

Engineering Procedure

SAEP-32

30 June, 2003

Environmental Performance Assessment (EPA) Program

Environmental Standards Committee Members

Al-Sharif, A.A., Chairman

Abed Hezam, M.H.

Al-Bokhedaim, Y.S.

Al-Kadhim, M.H.

Al-Said, M.M.

Arnold, L.P.

Dobinson, I.D.

Hagen, D.L.

Ngao, J.O.

Rehm, T.E.

Worrall, M.E.

Saudi Aramco DeskTop Standards

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1 Scope

This SAEP describes the procedures for the administration and implementation of the Environmental Performance Assessment (EPA) Program. The purpose of this program is to conduct periodic facility surveys to determine compliance with Saudi Aramco's environmental, environmental health, and industrial hygiene requirements, as well as related Saudi government requirements.

2 Applicable Documents

2.1 Saudi Aramco References

Saudi Aramco Policy Statement

<i>SAPS No. INT-5</i>	<i>Environmental Protection</i>
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Saudi Aramco General Instructions

<i>GI-0002.714</i>	<i>Environmental Protection Policy Implementation</i>
<i>GI-0002.717</i>	<i>Procedures and Guidelines for Handling Polychlorinated Biphenyls (PCBs)</i>
<i>GI-0006.021</i>	<i>Safety Requirements for Abrasive Blast Cleaning</i>
<i>GI-0150.000</i>	<i>Implementing Occupational Health Aspects of Loss Prevention Policy</i>
<i>GI-0150.001</i>	<i>Asbestos Regulation</i>
<i>GI-0150.003</i>	<i>Ionizing Radiation Protection</i>
<i>GI-0151.006</i>	<i>Implementing the Saudi Aramco Sanitary Code</i>
<i>GI-0425.000</i>	<i>Refrigerant Management</i>
<i>GI-0430.001</i>	<i>Waste Management General Instruction</i>

Saudi Aramco Engineering Standards

<u>SAES-A-007</u>	<i>Hydrostatic Testing Fluids and Lay-Up Procedures</i>
<u>SAES-A-102</u>	<i>Air Pollutant Emission Source Control</i>
<u>SAES-A-103</u>	<i>Discharges to the Marine Environment</i>
<u>SAES-A-104</u>	<i>Wastewater Treatment, Reuse and Disposal</i>
<u>SAES-A-105</u>	<i>Noise Control</i>
<u>SAES-B-005</u>	<i>Spacing and Diking for Atmospheric and Low- Pressure Tanks</i>

<u>SAES-B-069</u>	<i>Emergency Eyewashes and Showers</i>
<u>SAES-K-001</u>	<i>Heating, Ventilating and Air Conditioning (HVAC)</i>
<u>SAES-P-123</u>	<i>Lighting</i>
<u>SAES-S-007</u>	<i>Solid Waste Landfill Standard</i>

Saudi Aramco Engineering Procedures

<u>SAEP-302</u>	<i>Instructions for Obtaining a Waiver of a Saudi Aramco Engineering Requirement</i>
<u>SAEP-327</u>	<i>Disposal of Wastewater from Cleaning, Flushing, and Dewatering Pipelines and Vessels</i>
<u>SAEP-340</u>	<i>Air Quality Impact Analysis & Assessment</i>

Saudi Aramco Forms and Data Sheets

<i>Form SA 7305-ENG</i>	<i>Equipment Noise Data Sheet</i>
<i>Form SA 9563-ENG</i>	<i>Asbestos Disposal Form</i>
<i>Form SA 9564-ENG</i>	<i>Waste Manifest</i>

Saudi Aramco Supply Chain Management (SCM)

<i>CU 22.01</i>	<i>Processing and Handling Gas Cylinders</i>
<i>CU 22.02</i>	<i>Control of Chlorine, Ammonia and Nitrogen</i>
<i>CU 22.03</i>	<i>Processing and Handling of Hazardous Material</i>

2.2 Government Requirements

<i>General Standards Document No. 1409-01 & Revisions</i>	<i>Environmental Protection Standards in the Kingdom of Saudi Arabia -Presidency for Meteorology and the Environment (PME)</i>
<i>PME</i>	<i>National Plan to Combat Pollution from Oil and Other Harmful Substances in Emergency Situations</i>
<i>ROPME</i>	<i>Protocol Concerning Marine Pollution Resulting from Exploration and Exploitation of the Continental Shelf</i>
<i>Royal Commission of Jubail</i>	<i>"Royal Commission Environmental Regulations", Royal Commission for Jubail and Yanbu; Directorate General for the Jubail Project, Health Services Department, September 1999</i>

<i>Royal Commission of Yanbu</i>	<i>Environmental Protection Manual and Revisions Manual, Directorate General for the Yanbu Project, Madinat Yanbu Al-Sinaiyah, Royal Commission for Jubail and Yanbu, January 1991</i>
<i>Royal Decree No. M/9</i>	<i>Regulations for Fishing, Exploitation and Protection of Marine Life in Saudi Territorial Waters, November 18, 1987</i>

2.3 Other Requirements

<i>SASO</i>	<i>Industrial Safety & Health Regulations in the Kingdom of Saudi Arabia, Saudi Arabian Standards Organization (SASO)</i>
<i>SAS 315</i>	<i>Occupational Health & Environmental Control</i>
<i>SAS 319</i>	<i>Hazardous Materials</i>
<i>SAS 332</i>	<i>Personal Protective Equipment</i>
<i>SAS 335</i>	<i>Electrical</i>
<i>SAS 336</i>	<i>Welding, Cutting & Brazing</i>
<i>ACGIH</i>	<i>American Conference of Governmental Industrial Hygienists (Threshold Limit Values and Biological Exposure Indices only)</i>
<i>ANSI Z9.5</i>	<i>Laboratory Ventilation</i>
<i>ASHRAE 110</i>	<i>Method of Testing Performance of Laboratory Fume Hood</i>
<i>U.S.-OSHA</i>	<i>Occupational Safety & Health Administration standards (29 CFR-1910)</i>

3 Program Objectives

The EPA Program was developed in response to Saudi Aramco's Environmental Protection Policy (INT-5) Statement, which commits the Company to manage and conduct its activities in an environmentally responsible manner. Implementation of this policy is provided under GI-0002.714 and promotes protection of public health and the environment, conservation of natural resources, and protection against liability. The objectives of the EPA Program are to:

- Assess the environmental performance of Saudi Aramco facilities.
- Identify significant environmental compliance issues:

- o Environmental Engineering (*air quality & emissions, wastewater discharges, management of solid, liquid, and hazardous materials, spill prevention and control*)
- o Industrial Hygiene (*noise, emergency eyewashes and showers, lighting, respiratory protection, asbestos handling, personal protection equipment*)
- o Environmental Health (*food services and potable water, vector control and public health nuisances*)
- Ensure that major findings (i.e., areas of noncompliance) are appropriately resolved.
- Provide annual reports to corporate management on the status of the EPA Program.

4 Instructions

Commentary Note:

For further details, refer to the EPA Program Manual and the Team Leader's Handbook issued by the Environmental Protection Department.

4.1 Facility Selection and Scheduling

4.1.1 The Environmental Protection Department selects facilities, or groups of facilities, to be surveyed during the following calendar year. Selection is primarily based on the time elapsed since the last survey, but shall also consider potential effects on human health and the environment, continuing compliance problems and/or complaints, available environmental monitoring data, recommendations and feedback received from previous Team Leaders, current or planned operational status at the facility, and requests by Proponent Departments. Saudi Aramco refineries, gas plants and Abqaiq Plants shall be surveyed every 3-5 years, whereas other facilities are surveyed every 5-7 years.

4.1.2 Facility selection shall be confirmed with the Proponent Departments in September of the year preceding the surveys.

4.2 Survey Team Selection

The Environmental Protection Department (EPD) determines the number of survey team members and the type of expertise needed for each survey, based upon the type and complexity of the facility. The Team Leader shall be provided by EPD from any of the divisions. Environmental Engineering Division shall provide at least one team member and additional expertise as deemed necessary. Environmental Compliance Division shall provide one representative to the team from each discipline - Industrial Hygiene,

Environmental Health, *and when applicable*, Radiation Protection. A team member shall be provided by the Proponent Department. Survey team composition is finalized by November of the preceding year.

Other Company Departments may be requested to provide representatives whose specialized technical knowledge will contribute to the effectiveness of the EPA Program.

4.3 Team Preparation

The team members prepare for the survey by familiarizing themselves with the facility organization and functions. All previous EPA reports should be reviewed, as well as documentation regarding past environmental problems, non-compliance incidents and formal complaints. The Team Leader may ask the proponent to submit facility information that will help prepare the EPA team for their visit.

4.4 Opening Meeting

The EPA Opening Meeting is held before the site visit commences and is presided by the EPA Survey Team Leader. In attendance are the survey team, the Proponent Manager, and appropriate facility supervision (as invited by the manager). The purpose of the Opening Meeting is to introduce the EPA survey team and facility management, give an overview of the EPA process, clarify any areas of uncertainty, discuss site details and logistics, and set a time and location for the Closing Meeting.

4.5 Onsite Survey

4.5.1 The survey team will assess the facility's environmental performance by evaluating compliance with the Company documents listed in Sections 2.1 through 2.3. These can be obtained from the Environmental Protection Department.

4.5.2 The EPA survey will cover the following items, as a minimum:

- Air pollutant emissions and air quality problems
- Wastewater discharges and management
- Solid and hazardous waste disposal and management
- Hazardous, toxic and regulated materials management
- Environmental monitoring, testing & sampling program data
- Spill containment and contingency planning

- Occupational health hazards (chemical, physical, biological, and radioactive)
- Noise, emergency eyewashes and showers, lighting, respiratory protection, asbestos handling, personal protection equipment
- Food services and potable water
- Vector control and public health nuisances

4.5.3 To assess the items listed in Section 4.5.2, the survey team should walk through and inspect the facility, interview personnel, review pertinent files, and investigate facility procedures. Checklists are required to be used by the team members as a reminder of things to look for and to document findings.

4.5.4 The survey team shall ensure that major findings from previous EPA surveys have been appropriately resolved. Unresolved major findings will be carried over to the new survey.

The survey team will check the status of the minor findings from previous EPA survey. Unresolved minor findings may be elevated to major status in the current EPA survey.

4.6 Summary Report and Closing Meeting

4.6.1 After completion of the onsite survey and initial data evaluation, the team shall prepare a Summary Report that contains the major and minor findings. This report will be presented in a closing meeting. In attendance are the survey team, the proponent manager, and appropriate facility supervision (as invited by the manager).

- Major findings are items that conflict with a Saudi Arabian government or Saudi Aramco environmental requirement, and/or represent significant cost to the Company if left unresolved, and/or could have a significant adverse effect on human health or the environment if unresolved. The findings should be supported by reference to a specific mandatory requirement. They usually represent issues that will take major funding to resolve.
- Minor findings are issues that should be brought to the attention of facility management. These are generally findings that can be resolved within 6 months and may require some local funding. The facility should seek to permanently resolve these findings as soon as possible.

- 4.6.2 The Summary Report is presented to facility management at the Closing Meeting, which is normally held the last day of the site visit. The team gives an overall assessment of environmental performance and discusses each of the findings, highlighting items that need immediate attention and those that require significant capital expenditure.
 - 4.6.3 A copy of the Summary Report is left with facility management so that they can correct and permanently resolve the minor findings and develop an action plan for the major findings.
 - 4.6.4 The Summary Report will be included as an attachment to the EPA Final Report.
 - 4.7 EPA Final Report
 - 4.7.1 Only major findings will be highlighted for action in the EPA Final Report.
 - 4.7.2 The Survey Team Leader is responsible for circulating a draft report to the team members and EPA Program Coordinator within four (4) weeks of the site visit. The Final Report shall be completed within six (6) weeks of the site visit and is sent to the Proponent Manager from the Manager, Environmental Protection Department, with copies to managers of other participating organizations and survey team members.
 - 4.8 Facility Action Plan and Resolution of Findings
 - 4.8.1 After receiving and reviewing the Final Report, the Proponent shall complete the action plan attached to the report, which addresses resolution of the major findings. This plan, *with estimated dates of completion*, shall be submitted to the Environmental Protection Department within four weeks of receipt of the Final EPA Survey Report.
 - 4.8.2 The proponent shall resolve the major findings expeditiously, using appropriate Company resources as needed.
 - 4.8.3 Proponents should provide pertinent and verifiable documentation to support closure of major findings. Relevant documentation should be sent to EPD in support of closure. Field verification of implementation may be conducted by the Environmental Protection Department.
 - 4.8.4 Minor findings should be resolved expeditiously. These findings will be re-evaluated at the next scheduled survey and, if unresolved, may be elevated to "major" status.
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4.9 Status Reports

- 4.9.1 The Environmental Protection Department will request the Proponent Department to submit a status report on the major findings every six (6) months, until the findings are resolved to the satisfaction of EPD.
- 4.9.2 A finding involving project action is not considered 'closed' until the project has been completed and commissioned. Copy of the commissioning certificate should be filed with EPD.
- 4.9.3 Where a regulatory agency is involved, a letter indicating the solution has been accepted or approved by that agency is required. Copy of the approval letter should be filed with EPD.
- 4.9.4 The Environmental Protection Department shall have final concurrence on the resolution and authorize closure of all major findings.

4.10 Annual Report

A year-end report is submitted to Corporate and Executive Management by the Vice President, Engineering Services, summarizing all of the EPA surveys completed to date and the progress made by facilities in resolving major findings as per the facility action plans.

5 Responsibilities

5.1 Environmental Protection Department (EPD)

- 5.1.1 EPD is responsible for the administration, coordination, and execution of the EPA Program. The EPA Program Coordinator will carry out the day-to-day tasks.
- 5.1.2 EPD shall finalize facility selection by September, and the survey team composition by November of the preceding year.
- 5.1.3 EPD shall circulate the draft EPA Final Report within four (4) weeks of the site survey to the team members and EPA Program Coordinator for comments, and shall distribute the Final EPA Survey Report within six (6) weeks of the site survey.
- 5.1.4 If requested, EPD shall provide consultation on the development of a corrective action plan for the facility.
- 5.1.5 EPD shall request the Proponent Department to submit a status report on their action towards resolving the major findings every six (6) months,

until the findings are resolved. EPD shall track the findings and work with the Proponent Department to ensure resolution.

- 5.1.6 EPD shall prepare an Annual Report for submission to Corporate and Executive Management that summarizes all of the EPA surveys conducted to date and the progress made by facilities in resolving major findings.

5.2 Proponent Department

- 5.2.1 The Proponent Department shall provide a survey team member with the qualifications and experience recommended by the Environmental Protection Department.
- 5.2.2 Prior to the site survey, the Proponent Department shall provide any information requested by the EPA Team Leader in sufficient time for the team to evaluate the information and plan its visit.
- 5.2.3 The Proponent Department shall provide access and logistical support to the survey team to inspect its facilities, interview its employees, and review its documents.
- 5.2.4 The Proponent Department shall submit a facility action plan for the resolution of major findings (if any) within four (4) weeks of receipt of the EPA Final Report. Both major and minor findings shall be corrected as soon as possible.
- 5.2.5 The Proponent Department shall track the resolution of all findings and provide status reports as outlined in Section 4.9. Proper documentation will be provided to EPD to support closure of resolved findings.

5.3 Support Departments

If requested to participate, support departments shall provide specialized technical representatives that will contribute to the thoroughness of the EPA program.

5.4 EPA Survey Team

- 5.4.1 The EPA Team Leader shall direct the course of the survey. This may include assigning tasks to team members in order to efficiently utilize their expertise.
- 5.4.2 The EPA team members shall participate full-time during the onsite survey.

- 5.4.3 The team members shall finalize their findings by the end of the survey period and present them in a Summary Report at the Closing Meeting. They shall assist the Team Leader in preparing the EPA Final Report.

Revision Summary

26 February, 2003

Minor changes that provide clarification to existing directives and statements.
Revised the Next Planned Update.

30 June, 2003

Editorial revision to change the title of [SAEP-327](#) referred to in this document.