**

3. The Best Activity(ies) adopted

OMIFCO has decided to do the online remote seawater temperature sensor on the sea using floating buoys. The decision came during the summer marine survey campaign which is being conducted yearly by an external agency. During the survey, a clear thermocline was found at the location of the 300m RADP online seawater temperature sensor. This may be one reason for the variability between seawater intake temperature (seawater is being taken from 18m depth) and the seawater at 300m RADP (where we measure the temperature at 3m). The thermocline is not being present in winter when the seawater column is well mixed and there will be little difference, but once the spring and summer seasons begin the thermocline will form and the difference between the water layers can be 2-3 degrees or more. In addition to that, the location of the 300 m sensor (under the structure of the jetty) is being affected by the movement of the ship as well as it in fact is not being mixed well and most of the time is under the shed.

As the plume is generally hotter than its surroundings, this body of water tends to migrate to the surface due to its lower density - so the temperature at 18m deep at a distance of 300m from the outfall may be very similar to the temperature at the intake point - but a comparison of the difference in temperature between 3m depth at the intake and 3m depth at 300m from the outfall will probably show significant variation depending on current direction.

For all of the above and to overcome this issue in the future, OMIFCO has decided to install online remote seawater temperature sensor at the intake point buoy where it will be considered as ambient water and install a new buoy holding temperature sensor which is 300 m far from the discharge point towards the common current direction. This is for the purpose of better comparison between the ambient seawater temperature and at 300m RADP and will be measured at the same depth.

4. The Added Value of the Best Practice: <please tick as applicable>

6.1 Procedure enhancement: ☐

Specify:----------

6.2 More Assurance of Risk Control: ☐

Specify:----------

6.3 Communication, Leadership and Accountability : ☐

Specify:----------

6.4 Occupational Health Enhancement: ☐

Specify:----------

6.5 Minimizing Environmental Impact: ☐

Specify: **The effect of the thermal load on the marine environment can be estimated more effectively and the necessarily actions can be taken at the proper time.**

6.6 Improved HSE Control on Contractors (Service Providers): ☐

Specify:----------

6.7 Economical and Social Impact ☐

Specify:----------
