**The Public Service Commission of
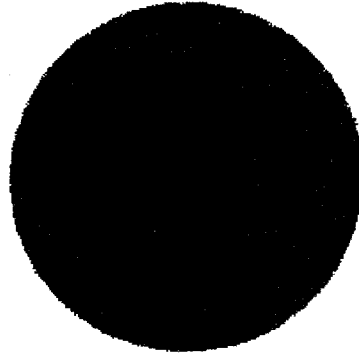South Carolina**

*REVISED PROCEDURES*

*FOR MONITORING*

*PIPELINE SAFETY ACTIVITIES*

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# REVISED PROCEDURES

# FOR MONITORING

# PIPELINE SAFETY ACTIVITIES


## INTRODUCTION

The Pipeline Safety Program for the State of South Carolina operates under the management of the Utilities Department of the Public Service Commission. The Program functions within parameters set forth in the 60105(a) agreement with the Federal Department of Transportation's OPS (Office of Pipeline Safety) **(See Appendix A)** and the Commission. Application of the staffing formula specifies the number of personnel required to effectively and efficiently carry out the responsibilities established in the agreement, but does not specify exact means or technology with which to carry them out. A large part of the responsibilities include monitoring, summarizing and reporting of Pipeline Safety activities to OPS at year's end. This is known as the Annual Program Certification.

As requirements become more stringent in the workplace and cost-cutting measures more necessary, the natural result is generally increased efficiency. To meet the expectations of Management as driven by economic concerns as well as the need to communicate electronically outside the workplace, traditional methods are giving way to newer, high-tech means. The opportunity presents itself to ascend from hand written labor intense methods to faster and more advanced electronic means. It is almost a given that quality and efficiency will increase. We have established performance measures to verify this and included them in the project.

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## THE PROJECT

This project proposes revising traditional record keeping and reporting procedures and offers a web-based application that will build and store a database that can be queried to generate any type of report or document needed--as long as the information has been properly entered. The newly revised *Pipeline Safety Inspection Summary Report* **(See Appendix B)** is designed to capture that information. The Administrative Specialist is responsible for verifying and entering the data from the Inspector's field version of this form to an electronic version of the same form. The e-version includes several drag-down menus at text boxes to expedite the data entry process. This data will serve to build a database for future queries that will be needed to complete certain reports such as the annual Program Certification or a monthly report of activities. Also, we will review these reports to identify trends that will assist in the scheduling of future inspection activity, as well as actions for Operator non-compliances, etc.

## GOALS

Some short-range goals for the new system have been determined. They are as follows:

- ✓ Refine and structure the Pipeline Safety activity data entry and retrieval process utilizing a standardized form.
- ✓ Designate an administrator (probably the Chief of Pipeline Safety) for the system with unlimited access but allow limited access by all Pipeline Safety personnel.

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✓ Re-organize and condense where possible the data being entered into the system and eliminate redundancy.

✓ Improve the efficiency of the Pipeline Safety Personnel.

Initially, the scope of this project was much greater. However, the goals listed above have been determined to be realistic and represent the basis for reassessing the scope for the overall project and consideration for trimming it down somewhat. As long as new technology and ideas evolve the system can be expanded to include more of the job duties of the positions in Pipeline Safety. The Commission's Information Systems Management Department is committed to making such resources available to all Departments in this agency.

## SOFTWARE DEVELOPMENT AND SUPPORT

The software and applications are being provided by Mr. Paul Jones from Information Systems. As a result of several planning meetings **(See Appendix C)**, a good working relationship was established early on in the project research between Pipeline Safety and the Information Systems personnel. Cooperation was extended from the beginning between departments. Actually, information learned in some of these meetings resulted in the "trimming down" of the Project. It became obvious that the enormous amount of work involved in converting all of the forms, establishing the working database that would provide information for the fields on those forms, and setting performance standards for each process were all together just too great a task to take on. At least, this was too great a task to be done all at once. That's when the first phase was determined and established.

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The first implementation task was to formulate and introduce to the Pipeline Safety personnel the *Pipeline Safety Inspection Summary Report.* This form is a combination of two previous forms. It must be completed and submitted with every inspection that is reported on. The Inspectors will do a hard copy for now and the Administrative Specialist will transfer the data to an electronic version of the *Pipeline Safety Inspection Summary Report.* The fields in the form serve to place data in the new database for Pipeline Safety Activities. The List of Queries **(See Appendix D)** will be used to set up actions to retrieve the information in whatever format needed; whether it be graphs or charts for trend analysis, specific Operator information, or general activity history, all will assist in planning future inspection activities.

With guidance and input from the Pipeline Safety personnel, the characteristics of the new system are very usable and should need a minimal amount of adjusting after implementation. However, not all of the proposed queries will be installed initially. Only those four or five most frequently needed ones will be installed during the first few weeks. Then, later on others from the original list can be put in place as determined based on priority of reports and information needed.

The web-based application will be accessible to all affected parties, but the information in the database cannot be removed, edited or added to by anyone other than the System Administrator. Of course, this clearance must be afforded to the person who enters the data also. In addition, the new system is password protected.

Accomplishing success in the implementation of this project will depend on the collaborative efforts of those affected employees. As far as the Pipeline Safety personnel, meetings were held, mostly one on one (Chief of Pipeline Safety with each of

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(three) employees) to insure their willingness to see increases in efficiency and quality in our work. Individuals will contribute willingly to a group effort towards improvements in the workplace if leadership "... *provides proper planning, access to needed resources and fosters an environment of trust and collaboration"* [1]. In other words, it takes small amounts of empowerment to produce lots of teamwork.

## PERFORMANCE MEASURES

As for performance measures to evaluate the new system, they are as follows:

- ✓ New form and procedures "fitted" into place with minimal problems.

- ✓ Any additionally required training for personnel so that all are able to negotiate data entry and retrieval; for example, a group session on completion of the new Inspection form ( held 1/13/2003).

- ✓ Comparison of quality of work performed on the new system as opposed to work performed on the old system (reports generated, accessibility, etc,).

- ✓ Realization of time saved utilizing new system; including reduction of time required to complete annual Certification (3 or 4 days).

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[1] The Team Handbook (The Second Edition), Peter R. Scholtes; Peter R. Scholtes; Madison, WI : Joiner, 1996; Chapter 5, Leadership and Teamwork.

The Public Service Commission produces *the Annual Accountability Report* [2]. It describes agency activities and performance. Each department must provide detailed information concerning travel, equipment purchases, training, etc., and list total department costs. In the report, Pipeline Safety is accounted for similarly to other stand-alone Departments. The use of the new Pipeline Safety Activity Management System will save time and money while enabling our Pipeline Safety Program to obtain and utilize information in a way that has not been previously available. Again, we will realize improved efficiency and less work overall. In addition to being more user-friendly, the new system makes it easier to store and retrieve information to and from. Of course, it may take several months for exact expense to be ascertained. However, the performance measures can be applied continually to insure the maximum level of efficiency and savings.

## IMPLEMENTATION

The new system is being implemented beginning with the January 1, 2003 inspection reports. Under the terms of the Commission's agreement with the OPS, fiscal summarization of Pipeline Safety activities must be reported at the end of each year. Design of the reporting form, database, and querying abilities are being completed with these reporting requirements in mind.

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[2] The Public Service Commission of South Carolina, <u>Annual Accountability Report, Fiscal Year 2001-2002;</u> Utilities Department, Pipeline Safety Program.

It is possible to achieve the upgrading of the Pipeline Safety activity monitoring methods while establishing a methodology to retrieve the data in such a format as to satisfy the Federal reporting requirements. The first evaluation of the performance of the new system must take place after February 1, 2003, at which point the first month's data will be available. At this time we will make several crucial comparisons as to the usefulness of the formatting. At the end of each subsequent month the data can be used for monthly reporting. At the end of the year, data can be evaluated and stored-- establishing annual grouping. Then, a new year can be started.

As for the process for entering data, a significant amount of time will be saved. For example, it now takes as much as 30 (thirty) minutes to transfer data from one report form to the appropriate location on the old system. This is due in part to the functionality of the old form(s) and related processes. If 20 (twenty) minutes could be saved on each report form and 10-12 reports are done per week, on average, that's 2 ½ - 3 hours saved weekly just on entering data summaries. This doesn't include monthly reports, year-end reports, specialty reports, etc. As our familiarity with the new system and negotiation of the process increases we will be more able to apply the performance measures and determine more precise savings.

There are several forms that are associated with the various types of inspections which are performed throughout the year in the Pipeline Safety Program. As of this writing, there are a *total of 28 (twenty eight) forms* (See Appendix E). This list contained approximately 35 (thirty five) forms when the project research began. Some forms were outdated, some revised and others removed. Some of the existing forms are available in

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electronic version. Eventually, all of them will be. This task is one of the long range goals of the Pipeline Safety Program related to the new system. These include but are not limited to the following:

- ✓ Incorporate all forms used in Pipeline Safety to electronic format.

- ✓ Install templates of all forms on each Pipeline Safety Inspector's laptop computer.

- ✓ Merge State vehicle mileage reports, Operator Annual reports, Operator welder records, and employee annual/sick leave forms into system.

- ✓ Evaluate, update and distribute monthly reports from new system summarizing inspection activities and utilize at monthly Department meetings.

- ✓ Provide any additional training for employees as needed.

These goals may be revised as necessary upon evaluation of the established performance measures each month, or as changes in Federal or State requirements necessitate.


**CONCLUSION**

Several months ago, when this project was being identified and discussed, there were many aspects of conversion of the present methods to electronic format considered. For example, converting all of the Pipeline Safety forms was discussed. However, it was determined that the scope of the project must be reasonable, attainable, and not just a big store-bought contraption that some outsider could be hired to come in and do. The Pipeline Safety employees, Information Systems employees, Utilities Manager, and others

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have made significant contributions to the success of this project. We want, have need of and will have a tailor made system. The people who will use the system, maintain it, pay for it, and benefit from it have all had input. The goals associated with the project are spelled out clearly as stated above. The intent of those responsible for the success of the project is consistent with the Mission Statement of the Public Service Commission.[3] Specifically, "...*to best serve the needs of all of the citizens of the State and also while encouraging a sense of satisfaction and accomplishment for employees.*" The use of the new Pipeline Safety Activity Monitoring System helps do both of these.

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[3] The Public Service Commission of South Carolina Accountability Report, Fiscal Year 2001-2002; Mission Statement.

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The Team Handbook (The Second Edition), Peter R. Scholtes; Peter R. Scholtes, Author;

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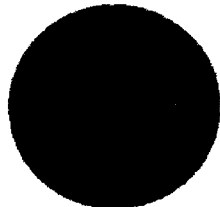
    Teamwork.


The Public Service Commission of South Carolina Annual Accountability Report for

    Fiscal Year 2001 – 2002; Utilities / Pipeline Safety Section.


The Public Service Commission of South Carolina Annual Accountability Report for

    Fiscal Year 2001 – 2002; Mission Statement.

**APPENDIX A**

*PIPELINE SAFETY INSPECTION*

*SUMMARY REPORT*

*APPROVED BY:* _____

*DATE:* _____

*DATE(S) OF INSPECTION:* _____     *DATE OF REPORT :* _____

*NAME OF OPERATOR* _____

*TYPE OF OPERATOR* _____

*PLEASE ALLOCATE TIME IN DAYS (TENTHS) AND INDICATE NUMBER OF INSPECTIONS*

| SYSTEM LOCATIONS | COMPREHENSIVE P-DAYS | SPECIALIZED P-DAYS | DESIGN, TESTING, CONST. P-DAYS | TRAINING P-DAYS | FOLLOW-UP P-DAYS |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| TOTAL |  |  |  |  |  |

*TOTAL NUMBER OF REGULAR INSPECTIONS* _____

*TOTAL NUMBER OF DRUG/ALCOHOL INSPECTIONS* _____

*RULE OR REGULATION CITED*            *ADDRESS (CITY, TOWN,*

*FOR NON-COMPLIANCE*                  *OR ENTIRE SYSTEM)*

_____     _____

_____     _____

_____     _____

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SYSTEM OPERATOR:_____

LOCATION(S):_____

_____

TYPE OF INSPECTION(S) AND PURPOSE:_____

_____

NAME AND TITLE OF PERSON(S) CONTACTED:_____

_____

COMMISSION REPRESENTATIVE(S):_____

LIST BELOW ANY INSTANCES OF NON–COMPLIANCE, EACH IDENTIFIED BY SECTION OR SUBSECTION OF CFR49; (ATTACH ADDITIONAL PAGES IF NECESSARY):

_____

_____

_____

_____

_____

_____

_____

_____

PLEASE COMPLETE FOLLOW–UP DATA FOR ANY PENDING VIOLATION(S):

1. ARE THERE ANY NON–COMPLIANCES FROM PAST INSPECTIONS     YES     NO
   STILL PENDING?
2. DOES THIS INSPECTION CONFIRM THAT THE NON–COMPLIANCES     YES     NO
   HAVE BEEN ADDRESSED AND CORRECTED?
3. ENTER NUMBER OF HOURS SPENT ON FOLLOW UP:_____

*{SC PSC Pipeline Safety Inspection Summary Report 1/2003}*

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# NATURAL GAS PIPELINE SAFETY PROGRAM

# CERTIFICATION FOR CALENDER YEAR 2001

**Document Status: Submitted on 4/17/2002 3:32:43 PM by Gainey, Vernon**

This certificate (including attachments is submitted by the PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA (the state agency to the Secretary of Transportation (the Secretary) under Section 60105 of Title 49, United States Code.

Pursuant to Section 60105(a) of this Title, the state agency hereby certifies to the Secretary that

1. Except as set forth in Attachment 1, under the Constitution and laws of South Carolina it has regulatory jurisdiction over the safety standards and practices of all intrastate pipeline transportation within South Carolina as summarized on Attachment 1.

2. It has adopted, as of the date of this certification, each federal safety standard established under this Title that is applicable to the intrastate pipeline transportation under its jurisdiction as set forth in paragraph 1, or, with respect to each such federal safety standard established within 120 days before the date of the certification, is taking steps pursuant to state law to adopt such standard. (The adoption by a state agency of a safety standard that is additional to or more stringent than the applicable federal standard is compatible with the federal standards [see Section 60102(a)(1) of this Title] does not prohibit that state agency from certifying to the actions described in this paragraph.)

3. It is enforcing each standard referred to in paragraph 2.

4. It is encouraging and promoting programs designed to prevent damage to pipeline facilities as a consequence of demolition, excavation, tunneling, or construction activity.

5. It has authority to require each person who engages in the transportation of Natural Gas or who own or operates pipeline facilities subject to its jurisdiction as set forth in paragraph 1, to establish and maintain records, to make reports, and to provide information, and that this authority is substantially the same as the authority provided under Section 60117 of this Title.

6. It has authority to require each person who engages in the transportation of Natural Gas to who owns or operates intrastate pipeline transportation facilities, subject to its jurisdiction as set forth in paragraph 1, to file with it for approval a plan for inspection and maintenance substantially as described under Section 60108 (a) and (b) of this Title.

7. The laws of South Carolina provide for the enforcement of the safety standards referred to in paragraph 2 by injunctive and monetary sanctions substantially the same as those provided under Sections 60120 and 60122 (a)(1) and (b)-(f) of this Title.

The state agency furthermore agrees to cooperate fully in a system of federal monitoring of the state program to assure the program is being carried out in compliance with this certification. The terms "intrastate pipeline transportation," "pipeline facilities," "transportation of Natural Gas," and "state," are used in certification as defined in this Title. This certification is subject to termination by the Secretary in accordance with Section 60105(f) of this Title if the Secretary Under Section 60105(f), the Secretary, on reasonable notice and after opportunity for hearing, may reject the certification or take such other action as deemed appropriate to achieve adequate enforcement including assertion of federal jurisdiction.

In witness whereof, the hand and seal of the PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA is hereby affixed on ___4-17-02___ .

PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

## APPENDIX C

Meetings were held on the following dates with the corresponding individuals to discuss the Pipeline Safety Activities Monitoring System revision;

- August 5, 2002 meeting with Wayne Burdett, Utilities Manager, Public Service Commission.
- August 6, September 3, September 11, October 21, December 3, December 13, December 20, December 30, 2002, and January 6, 2003 meetings with Paul Jones, Technical Support Specialist, Information Systems. Department, Public Service Commission.
- August 15, 2002 meeting with Brent Sires, Chief of Gas Economics, Public Service Commission; and David Smith, Information Management Consultant, USC.
- September 16, 2002 meeting with Randy Erskine, Information Systems Manager, Public Service Commission.
- September 20, 2002 meeting with Nathan Strong, OHR.
- January 13, 2003 meeting with Pipeline Safety Inspectors on completing new form.

Several non-formal conversations have occurred with each of the Pipeline Safety Employees to build support and gain valuable feedback pertaining to the implementation of this new system.

# APPENDIX D

## QUERIES FOR PIPELINE SAFETY

## INFORMATION SYSTEM

1.  How many operators do we have?

2.  How many M/M, Municipals, Private, etc?

3.  How many non-compliances last year, last month, average per month?

4.  What percentage of total non-compliances does each Operator have?

5.  List non-compliances in order of frequency, in chronological order, in numeric order in correlation to the Code.

6.  How many person-days spent on dist., trans., comp., new const., training, etc?

7.  What percentage of total inspection time has been spent at each Operator?

8.  How many inspection units per type of Operator?

9.  How many inspection units inspected last year, last month, average per month? (Also, all queries may need to be presented in cumulative format so as to get an indication of progress during the year.)

10. How many field inspections made by each individual inspector?

11. Are templates for all forms used in Pipeline Safety available?

12. Do all Pipeline Safety personnel have access to the information?

13. Can System be accessed remotely with laptop?

14. Can Operator Annual Reports be incorporated?

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# APPENDIX E

## PIPELINE SAFETY FORMS LIST

1. Comprehensive Corrosion Control Inspection Form
2. Comprehensive Critical Valve Inspection Form
3. Comprehensive Emergency and Operations & Maintenance Plan Inspection Form
4. Comprehensive Emergency Response Plan Inspection Form
5. Comprehensive Leak Survey and Repair Inspection Form
6. Comprehensive Transmission Lines Inspection Form
7. Comprehensive Distribution System Inspection Form
8. Comprehensive Alcohol Misuse Plan for Headquarters Inspection Form
9. Comprehensive Drug Abuse Plan for Headquarters Inspection Form
10. Comprehensive Liquid Lines Inspection Form
11. New Construction Inspection Form
12. Comprehensive Maximum Allowable Operating Pressure Inspection Form
13. Regulator Station Field Inspection Form
14. Regulator Station Records Inspection Form
15. Comprehensive Propane Air Plant Inspection Form
16. Comprehensive Liquefied Natural Gas Inspection Form
17. Comprehensive Alcohol Misuse plan for Field Inspection Form
18. Comprehensive Drug Abuse Plan for Field Inspection Form
19. Comprehensive Operator Qualification Inspection Form
20. Repaired Leaks Form
21. Inactive Risers Form
22. System Operator Inspection Form
23. Corrosion Control Monitoring Form
24. Additional Comments Form
25. Regulator Station Records Inspection Form
26. Regulator Station Field Inspection Form
27. Gas Distribution Annual Report Form
28. Gas Transmission Annual Report Form