

**The Santa Barbara County**  
**Systems Safety and Reliability Review Committee (SSRRC)**

**Administrative Guidelines**

February 2002

(Revised 11/06/03)

c/o: Energy Division, Planning and Development Department  
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**The Santa Barbara County  
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Administrative Guidelines**

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**The Santa Barbara County  
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**I. Authority.** The Systems Safety and Reliability Review Committee ("SSRRC") serves two functions:

**A. Exercising Authority Delegated by Board of Supervisors or Other Bodies**

The Santa Barbara County Board of Supervisors originally established the SSRRC in final permit actions for oil and gas development projects. As authorized by the County zoning ordinances, the Board of Supervisors and the Planning Commission may require that any project be redesigned as a condition of approval of preliminary or final development plans as they deem necessary to protect persons and property and to preserve the general public welfare. Project redesign may be required to ensure consistency with general and coastal plans, zoning ordinances and state and other laws. The Air Pollution Control District (APCD) Hearing Board has also delegated authority to the SSRRC to approve compliance plans required by orders of the Hearing Board. In this instance, the SSRRC is delegated authority for technical design review, as well as Safety, Inspection, Maintenance and Quality Assurance Program (SIMQAP) approval and implementation (conduct safety audits, review facility changes, etc.). The authority delegated to the SSRRC is generally found within specific project permit conditions and is separate and distinct from the jurisdictional authority of individual departments as described in Appendix II. The project permit conditions of approval specify actual project requirements and are not superseded by these Administrative Guidelines.

**B. Technical Advice on Projects**

When not acting pursuant to authority delegated as discussed in I (A), the SSRRC performs a purely staff function of reviewing and commenting on projects being reviewed by Planning and Development, the Planning Commission, the Board of Supervisors or other County, state or federal agencies. Such review and comment is purely advisory to the official, department, commission, agency or board authorized to review and approve the project or plan. Such staff advice and recommendations are advisory only and do not constitute final action of any kind.

**II. Purpose**

The purpose of the SSRRC is to identify and require correction of possible design and operational hazards prior to construction and startup of the project and for project modifications. The goal of SSRRC review is to substantially reduce the risks of project-related hazards that may result in loss of life and/or injury and damage to property and/or the natural environment. This process occurs through the review and approval of project designs and plans. This review also

serves to avoid possible conflicting jurisdictional regulation or departmental overlap that may result in adverse safety implications.

### **III. Scope of SSRRC Review**

The SSRRC is delegated responsibilities to review and approve certain design proposals for projects as well as various compliance plans. Where authority is delegated to the SSRRC, the instrument that created the delegation defines the scope of review.

The delegated functions of the SSRRC are typically found in the Systems Safety and Reliability Review Committee conditions or Risk Management Program conditions of the Final Development Plans. These conditions primarily concern approval of systems designs and SIMQAPs.

In order to produce the maximum potential safety benefit with the least impact to project development, the technical design review should commence at the earliest possible stage of project development. Preliminary input by the SSRRC can begin as early as the application completeness review process.

A permit applicant's conceptual design of a facility is subject to a preliminary systems safety analysis in the California Environmental Quality Act (CEQA) environmental review (EIR) process. Based on the EIR analysis and specified mitigation measures, oil and gas development projects may be approved by the Planning Commission or the Board of Supervisors with modifications to the original project design. Because final process and construction design may not be completed at the time of final discretionary project approval, the SSRRC is delegated the authority to undertake subsequent review of design and construction drawings for hazards identification, risk assessment and mitigation of design and operational hazards prior to project construction. The SSRRC may employ third-party technical review to complete these tasks.

The project shall be referred to Planning and Development for further environmental review pursuant to the Coastal Zoning Ordinance (Article II), or the Inland Zoning Ordinance (Article III), if SSRRC design recommendations may result in significant impacts not analyzed in the EIR process for original project approval. Alternatively, the project may be referred to other appropriate officials or agencies with jurisdiction over the project.

### **IV. SSRRC Tasks**

#### **A. Third-Party Consultant Design Review**

The SSRRC may maintain qualified person(s) to assist in SSRRC decisions. As set forth in the FDP or other permit conditions, review of facility design and proposed mitigation measures shall be coordinated by the SSRRC and funded by the permittee. The scope of the third-party technical review is to identify and suggest correction of possible design hazards so as to ensure mitigation of potential on-site and off-site risks.

As directed by the SSRRC, the review may evaluate, but not be limited to, all the system safety related mitigations in the project environmental document, as well as process flow diagrams, piping and instrumentation diagrams (P&IDs), flare sizing, relief valve criteria and sizing, system redundancy, vapor recovery, established severe service criteria (i.e., corrosion, embrittlement, and sour gas service), instrumentation, monitoring and leak detection systems, operating procedures, and other systems.

The review will use recognized risk identification and mitigation techniques that may include quantitative and qualitative risk assessment, Process Hazards Analysis including hazard and operability studies (HAZOPS), hazard identification, fault tree analysis, and other analysis and techniques.

Consistent with existing County procedures, the SSRRC shall determine whether a specific project, or project element, should be reviewed by a consultant under contract to an individual department as the third-party reviewer. No work shall be conducted without authorization from the SSRRC. The SSRRC shall consider the recommendations from the third-party reviewer prior to making decisions, but is in no way obligated to implement the recommendations.

## **B. Project Design and Plan Review**

### **1. Construction Plans**

Construction drawings and supporting documents demonstrating compliance with relevant conditions shall be reviewed and approved by the SSRRC prior to each construction activity. For example, construction plans include safety plans, grading and erosion control plans, welding and QA/QC (Quality Assurance/Quality Control) programs, air pollution emission reduction plans, and environmental quality assurance programs.

### **2. Safety Inspection, Maintenance and Quality Assurance Programs (SIMQAP)**

A SIMQAP shall be reviewed and approved by the SSRRC for both facility construction and operations, as deemed appropriate by the SSRRC.

### **3. Commissioning Plans and Operations Manuals**

A permittee shall develop Commissioning Plans and Operations Manuals as directed by the SSRRC and consistent with project conditions of approval. These plans shall be reviewed and approved by the SSRRC prior to operation of each project element.

#### **4. Other Systems**

The SSRRC also has review and approval authority over safety systems required by other project permit conditions. This could include, for example, fire protection systems, facility drainage and containment systems.

#### **C. Review of Facility Changes**

A summary of any alteration resulting from major or minor modifications or maintenance procedures to any project element shall be submitted to the SSRRC for review and approval at an interval specified by the SSRRC.

#### **D. Safety Audits**

Facility safety audits can include, but are not limited to, review of Process Hazards Analysis (PHAs), Process and Instrumentation Diagrams (P&IDs), and all other components as specified in the project's Safety, Inspection, Maintenance and Quality Assurance Program (SIMQAP). Sample SIMQAP safety audit agendas are included as Appendices I and II, and a sample SIMQAP Audit Matrix and Procedures is included as Appendix IV.

### **V. SSRRC Procedures**

#### **A. Regular Meetings and Agendas**

The SSRRC meets regularly on the first Thursday of each month. At the discretion of the chair, special meetings may be called. The agenda for the regular meetings will be posted 72 hours before each meeting; special meetings will be posted 24 hours before each meeting. Nothing in the section shall prohibit the SSRRC from holding unannounced non-noticed meetings on matters that are not governed by the Brown Act. Meetings on matters not covered by the Brown Act may, at the discretion of the SSRRC, be closed to the public.

#### **B. Brown Act**

In situations where the Board of Supervisors or other body has delegated authority to the SSRRC and the delegating body's proceedings are governed by the Brown Act, Government Code Section 54950 *et seq.*, the SSRRC shall follow the notice and meeting requirements of the Act, including public participation and notices.

**C. Public Safety Thresholds and Risk Guidelines**

The SSRRC will use the risk guidelines as set forth in the County's Public Safety Thresholds as a means to assess risk prior to initial construction and subsequent modifications of facilities. The risk guidelines and thresholds are used as screening criteria for determining whether identified risk requires consideration of additional mitigation.

**D. Decision Making**

The SSRRC shall strive to make all decisions through consensus of its designated members. If consensus cannot be achieved at the staff level, the matter will be considered and decided by the SSRRC department heads as soon as possible.

The SSRRC may form subcommittees or delegate to departmental members or their consultants any tasks appropriate for such delegation. The subcommittees, departmental members, and consultants shall report their recommendations or authorized actions to the SSRRC before any direction is given to the applicant.

The SSRRC decision in any matter shall not be in conflict with the requirements of any individual department in the discharge of their jurisdictional responsibilities.

**E. Condition and Plan Sign-Off**

Each representative SSRRC department shall provide written approval of condition or plan compliance prior to P&D transmitting a notice of SSRRC condition and/or plan compliance to the permittee.

**F. Appeal Process**

The SSRRC consists of representatives of designated County departments. In the event a permittee disagrees with a SSRRC staff decision, the applicant may request review of the decision by the SSRRC Department Heads. A decision at the Department Head level shall constitute the final decision by the SSRRC. The final decision of the SSRRC may be appealed beyond the SSRRC consistent with the provisions of the project permit and applicable County ordinances or other law.

**G. Committee Administration**

P&D Energy Division is the coordinating department of the SSRRC, providing meeting management and identifying consensus with the SSRRC. P&D furnishes administrative support to the SSRRC, including agenda management, general media information, certain third-party contractor management, and distribution of

correspondence between departments and applicants. In addition, P&D Energy Division normally represents the County as the Lead or Responsible Agency in the project environmental review process, and processes any necessary County discretionary and ministerial land use permits.

## **VI. Membership**

SSRRC membership is established by project permit conditions and is comprised of Planning and Development (Energy and Building and Safety Divisions), County Fire (including Protective Services Division and Office of Emergency Services), Air Pollution Control District, and other County departments on an as-needed basis. Other Santa Barbara County departments with regulatory interest in the safe design of projects are expected to participate in the SSRRC process, as needed.

Each department referenced in permit conditions, or participating on an “as needed” basis, shall designate an individual to represent the department on the SSRRC.

## **VII. Public Information**

The SSRRC acts as a legislative body and advisory committee subject to the public decision making requirements of the Ralph M. Brown Act, Government Code Sections 54950 et seq. Regular SSRRC meeting notices shall be posted at least 72 hours before the meeting; special meeting notices shall be posted at least 24 hours before each meeting. The notice shall contain a brief general description of agenda items to be discussed at the meeting. With the exception of closed sessions, agendas and minutes of SSRRC meetings shall be made available to the public upon request. Closed session meetings may be held under narrow circumstances and are based on the need for confidentiality in cases involving personnel and litigation issues. Ex-agenda items may be heard by the SSRRC, pursuant to Government Code Sections 54954.2 and 54956.5, and consistent with Santa Barbara County Resolution No. 86-642 (see Appendix VI).

## APPENDIX I

### Sample SIMQAP Safety Audit Agenda – Minor Facility

- **Safety Briefing/Kick Off**
- **Facility Walk – Visual/Safety Inspection**
- **Gas Detectors functional Check; Record Verification; ESD (Simulated) Functional Check**
- **Incident/Near Miss Program, Job Safety Analysis, HAZMAT, Root Cause Analysis**
- **Facility Documentations, P&IDs, HAZOPS, Specifications**
- **SIMQAP Mandated Maintenance: PSVs; Control, Alarm and Shutdown Devices (Pressure, Flow, Temperature, and Level); Emergency Shutdowns (ESDs)**
- **Fire Protection Plan: ERP; Inspection, Maintenance, and Testing of Fire Protection and Detection Systems; OSHA Required Training Records; UFC Permits; and SIMQAP Elements**
- **NDT Inspections: Vessels, Tanks, Piping and Pipelines**
- **Operating Procedures Updates and Revalidations: Facility and Pipelines**
- **Training Procedures and Protocol; Training Records and Validations**
- **Business Plan and Related Elements**
- **Corrosion Control and Monitoring: Facility and Pipelines including Cathodic Protection for Both**
- **Equipment Repair and Maintenance Records including Welding, NDTs (X-Rays, UT, MT, etc.)**
- **Facility and Pipeline Leak Detection System**
- **Company and/or Third Party Safety Audits**
- **Preparation for and Debriefing**

## APPENDIX II

### Sample SIMQAP Safety Audit Agenda – Major Facility

#### Day 1

- **Safety Briefing/Kick Off**
- **Facility Walk – Visual/Safety Inspection**
- **Incident/Near Miss Program, Job Safety Analysis, HAZMAT, TRMPP, Root Cause Analysis**
- **Facility Documentations; MOCs; P&IDs; Cause & Effect Charts; HAZOPS; and Specifications**
- **Computerized Maintenance System**
- **SIMQAP Mandated Maintenance: PSVs; Control, Alarm and Shutdown Devices (Pressure, Flow, Temperature, and Level); Emergency Shutdowns (ESDs)**
- **Fire Protection Plan: ERP; Inspection, Maintenance, and Testing of Fire Protection and Detection Systems; OSHA Required Training Records; UFC Permits; and SIMQAP Elements**
- **Equipment Design Criteria and Current Design Limit**
- **Briefing**

#### Day 2

- **Operating Procedures Updates and Revalidations: Facility and Pipelines; Maintenance Procedures**
- **Training Procedures and Protocol; Training Records and Validations**
- **Review of Last Year's Outstanding Audit Items**
- **Gas Detectors Functional Check (H<sub>2</sub>S, Gas and Fire); Record Verification; ESD (Simulated) Functional Check**
- **Business Plan and Related Elements**
- **Corrosion Control and Monitoring: Facility and Pipelines including Cathodic Protection for Both**
- **Equipment Repair and Maintenance Records including Welding, NDTs (X-Rays, UT, MT, etc.)**
- **NDT Inspections: Vessels, Tanks, Piping; Pipeline Surveys**
- **Company and/or Third Party Safety Audits**
- **Preparation for and Debriefing**

## **APPENDIX III**

### **SIMQAP Guidance Document**

## **Safety, Inspection, Maintenance, Quality Assurance Plan Guidance Document**

*February 1, 2001*

### **Introduction**

The following document was prepared by the Santa Barbara County System Safety and Reliability Committee (SSRRC) and adopted on February 1, 2001 to serve as a model for new Safety, Inspection, Maintenance, Quality Assurance Plans (SIMQAPs) and for future updates to existing SIMQAPs. It provides guidance for SIMQAP content. Operators will not be required to reformat existing SIMQAPs to conform to the outline attached. However, operators should ensure that all relevant aspects of the guidance document are included in their SIMQAP with each update. Use of the attached format will facilitate SSRRC review and should be followed when feasible when new SIMQAPs are developed or when substantial revisions to existing SIMQAPs are undertaken.

The SSRRC acknowledges that all facilities are unique and that some portions of the attached document may not apply to a particular facility. The SSRRC will continue to apply its discretion, as appropriate, when reviewing new and modified plans. The guidance document is intended to provide operators with information on the scope and level of detail that should be provided in their SIMQAP as well as a general idea of the scope of the safety audits conducted annually by the SSRRC. The guidance document is also intended to help provide consistency in the County's review of facilities subject to SSRRC oversight.

Some aspects of the guidance document may overlap with previously established company plans or programs for a facility, such as an operator's training program or pipeline operations and maintenance manual. Instead of duplicating information, the operator may elect to reference the applicable plan or program in the SIMQAP and submit it for review to satisfy the requirements of the SIMQAP. All referenced documents are considered part of the SIMQAP and must be submitted for SSRRC review and approval. Likewise, any updates to such referenced documents must be submitted to the SSRRC for review and approval.

## **Safety, Inspection, Maintenance, Quality Assurance Plan Guidance Document**

**Adoption Date: February 1, 2001**

**Overview Page** – Name of facility, type of facility, date of installation including date of any major upgrades, facility address, location, name and address of owner/operator, designated company representative responsible for implementing the plan, designated company representative responsible for plan administration.

**Record of Revisions Page**

**Distribution List**

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### **1.0 Introduction**

1.1 Scope of Plan (Purpose of Plan)

1.2 Administration of the Plan

- Identify who within the organization is responsible for the plan and contact information.
- Include requirement for updates every 2 years or more often if necessary.
- All changes must be reviewed and approved by the SSRRC.

### **2.0 Facility Description**

- Text description with throughput limitations and storage capacities (revise as necessary to keep current with future project modifications).
- Facility layout (plot plan)
- Access to the facility.

### **3.0 Product Characteristics for Hazardous Substances**

- Composition
- Temperature
- Pressure
- Flash Point
- H<sub>2</sub>S, or any other hazardous content

### **4.0 Operations Staffing & Emergency Response**

4.1 Staffing

- Number and type of personnel typically on-site during normal operations
- Minimum number of operations staff at facility (must be consistent with OES requirement in the ERP)
- Note if facility operates 24-hrs/day, 365 days/yr.

- Organization Chart
- 4.2 Emergency Response
- Reference to Emergency Response Plan

## **5.0 Training**

### 5.1 Scope of Training

- If training manual is referenced, document must be submitted for SSRRC review.
- Should include both classroom and hands-on training.
- Who in the organization is responsible for the training program
- Who does the training (experienced staff, or outside consultants)

### 5.2 Training

- New hires
- Contractors, vendors, visitors
- Experienced staff (refreshers)
- Training to comply with OSHA Process Safety Management Regulation 29CFR 1910.119 recertification every 3 yrs., refresher annually. Facility Operations and Maintenance Training.
- Specific operating procedures, including initial commissioning, prestart-up and start-up (proper sequence for bringing on equipment), normal operation, abnormal operations (including incident prevention),\_emergency shutdowns, conditions requiring emergency shutdowns, emergency operations, safe work practices.
- Safety systems – detectors, alarms, communication systems, control systems, emergency shutdown systems
- Electrical systems, including back-up power, UPS and emergency lighting
- Plant operations

### 5.3 Regulatory/Environmental Training

- OSHA training (confined space, lockout/tagout (LOTO), fire fighting, HAZCOM, HAZWOPER)
- Business Plan
- Emergency Response Plan
- Fire Protection Plan
- Hazardous Material Management Plan
- Hazardous Waste Management Plan
- Oil Spill Contingency Plan
- Oil Spill Response (for facilities near the coast or offshore production units)
- Air Quality Compliance Plans
- Other

### 5.4 Training Records

- Where are they kept
- How long are they kept
- Statement that records are available for review by the County

## 6.0 Safety Systems

- Include plot plan(s) or drawing(s) that shows where all detectors and safety devices are located (fire extinguishers, breathing apparatus, toxic gas detectors, flammable and combustible gas detectors, fire eyes, ionization smoke detectors, manual fire alarms, emergency shut-down stations, etc.)
  - Facility should be protected with safety systems applicable to onshore oil and gas facilities that are designed in compliance with the current codes, standards, and recommended practices in effect at the time of construction, including, but not limited to: American Petroleum Institute (API), American National Standards Institute (ANSI), American Society of Mechanical Engineers (ASME), National Electric Code (NEC), Uniform Fire Code (UFC), National Fire Protection Association (NFPA), Cal Title 8 (CCR), Department of Transportation (CFR), National Fire Alarm Code. Safety systems shall also be upgraded to comply with the latest codes, standards and recommended practices listed above where required by law, regulation, statute, or as recommended by the SSRRC in consultation with the operator.
- 6.1 Fire Protection Systems
- Include fire suppression (foam and water) systems, capacity of firewater tank, fire pump pressure rating.
  - Fire eyes
  - Portable fire extinguishers including size, type and location
- 6.2 Pressure Control Protection
- Pressure relief systems
  - Vacuum protection
  - Flare system, if applicable
- 6.3 Temperature Controls
- 6.4 Gas Detection Systems
- Toxic gas (H<sub>2</sub>S, Ammonia, etc.) detectors
  - Combustible gas detectors
  - Other toxic or reactive gas detectors
- 6.5 Level Controls
- 6.6 Flow Controls
- 6.7 Emergency Shutdown Systems
- Identify all critical scenarios that trigger emergency shutdown, such as:
    - electrical power failures;
    - earthquakes;
    - detection of gas releases above certain thresholds;
    - critical process triggered shutdowns (e.g., pipeline failures);
    - location and availability of manually actuated ESDs.
  - Identify what remains operational or available in the event of all types of an ESD (safety system lighting, vapor recovery, etc.)
- 6.8 Emergency Notification Systems
- Alarms

- Sirens
  - Paging system
  - Radio communication
  - Community Alert Network (if applicable) – for "what", and "who" is notified
- 6.9 Uninterruptible Power Supply (UPS)
- Describe the components, capacities, and items serviced by this (these) system(s). Describe the design philosophy for this system, for example, is the UPS intended: a) to facilitate only a safe and orderly shutdown and suspension of operations until power is restored; or b) to allow for continued full operations of safety systems after primary power is lost.

#### **6.10 Back-up Power Supply**

- Describe the components, capacities, and items serviced by this system. Describe the design philosophy for this system, for example, is the back-up power system intended to take over the full operation of the facility after the primary power is lost or only selected systems.

#### **7.0 Leak Detection**

- 7.0 Routine Operations
- 7.1 Fugitive Emission Inspection and Maintenance Program
- 7.2 Gas Detection (*see Section 6.4*)
- 7.3 Crude Oil Storage Detection
- 7.4 Hazardous Materials Storage for:
  - Reactive
  - Flammable
  - Toxic
  - Materials with multiple hazards
- 7.5 Other Product and Process Vessels
- 7.6 Drain Systems
- 7.7 Underground Piping

#### **8.0 Safety Inspection and Maintenance**

- 8.1 Responsibilities
  - Person within the organization is responsible for monitoring and implementing the inspection and maintenance schedules
- 8.2 Safety Device Inspections
  - Reference appropriate standards/regulations (*OSHA, NFPA, ASME, ANSI, API, CFR Title 8 (CCR), DOT (CFR), etc.* )
- 8.3 Surveillance Program
- 8.4 Preventative Maintenance Program
  - Reference appropriate standards/regulations (*OSHA, NFPA, ASME, ANSI, API, CCR, CFR*)
  - Description of computerized or other maintenance management system
  - Test Procedures and Inspection Schedule for Safety Systems

- Include a discussion on methods of inspection for vessels and piping and under what conditions different types of NDE (non-destructive examination)\_ inspection will be used, including, but not limited to: ultrasonic , Shearwave, X-ray, Gamma-ray inspection, magnetic particle inspection, wet fluorescent dye penetrants, pressure testing, hydrotesting, leak testing, eddy current, etc.
- Include a table listing the inspection schedule for various vessels, piping, instrumentation, detectors, and emergency notification systems. Also describe any Risk-based Inspection ("RBI") program, including the basis and logic for selecting inspection frequencies
- Include testing frequency for pressure safety relief valves.
- Electrical equipment and instrumentation.
- Fire suppression systems – method of inspection, frequency of inspection, and documentation reporting
- Portable fire extinguishers – inspection and annual maintenance

## **9.0 Corrosion Monitoring and Control**

### **9.1 Corrosion Control Program**

- Corrosion coupon monitoring
- Corrosion inhibitor injection
- Crude oil sample analysis for presence of corrosive substances
- Cathodic protection
- Erosion/corrosion piping inspections
- Pipe-to-soil potentials (underground lines)
- UT, HIC, or any other inspections

### **9.2 Computerized Record Keeping and Analysis Program**

## **10.0 Safety Procedures**

### **10.1 General Operations**

### **10.2 Hot Work Practices and Procedures**

### **10.3 Car seal log and procedures**

### **10.4 Line Identification Program**

### **10.5 Job Safety Analysis**

### **10.6 Management of Change Procedures including Operating Control System Software**

### **10.7 Accident Investigation and Reporting Procedures**

### **10.8 Near Miss Incidents**

## **11.0 Transportation of Flammable or Hazardous Materials**

- All hazardous materials used at the facility should be addressed

### **11.1 Sulfur Transportation**

### **11.2 NGL/LPG Transportation**

- Must comply with Board Resolution 93-480
- Reference to Transportation Risk Management Prevention Program (if required by permit)

### **11.3 Liquid Oxygen**

- 11.4 Liquid Nitrogen
- 11.5 Anhydrous Ammonia
- 11.6 Other Hazardous Materials
- 11.7 Truck Inspection/Loading/Unloading
- 11.8 Truck Routing
- 11.9 Truck Communications

## **12.0 Pipeline Safety**

Much of the information under this section may be included in an operator's Pipeline Operation and Maintenance Manual. Instead of duplicating information, the operator has the option of referencing the Operations and Maintenance Manual in the SIMQAP and submitting it for review as part of the SIMQAP. Please note, however, that any updates to such referenced documents must be submitted to the SSRRC for review and approval.

### 12.1 Pipeline Description

- Pipeline route (including map)
- Pipe grade and type
- Installation date noting date of any replaced segments
- Pumping information including controls
- Valves (automatic, remote, and manual)
- Product information
- Pipeline markers
- Maximum design and operating pressures
- Statement that they are members of Underground Service Alert

12.2 Leak Detection System (include information on any evacuation alert system (e.g., sirens, CAN) and the sensitivity of detection system for pinhole leaks and for ruptures)

### 12.3 Inspection Methodology and Frequency

#### 12.3.1 Internal

- Smart pigging
- Hydrotesting

#### 12.3.2 External

- Remotely Operated Vehicle (ROV)
- Side scan sonar
- Visual

### 12.4 Corrosion Control and Monitoring

- Corrosion coupons
- Corrosion inhibitors

## **13.0 Safety Audits**

13.1 Internal (Company Audits)

13.2 External (Regulatory Agency Audits)

- Must include annual audit by SSRRC
- Audit to include, but not be limited to, review of :
  - Equipment inspection and maintenance records
  - P&IDs and line lists to ensure they are up-to-date
  - Corrosion control and corrosion monitoring programs
  - Operator training records including recertification and revalidation (refresher training)
  - Management of Change (MOC) records,
  - Flow, temperature, pressure level device inspections, PSV testing, etc.
  - Fire protection system inspections
  - Validation of emergency and process alarms and shutdown systems
  - Review and validation of procedures
  - Accident reports
  - Near miss program
  - Visual inspection during plant walk-through
  - Safety program management
  - Corporate and facility audits

#### **14.0 Record Keeping**

- Summary of what records are kept, where they are kept, and for how long.

#### **Acronym List**

**Facility Plot Plan noting location of Safety Systems** (*see Section 6.0*)

## APPENDIX IV

### Sample SIMQAP Safety Audit Matrix and Procedures

The sample SIMQAP Safety Audit Matrix (following page) will be used by the SSRRC to organize and prioritize action items identified during a facility safety audit. The sample matrix is available to the project planner in Microsoft Excel (or other similar program) and will also provide tabular and graphical summaries of work progress, as illustrated. The SSRRC will assist the project planner in preparing a draft matrix for review by the audited facility operators. A final matrix will be approved at a regular SSRRC meeting, preferably at the first meeting following the audit. The content of the final audit matrix(s) is at the discretion of the SSRRC. Text is provided in the sample matrix to demonstrate the level of detail desired.

The audit matrix items will be listed in descending order of priority, as described below. All audit items will be assigned due dates (or milestone dates) that will be set at the SSRRC meeting, with the facility operator present. All audit items shall be completed as quickly and safely as possible, regardless of priority. Due dates may be extended by the SSRRC, with good cause shown.

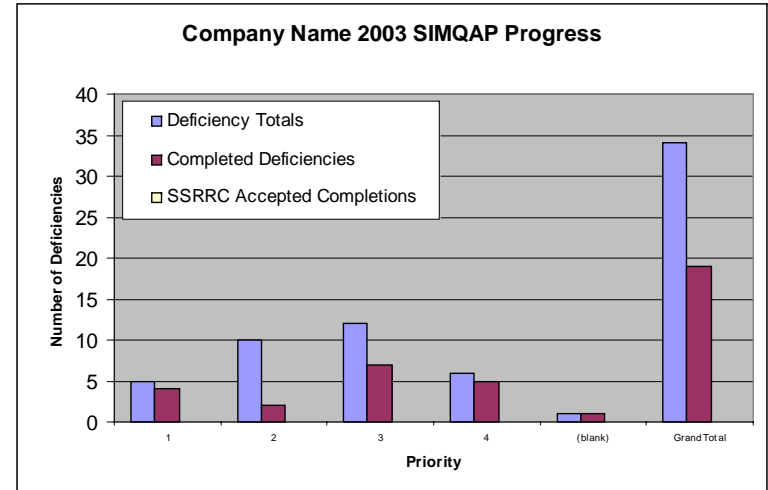
Audit matrices shall be updated and presented to the SSRRC at the regular monthly meetings, until completed. Items will not be considered completed until verified by the SSRRC representative. Failure to meet the due dates (without an SSRRC-authorized extension) may result in permit compliance action(s) as provided by the facility operating/land use permit(s) and other appropriate remedies.

#### **Priorities:**

- 1. Significant potential for serious: personal injury, negative environmental impact, property damage or hazardous material release**
- 2. Moderate potential for serious: personal injury, negative environmental impact, property damage or hazardous material release.**
- 3. Low potential for serious: personal injury, negative environmental impact, property damage or hazardous material release.**
- 4. Housekeeping and other maintenance items.**

### Sample SIMQAP Safety Audit Matrix

(Company Name) EOF 2003 SIMQAP Audit, Progress						
10/24/2003						
	Pri					
Data	1	2	3	4	(blank)	Grand Total
Deficiency Totals	5	10	12	6	1	34
Completed Deficiencies	4	2	7	5	1	19
SSRRC Accepted Completions	0	0	0	0	0	0
Percent Completed	80%	20%	58%	83%	100%	56%
Percent Accepted by SSRRC	0%	0%	0%	0%	0%	0%



**NOTE:**

- 1- Significant potential for serious: personal injury, negative environmental impact, property damage or hazardous material release.
- 2- Moderate potential for serious: personal injury, negative environmental impact, property damage or hazardous material release.
- 3- Low potential for serious: personal injury, negative environmental impact, property damage or hazardous material release.
- 4- Housekeeping and other maintenance items.

	Deficiency Description	Technical Reference	Who	Pri	Recommendations	Status	Due	Done	Accepted SSRRC
1	Post a "Do Not Enter" sign at the caustic storage area.		SSRRC	1	The sign should be visible from both sides.				
2	The gas and oil pipeline O&M Manuals have not been updated this year.		B&S	2	The manuals need to be reviewed and revalidated at least once per calendar year.				
3	Unmarked 5-gallon container in the chemical storage area.		Fire/OES	3	Properly dispose of the contents.				
4	Exterior rust on the oil storage tanks.		SSRRC	4	Paint the tanks to avoid future corrosion damage.				

## APPENDIX V

### Department Roles External to SSRRC

Described below are the roles of each primary County department members outside of the SSRRC process:

#### A. Planning and Development (P&D)

The Planning and Development Department (P&D) acts as Chair of the SSRRC and is represented on the Committee by the two divisions described below.

##### 1. Energy Division

The Energy Division, as the permit holder, has primary jurisdiction over oil and gas development permits, including but not limited to Development Plans, Conditional Use Permits, Land Use Permits, and Coastal Development Permits. The Energy Division manages the Environmental Quality Assurance Programs (EQAPs) and other permit compliance programs and plans and reviews all proposed project changes for consistency with original project approvals, including but not limited to facility risk evaluations, safety audits, and operational changes. This authority is derived from Chapters 21 and 35 of the Santa Barbara County Code.

##### 2. Building and Safety Division

The Building and Safety Division of P&D is responsible for the regulation of all construction within Santa Barbara County. Building and Safety authority is derived from Chapter 10 of the Santa Barbara County Code. Chapter 10 adopts current additions of the Uniform Codes including the Electrical Code through the ordinance process. Responsibilities of Building and Safety include plan and specification review, on-site construction inspection, and “as-built” inspections.

Section 302 (b) of the Uniform Building Code gives the Building Official the authority to require any necessary plans, specifications or other information so that the safety, proper construction and use of a proposed project can be determined. Similar authority is created in the other Uniform Codes. Since many aspects of energy projects are unique, the Building Official requires that special codes and nationally recognized standards be utilized for approval of proposed projects. These standards include, but are not limited to, the following:

#### CODES OF FEDERAL REGULATIONS (CFRs)

- 49 CFR 195 - Oil Pipelines
- 49 CFR 192 - Gas Pipelines

#### AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

and AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ASME Boiler and Pressure Vessel Code  
ASME B31.3 Chemical Plant and Refinery Piping

AMERICAN PETROLEUM INSTITUTE (API)

API 520, 521 - Pressure Relieving and Depressurizing Systems  
API 1104 - Pipeline Welding  
API 620, 650 - Storage Tanks  
API 500 - Hazardous Area Classification

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 - National Electrical Code  
NFPA 30 - Flammable and Combustible Liquids Code

NATIONAL ASSOCIATION OF CORROSION ENGINEERS (NACE)

MR-01-75 - Sulfide Stress Cracking – Sour Systems  
RP-01-75 - Internal Corrosion in Steel Pipelines

AMERICAN WELDING SOCIETY (CCR)

Title 8, 24

UNDERWRITER'S LABORATORY (UL)

OTHER GENERAL INDUSTRY AND COUNTY MANDATED STANDARDS

The major areas of responsibility for Building and Safety include:

1. Civil/Structural: Pre-construction geotechnical analysis, grading review, foundations review, vessel certification and inspection, welding review, materials analysis, piping installation.
2. Electrical Review: Identification of hazardous classification areas, certification of all electrical components (pre-manufactured and site-installed), wiring inspection, including sensing and control systems.
3. Chemical/Process: Review of process flow diagrams, process and instrumentation diagrams (P&IDs), flare relief system sizing and criteria, equipment (vessels, tanks, piping, etc.) design and specifications, system redundancy, vapor recovery, severe service criteria (i.e., metallurgy, cryogenics, corrosion, embrittlement and sour gas service), instrumentation, monitoring and leak detection systems, qualitative and quantitative risk

assessments, Process Hazards Analysis (PHAs), hazardous area classifications, operating procedures and other safety systems.

## **B. Fire Department**

The Fire Department exercises primary jurisdiction over the storage, handling and use of hazardous substances, materials and devices in order to safeguard life and property from the hazards of fire and explosions (Uniform Fire Code Section 1.102 (a) as adopted within Chapter 15 of the Santa Barbara County Code. Topics subject to the Fire Department's regulation and approval include, but are not limited to:

Flammable vegetation management (UFC App. II-A)

Emergency vehicle access (UFC Art. 10)

Periodic building and premise inspections (UFC Art. 2)

Fire water distribution systems (UFC Art. 10)

Extinguishing systems (UFC Art. 10)

Detection and alarm systems (UFC Art. 14)

Emergency Shutdown systems (UFC Art. 2)

Permits for hazardous operations (UFC Art. 4)

Storage and use of flammable compressed gases (UFC Art. 74)

Relief valve criteria and sizing (UFC Art. 79, Div. V)

Vapor recovery (UFC Art. 79, Div. IX)

Review of design and materials (Art. 79 Div VII, ANSI B 31.3)

Petroleum piping and valves (Art. 79 Div. VII, UL 849)

Testing of pressure piping installations (Art. 79 Div. VII)

External corrosion protection (Art. 79 Div. VI, Div. VII, API 1632)

Design and construction of flammable liquid tanks (Art. 79 Div. I, API 650)

Pressure vessels (Art. 79 Div. I, ASME Stnds Sections I & VIII)

Monitoring and leak detection (Art. 80 Div. III)

Storage and use of cryogenic fluids (UFC Art. 75)

Storage and use of flammable and combustible liquids (UFC Art. 79)

Storage and use of liquefied petroleum gases (UFC Art. 82)

Design, installation and maintenance in accordance with nationally recognized standards (UFC Art. 2)

Storage and use of hazardous materials (UFC Art. 80)

Fire hazard assessment (NFC Sec. 21, Ch. 1)

Fire risk analysis (NFC Sec. 21, Ch. 2)

In addition to the overarching Fire Department jurisdiction, the Office of Emergency Services and the Protection Services Division also fall under the jurisdiction of the Fire Department and serve roles on the SSRRC as described below:

#### **1. Office of Emergency Services**

The Office of Emergency Services (OES) provides staff support to the Santa Barbara Operational Area (SBOA), created by a joint powers agreement between the County, the incorporated cities and the special districts. The purpose of OES is to prepare mutual plans for the preservation and safety of life and property and making provisions for the execution of those plans in the event of an emergency. The County Administrator is designated as the Coordinator of the SBOA. Additionally, pursuant to County Ordinance 3014, OES performs the following functions:

- 1) Prepares and carries out plans for the protection of persons and property within this County in the event of an emergency;
- 2) Manages the emergency programs of the County;
- 3) Coordinates the emergency functions of the County with all other public agencies, corporations, organizations, and affected private persons under the direction of the County Administrator;
- 4) Coordinates the development and review of the Area Oil and Gas Industry Emergency Response Plan;
- 5) Reviews, analyzes, makes recommendations and approves industry site-specific emergency response plans;

- 6) Analyzes and evaluates the off-site impacts of industry-related emergency incidents on the safety of persons and property within this County;
- 7) Monitors local ordinances and state and federal legislation related to oil and gas development; and
- 8) Analyzes potential impacts on County and city jurisdictions.

## **2. Protection Services Division**

The Protection Services Division of the Fire Department is responsible for the enforcement of the California Health and Safety Code, Chapters 6.5, 6.7, and 6.95, dealing with hazardous materials and waste, plus the regulatory requirements found in the California Code of Regulations, Titles 19, 22, and 23. These laws and regulations cover construction, plan review and ongoing operational inspections. Specifically, the sections of State law and regulation cover the following:

- 1) The construction, monitoring and abandonment of underground tanks containing hazardous materials or wastes;
- 2) The generation, storage, handling and treatment/disposal of hazardous wastes;
- 3) The inventory, training, and emergency response procedures for hazardous materials; and
- 4) The federal Risk Management Program (RMP) (implemented via the California Accidental Release Prevention [Cal ARP] Program) for acutely hazardous materials including the hazards and operability studies for acutely hazardous materials.

## **C. Air Pollution Control District (APCD)**

Pursuant to the Federal Clean Air Act and the California Health and Safety Code, the Air Pollution Control District (APCD) is mandated the sole responsibility and authority to issue Authority to Construct (ATC) and Permit to Operate (PTO) permits for the construction and operation of facilities with equipment that emits, or controls the emission of, air pollutants. The permitting process requires the APCD to determine conformance with District rules and regulations, including but not limited to:

1. Best Available Control Technology (BACT);

2. Continuous emission monitoring requirements;
3. Offset requirements;
4. Plant design of operations review for breakdown potential that may result in atmospheric releases of criteria pollutants and other acutely hazardous and toxic materials;
5. Review of process flow diagrams and process and instrumentation diagrams (P&IDs);
6. On-site as-built inspections/verifications; and
7. Review of vapor recovery and flare system designs.

As a member of the SSRRC, the APCD ensures that the above requirements are maintained in the Committee review process. Where there is an overlap with other County departments' jurisdictions, the APCD will work cooperatively with other SSRRC members in accomplishing Committee activities.

**APPENDIX VI**

**Ex-Agenda Request Procedures**

**Justification For The Necessity For The SSRRC  
To Take Action On A Matter Not On the Posted Agenda**

**TO:**                   **The SSRRC**

**FROM:**

**Department/Other:**

**Meeting Date:**

**Subject Of Item:**

**Recommended SSRRC Action:**

**Reason Item Cannot Be Placed On Future Agenda:**

**Statement Of Reason for Emergency\*, Or Why Need For Action Arose After The Agenda  
Was Posted:**

\_\_\_\_\_  
**Signature of Requestor/Title**

\_\_\_\_\_  
**Signature of SSRRC Chair**

**References:**

**\*Government Code Section 54956.5 defines “emergency situation” as:**

- a) Work stopping or other activity which severely impairs public health, safety, or both, as determined by a majority of the members of the legislative body;**
- b) Crippling disaster which severely impairs public health, safety, or both, as determined by a majority of the members of the legislative body.**

**\*See also:**

- Government Code Section 54954.2;**
- Santa Barbara County Resolution No. 86-642.**