

## HEALTH & SAFETY

### *Occupational health & safety management system*

ARL has implemented a Safety Management System (SMS), which follows the PLAN – DO – CHECK – ACT scheme; it is based on the Occupational Health and Safety Management system ISO 45001 and International Organization for Standardization (ISO) 14001 and has been designed to take an integrated approach for managing health and safety of our employees. ARL has an occupational health and safety management system in place for risk assessment of operations and committed to preserving its employees' health by avoiding accidents as much as possible.

The Health and safety management system is implemented to meet the legal requirements of the following:

- Punjab Environmental Protection Act, 1997
- The Boilers & Pressure Vessels Ordinance, 2002
- The Factories Act 1934
- Petroleum Act 1934
- Petroleum Rules 1985
- The Punjab Occupational Safety and Health Act, 2019
- OSHA Guidelines for Noise/Ammonia in air
- OSHA Guidelines for health and safety

The HSE department is currently heading the Occupational health and management system. ARL employs its own employees to run the Occupational health & safety management system. ARL HSE Management system supports improvement through continuous learning. The system helps improve capabilities through incident reporting and allows prevention of future incidents or accidents. ARL Health, Safety and Environment (HSE) Policy Statement, which is endorsed by our CEO, is conveyed to all employees through our induction programs and routine communications. ARL is committed to ensure the participation and consultation of workers and their representatives in health and safety matters. ARL delivers a health and safety program that focuses on the ongoing health and safety of everyone involved in and impacted by our work – including ARL employees, clients, contractors, as well as surrounding communities.

### *Risk assessment*

ARL has a long standing safety culture along with a detailed reporting of process and plant safety for prevention and mitigation of occupational health and safety impacts directly linked to operations and business relationships. ARL Occupational health safety, hazard identification, risk assessment & control are based on ISO 45001: 2018 standard. ARL identifies work-related hazards and assess risks on a routine and non-routine basis and applies a hierarchy of controls through various risk and hazard mitigation tools such as:

- Hazard Identification and risk assessment
- HAZOP study (Hazard and Operability study)
- Prestart- up Safet Review (PSSR)
- Job Safety Analysis
- Area Safety In-charges meeting (Monthly)
- Incident Investigation and Reporting committee (Monthly)
- Quality Council Meeting (Chaired by CEO occurs Bi-annually)
- Central HSE Committee (Chaired by CEO occurs on a Monthly basis)

ARL has defined how it calculates its risk through the following:

- Frequency of Exposure: Rate at which any person is exposed to the hazard.
- Incident Probability: Likelihood that the exposure will result in loss. It has an integral value from 1 to 4.
- Potential Consequences: Severity of the resulting loss is rated in this category. It has an integral value from 1 to 4.

Degree of Risk is defined as Frequency of Exposure \*Incident Probability\* Consequences

A rating scale for Degree of Risk, Risk Classification/Action has been defined. Risk assessment is incorporated into OHS hazard identification, control & Risk Assessment Form.

### *Hazard identification*

All ARL employees are encouraged to identify Occupational Health, safety and environmental hazards. Hazard identification is based on ISO 45001:2018 and ISO 14001 standard.

- Employees/workers are encouraged to communicate through several mediums such as Health safety, environment, quality and energy reporting card, Microsoft outlook messaging system, walkie talkie, and phone calls.
- Health & Safety Observations cards are available to all employees/workers in English and Urdu in order to have maximum participation.
- When facility in-charges receive information regarding hazards through said communication, they decide about the significant nature of the hazard/aspect. If the hazard/aspect is considered significant, then facility in-charges incorporate the hazard/aspect in the OHS identification, control & risk assessment form of the facility.
- Engineer (OHS/IMS) ensures quality of these processes by coordinating with concerned area in-charge for updating relevant section risk assessment.
- Area in-charges in consultation with workers, prepares a Hazard Identification, control & Risk Assessment Form by identifying all risk factor/potential hazards of only those activities, which may have significant health and safety impact keeping in view the history of near misses, incidents, accidents etc. that happened in the past. This form is incorporated into the departments Occupation Health, safety, hazard identification, risk assessment and control form.
- The procedure outlined for the identification of Health & Safety hazards is performed/reviewed every three Years or if there is any significant change in the ongoing processes, if a new facility is installed at ARL or identified in the internal and external audit.
- ARL employees and workers are encouraged to log in action items through the HSEQ management system which provides them with protection through reprisals
- Employees/worker can discontinue working if they see a job or a task as a risk or hazard.

To further eliminate hazards and minimize risks continuous trainings, safety talks and awareness sessions are organized throughout the year to ensure the quality of process and competence of the persons involved. Work Permit tests and management safety audits also ensure competence of the individuals. Related KPIs for safety and occupational health are reviewed monthly in the management meeting. ARL has six different systems for addressing non-conformities.

- i. Oracle based HSEQ Management System
- ii. Health, Safety, Environment, Quality and Energy Reporting Card
- iii. Action Items of HSEQ Meetings
- iv. Internal Audits

- v. External Audits
- vi. Quarterly Housekeeping Audits

### *Occupational Health services*

ARL's occupational health and industrial hygiene services aim to protect the health of our Employees through early identification, evaluation and control of possible health risks associated with working environments. ARL maintains confidentiality of its workers/employees medical and personal files. Worker/employees are nominated for testing through their In-charges in coordination with HSEQ. Transport facilities are usually provided. Testing of worker/employees can occur during working hours as well during the weekend depending on type of testing. ARL has an occupational health and safety committee which meets on a monthly basis to discuss various Occupational health and safety issues. Section head of Health and safety has the overall responsibility for the committee and Engineer (OHS/IMS) acts as its secretary. Occupational Health & safety advisor is responsible for overall development, implementation and monitoring of the occupational health program for our employees.

Following topics essentially form the agenda of the meeting:

- Review of previous meeting action items
- Review of policies and procedures
- Review and recommend actions to improve the effectiveness of the health and safety program.
- Audiometry Test of employees, Food Handlers medical tests etc.
- Occupational health and safety related surveys i.e. Noise surveys, Ergonomic Surveys, obesity surveys etc.
- Training of refinery staff related to occupational health and safety i.e. (first Aid, diseases related to occupational health and safety).
- The review output/decisions taken in meeting are converted into action item and are appropriately assigned to the concerned department

### *Worker participation*

The presence of workers in HSE committees is ensured at all levels. The CBA President is member of Central Health Safety & Environment Committee (CHSEC) headed by CEO. To review the performance of Health, safety & environment, CHSEC committee meets on monthly basis. The CBA president communicates workers inputs and concerns to the management and vice versa. Moreover, there is about 50 % representation of workers on safety steward forum.

Every ARL employee and contractor is required to be an active participant in managing the safe execution of work. We are focused on improving our safety performance through monitoring key indicators, holding leaders accountable and empowering all employees.

The International Labor Organization (ILO) marks the World Day for Safety and Health at Work on 28th of April each year to promote the prevention of occupational accidents and diseases.

### *Worker Training*

Health and Safety Programs are success of a good HSE Management System and it depends on the safety mindset of workers and contractors. To promote the safety culture at ARL, following initiatives have been taken:

- i. Monthly Basic HSE Induction Training Program
- ii. Monthly Live Fire Practice
- iii. Scenario based Emergency Drills
- iv. ERP on site refinery staff training
- v. Behavior Based Safety awareness & Surveys
- vi. Monthly meetings of Area Safety & Environment In-charges to discuss and present HSE aspects, performance and KPIs.
- vii. Monthly safety walk of operational area to identify areas of improvement
- viii. Quarterly Safety Awards for employees to reward and recognize their efforts in improving safety culture
- ix. Delegating responsibility to Line management for the compliance of safety in their respective areas
- x. Involvement of Shop Floor Level workers in the Health and Safety through Safety Stewards Forum
- xi. Arranging HSE Conferences at national level on alternate year.
- xii. Celebration of Annual Safety Week etc.
- xiii. Health & safety awareness sessions including ergonomics, obesity, First Aid CPR by OHS advisor.

### *Monthly Basic HSE Induction Training*

The safety training module is designed to give key aspects of the refinery regarding safety. Monthly basic training occurs over a period of 3 days and at the end of the third day a test is conducted to assess the capabilities of the participants. Since a majority of the workforce speaks and understands Urdu, the training is usually presented in Urdu. Training is provided free of charge and is conducted during working days. It is mandatory for participants to attend this training. Training is evaluated through discussion and a written test with the participants.

Topics Include:

- |  |   |
|--|---|
| i. Process safety Management               | vii. Incident Reporting and root cause Analysis |
| ii. Emergency response plan                | viii. H <sub>2</sub> S Safety                   |
| iii. Office safety / Behavior Based Safety | ix. NH <sub>3</sub> safety                      |
| iv. Permit to work system                  | x. Chemical handling                            |
| v. Personal protective equipment's         | xi. First Aid/ Drowning                         |
| vi. Integrated Management system           | xii. ISO 50001                                  |
|  | xiii. Hazard identification and risk assessment |

|                           |      |
|---------------------------|------|
| No. of training Man Hours | 4272 |
| No. of participants       | 178  |

### *Emergency Response Trainings*

Emergency Response Training record for the year;

|                           |      |
|---------------------------|------|
| No. of training Man Hours | 678  |
| No. of participants       | 1356 |

### *Scenario Based Emergency Drills*

Number of participants trained & training hours of scenario based emergency drills during the reporting year are as follows

|                           |     |
|---------------------------|-----|
| No. of training Man Hours | 311 |
| No. of participants       | 311 |

### *Monthly Live Fire Practice*

Training hours and number of participants trained in monthly live fire practice during the reporting year are as follows;

|                           |     |
|---------------------------|-----|
| No. of training Man Hours | 453 |
| No. of participants       | 453 |

### *Contractors Safety*

All the contractor's before being put into any contract with ARL are required to follow the Occupational Health and Safety Requirements of Attock Refinery Limited. Moreover, regular monitoring of Contractors Equipment's fitness, Personal Protective Equipment is ensured. Training is also imparted to contractor's staff. The safety of contractor is being ensured and constantly monitored by ARL HSE Staff.

### *Promotion of worker health*

Employees' health is an integral part of the company's safety policy. Scheduled medical checkups of employees are ensured. It helps to optimize healthcare facilities and to increase productivity, performance and motivation at workplace. ARL has 2 state of the art ambulances 24/7 inside refinery for shifting of employees to attached hospital where medical services are provided.

### *OHS Activities*

Occupational health and safety is of major importance for Attock refinery Limited. Different activities for Occupational Health and safety include.

- ✓ Monthly OHS Committee meetings.
- ✓ Quarterly OHS trainings.
- ✓ Biannually food handler tests.
- ✓ Noise surveys.
- ✓ Audiometry test
- ✓ Ergonomics survey.

### *Medical Service*

Attock Hospital was established in 1930. Now it has a capacity of fifty beds with air conditioned facility. AHL provides services in more than 13 specialties round the clock to facilitate employees and neighboring communities and has well equipped operation theatres, laboratories, dialysis, radiology facilities and pharmacy.

### *Work related injuries & ill health*

All first aid cases and injuries are regularly reported. The fatality and injury rates for company and contractor are calculated by taking into consideration the number of recordable injuries multiplied by 1000000 and divided by Man-hours worked.

### *ARL coping with COVID-19*

Covid-19 has affected every industry around the globe. New Normal has been adopted for the continuity of business. In recognizing the changing working dynamics, ARL has played an active role and taken several initiatives which are highlighted below:

#### *Training & Awareness*

Regular awareness sessions for different sections of the Refinery has been arranged. Employees are briefed about symptoms and precautions of Covid-19 which they should consider during work and even at home. Awareness of staff has also been done through posters and circulars displayed on prominent places and notice boards.

#### *Audits*

Based on the guidelines, issued by Punjab government industries department, a checklist was prepared by HSE to audit different areas like workplace hygiene, availability of hand sanitizers and masks, hand washing facilities, employee awareness, social distancing, checking of body temperature. Audit of different areas in coordination with area safety in charges was conducted to check requisite compliance. Shortcomings were highlighted and addressed without any delay.

#### *Corona Surveillance Form*

For timely identification of persons, who had interacted with corona patient or are experiencing corona symptoms, corona surveillance form was circulated. Almost Eight hundred filled forms were screened and data was reported to Attock Hospital Limited for further action.



### Domestic Waste Management of COVID-19 Patients

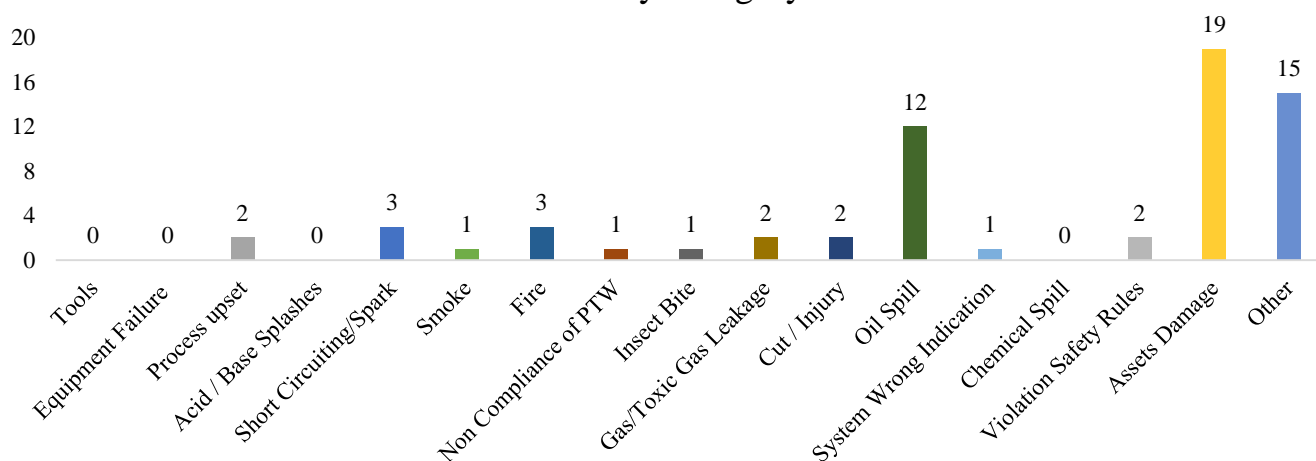
HSEQ department in coordination with other relevant departments developed a comprehensive procedure for safe collection and disposal of domestic waste to prevent spread of Covid-19. According to this procedure, medicated polythene bags were provided to corona positive or suspected patients. Necessary personal protective equipment were provided to person collecting waste which was then shifted through waste collection vehicle to incinerator for final disposal. Disinfection of person who collected the waste and vehicle was ensured.

### Hand Sanitizer, PPEs and Disinfection

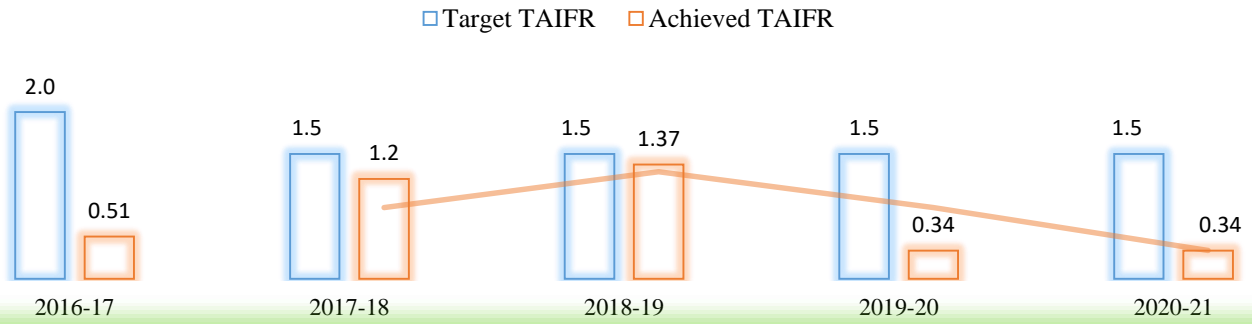
Research has shown that wearing mask can greatly reduce the transmission of COVID-19, while regular hand washing and use of hand sanitizer affectively removes virus. Considering the critical nature of masks and hand sanitizers, HSEQ department has played a key role in ensuring availability of masks and hand sanitizers for refinery employees. Laboratory section has developed an Indigenous Hand Sanitizer based on guideline of world health organization.



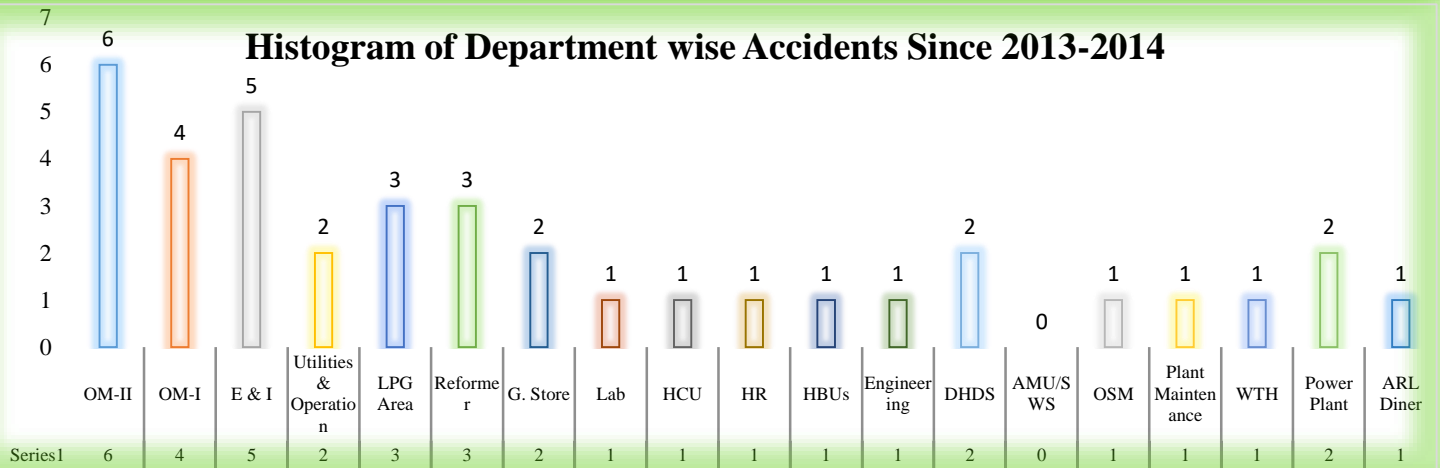
Near miss by Category 2021



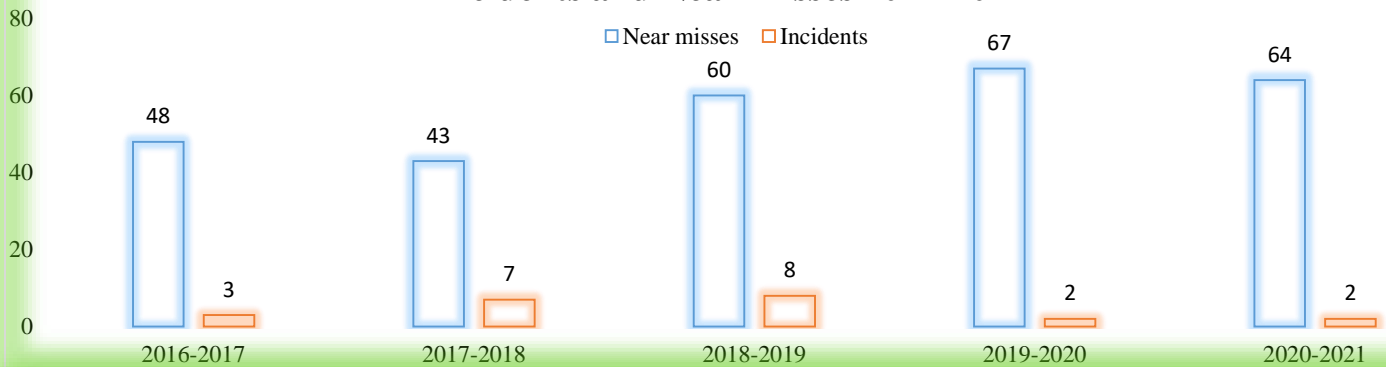
### Total accident incident frequency rate (TAIFR)



### Histogram of Department wise Accidents Since 2013-2014



### Incidents and Near Misses 2012-2021



### 5 Years Incident Analysis

