Safety Management System and Safety KPIs at a gas processing facility
Hernstein, April 2018
Angelika Zartl-Klik, OMV Austria
OMV Austria

2016 summarized

- ~5.6 mn bbl oil and condensate, ~10% of oil processed in Austria
- ~5.1 mn boe gas, ~15% of Austria’s gas consumption
- ~250 oil and ~100 gas reservoirs
- ~1,070 active wells, of which: ~700 oil wells, ~115 gas wells, ~90 water injections and ~165 storage wells in ~50 active production fields

* EPG: Erdölproduktionsgesellschaft
OMV Austria’s Aderklaa

* EPG: Erdölproduktionsgesellschaft

Sour Gas Plant
Aderklaa gas processing facility
Aderklaa Processing Unit simplified

Schönkirchen Gas
30,000 Nm³/h
2% H₂S
13% CO₂

Höflein Gas
29,000 Nm³/h
17% CO₂

Natural Gas Liquid

STABILIZED NGL

INLET SEPARATION

2-STAGE MDEA

TEG Dehydration

Hydrocarbon Dewpoint Control

Sales Gas

ACID GAS ENRICHMENT

CLAUS SRU

TAIL GAS UNIT

INCINERATOR

Product Sulfur
<table>
<thead>
<tr>
<th>Hazard categories (H, P, E, O Satz) Anlage 5 GewO, Teil 1</th>
<th>Hazardous Substances Anlage 5 zur GewO, Teil 2</th>
<th>Maximum quantity of dangerous substance</th>
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<tr>
<td>P5c, E2 (Flammable Liquids)</td>
<td>18 - Liquefied flammable gases, Category 1 or 2 (including LPG) and natural gas</td>
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<td></td>
<td>22 - Methanol</td>
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<td>34d Heavy fuel oils</td>
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<td></td>
<td>35 - Anhydrous Ammonia</td>
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OMV Group’s HSSE Vision

ZERO Harm NO Losses

- All accidents and losses can be prevented
- Every day we act and **manage our risks** in such a way that People, Environment, Assets and Reputation are protected
- HSSE is an integral part of OMV Group’s business
The HSSE Management System creates a framework that helps manage risks and prevent accidents.

Context of HSSE Management System (MS):

- **Vision**: Basic principles and direction
- **Values, Policy**: Specific requirements
- **Strategy**: OMV Group's Management System
- **Processes, Regulations**: 1 2 3 4 5 6 7 8 9 10 11 12
These can be clearly assigned to the continuous improvement process

Continuous improvement and associated MS elements

1 Leadership and Commitment
2 Organization
3 People, Competencies and Behaviour
4 Risk Management
5 Engineering and Project Mgmt.
6 Operations and Perform. Mgmt.
7 Contracted Services
8 Planning and Cost Management
9 Incidents and Accidents

Lessons learned

Planning

Review and Improvement

Implementation

Measurement and Evaluation

Commitment and Policy
Safety KPIs

CARE
Collect-Analyse-React-Exchange
Safety Performance 2017 OMV Austria (CARE reports)

Daten per 31. Dezember 2017

Process safety

Occupational safety

Tier 1: Loss of primary containment high impact

- Fatality (FAT)
- Lost work day incident (LWDI)
- Restricted work incident (RWI)
- Medical treatment incident (MTI)
- First aid case (FAI)

Near Miss, Hazard, Finding

- 2075

Tier 2: Loss of primary containment medium impact

- 345 (39 LOPC 245 CE)

Tier 3: Loss of primary containment or primary containment inspection outside limits or operational deviation

- Tier 4: n.r.

Tier 4: n.r.
# HSSE Key Performance Indicators
## (monthly monitoring)

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**Legend:**
- SAF: Safety Area
- PSE: Process Safety Events
- ORG: Organization
- ENV: Environmental
- HSEM: Health, Safety, Environment, and Management
- CE: Contractor Employees

**Abbreviations:**
- LTI: Lost Time Injury
- RWI: Restricted Work Injury
- MTI: Medical Treatment Injury
- FAI: First Aid Injury
- LWDI: Commuting Accidents
- MVC: Motor Vehicle Crashes
- VHC: Vehicle Health Check
- HSE: Health, Safety, and Environment
- PSE: Process Safety Events
- ORG: Organization
- ENV: Environmental
- HSEM: Health, Safety, Environment, and Management

**Notes:**
- The table includes key performance indicators for HSSE activities and incidents, including safety walk and management walk round results, safety findings, hazards, and near misses, process safety events, vehicle accidents, and training hours.
- The data is presented monthly for each category, with totals for the year provided at the bottom.
- The values represent the number of incidents or activities in each category.
Safety KPIs Aderklaa

- Safety Pyramid
- Plant Availability
- Number of MoCs (Management of Change)
- Maintenance of Safety Critical Elements – planned versus done
- Risk based Inspection Report – planned versus done
- Process Safety report incl. emergency exercises, audits
Questions & Answers