

**U S WEST  
Communications, Inc.  
Technical Publication**

**Engineering Complaints  
and Service Failure  
Analysis Reports**

**PUB 77357  
Issue C  
September 1991**

**U S WEST**  
**Communications, Inc.**  
**Technical Publication**

**Engineering Complaints**  
**and Service Failure**  
**Analysis Reports**

### NOTICE

This publication describes U S WEST Communications, Inc. for Engineering Complaints (ECs) and Service Failure Analysis Reports (SFARS).

U S WEST Communications, Inc. assumes no responsibility for any costs incurred by a Supplier in conforming to the contents of this publication. Further, conformance to this publication does not constitute a guarantee of acceptance of a given supplier's equipment and/or its associated documentation.

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U S WEST Business Resources  
Manager - Information Release  
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Company \_\_\_\_\_

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Telephone Number \_\_\_\_\_

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## **1. General**

### **1.1 Purpose and Scope of Document**

- This publication has been prepared to provide the industry with requirements for effectively interfacing with U S WEST Communications, Inc. concerning Engineering Complaints (ECs) and Service Failure Analysis Reports (SFARs). To emphasize the importance of this EC process, some internal U S WEST Communications, Inc. functions and responsibilities are also defined. There are no restrictions on these requirements and a Supplier may elect to follow the procedures described herein when dealing with customers other than U S WEST Communications, Inc.

### **1.2 Reasons for Reissue**

- This issue of TECH PUB 77357 incorporates the following changes to TECH PUB 77357, Issue C:
  - Title change - The document title has been changed from Guidelines for Engineering Complaints to Engineering Complaints and Service Failure Analysis Reports.
- Administration changes - This document reflects changes in EC administration that have occurred since the last issue.
- Introduction of SFAR - This document includes new sections and references to documents dealing with the SFAR.

### **1.3 Organization**

- Chapters 1 and 2 state the purpose scope and organization of this document and explain the forms and terms used. Chapters 3 through 7 describe EC applications, processing, supplier responsibilities and special handling. Chapter 8 describes SFAR's.

### **1.4 Forms**

- The example forms found in the back of this document are those used by U S WEST Communications, Inc. They are:
  - Mechanized Engineering Complaint (see Exhibit 8-2)
  - RG 01-0009 Engineering Complaint (see Exhibit 8-3)
  - Engineering Complaint Final Response Format (see Exhibit 8-4)
  - Engineering Complaint Interim Response Format (see Exhibit 8-5)

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## **2. Definitions**

### **2.1 Supplier**

In this publication, the term Supplier will be the equipment supplier, manufacturer or the contractor from which the product or service was purchased. Usually, this will also be the company that is responsible for the product's warranty.

### **2.2 Regional Engineering Complaint Coordinator (RECC)**

The term Regional Engineering Complaint Coordinator (RECC) will be the U S WEST Communications, Inc. regional contact responsible for coordinating and tracking all ECs, Supplier Reports and correspondence pertaining to the ECs. This individual will act as an interface between the Supplier and the Originator of the EC, typically the Area Technical Contact (ATC), to ensure that Supplier has fulfilled their obligations to U S WEST Communications, Inc. This individual resides in the Network and Technology Services Product Evaluation/Support/Quality Assurance (PE/S/QA) organization.

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### **3. Engineering Complaints Applicable Uses**

The EC is used by U S WEST Communications, Inc. to report unsatisfactory conditions and improper performance of telecommunications and minicomputer products and services. It may also be used to request credit (refund) or repair, on a non-billable basis, for defective products or unsatisfactory services.

Engineering Complaints are typically submitted to Suppliers via a mechanized letter format (see Exhibit 8-2). When the originator does not have mechanized access capability, a U S WEST Communications, Inc. Form RG 01-0009 may be issued (see Exhibit 3).

#### **3.1 Applicable Uses of Engineering Complaints**

An EC is used to cover products which:

- Do not function as documented in Supplier's specifications or as advertised.
- Fail to meet specified requirements which are in effect at the time of purchase.
- Fail in an abnormally short period of time (less than life expectancy) or when excessive quantities are inoperative upon delivery.
- Require field maintenance more frequently than comparable marketed products.
- Result in an alleged fire or safety hazard.
- Result in repeated cases of damage due to improper packaging.
- Reveal problems with inaccurate and/or inconsistent documentation provided by Supplier. (This would include paper, microfilm, embedded software or any form of electronically stored documentation.)

An EC is issued to cover services which:

- Reveal installation errors that are detected after job acceptance when installation is performed by Supplier.
- Include the repair, refurbishment or other work performed on U S WEST Communications, Inc. equipment (hardware or software), resulting in unsatisfactory performance or maintenance when work is performed by the Supplier.

#### **3.2 Non-Applicable Uses of Engineering Complaints**

An EC should not be initiated when a limited amount of initial or in-service product failures occur. The warranty procedures or repair and return procedures in these situations are considered normal U S WEST Communications, Inc./Supplier transactions and should not involve ECs. However, if U S WEST Communications, Inc. believes the number of failures to be excessive or that reasonable service life has not been achieved, ECs will be submitted to request repair, replacement or credit (refund) from the Supplier.

An EC will not be used for:

- Shipping or billing discrepancies, or products found to be damaged on receipt (where the product was obviously damaged in transit). These problems shall be handled according to the governing shipping contract. Repeated cases of damage due to inadequate packaging, however, are covered by an EC.
- Changes made to the Supplier's product which are not authorized by the Supplier.
- Products that fail because of improper use of handling by U S WEST Communications, Inc. personnel.
- Requests for new designs or features.
- Suggestions for design changes by U S WEST Communications, Inc. employees.
- Repairs made by those other than the Supplier when the repair order is not processed through the Supplier (unless U S WEST Communications, Inc. was referred to the repairing organization by the Supplier).

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## **4. U S WEST Communications, Inc. Engineering Complaint Processing**

### **4.1 U S WEST Communications, Inc. Administrative Contact**

The U S WEST Communications, Inc. EC Administration representative listed below is the official U S WEST Communications, Inc. contact for all incoming and outgoing EC correspondence:

U S WEST Communications, Inc.  
Regional Engineering Complaint Coordinator  
1801 California, Room 640  
Denver, CO 80202

All ECs will be issued to the Supplier through the RECC in U S WEST Communications, Inc. A flowchart (see Exhibit 8-6) reflects this EC Administration and flow process. The flowchart also depicts the EC Administration and flow process internal to U S WEST Communications, Inc.

### **4.2 U S WEST Communications, Inc. Technical Contact**

U S WEST Communications, Inc. will designate an "Area Technical Contact" (usually the Area Maintenance/Quality Assurance Engineer) to be the technical interface to the Supplier. This contact will be familiar with the problem and be able to answer questions relating to the EC and will be indicated on the last page of the mechanized EC letter (see Exhibit 8-2) or on Line 27 of Form RG 01-0009 (see Exhibit 8-3).

### **4.3 Engineering Complaint Numbering**

An eight character number consisting of three letters and five numerals will be assigned to the EC by U S WEST Communications, Inc. The three letters designate U S WEST Communications, Inc. and the state within U S WEST Communications, Inc. that originated the Engineering Complaint. A list of applicable letter combination codes is found in Exhibit 8-1.

The first two numerals of the identifying number will be the last two digits of the current year; the last three numerals will be specified by the originating State and be used to consecutively number the ECs as they occur (e.g., UAZ91001, the first EC originated by the State of Arizona, in 1991).

### **4.4 Engineering Complaint Closure Process**

An EC will be considered closed ONLY when the problem has been satisfactorily resolved and Supplier compliancy has been confirmed by U S WEST Communications, Inc.

An EC will normally be considered closed on the 46th day beyond the RECC receipt date of the Supplier Final Report. Refer to Chapter 5, the Section titled, "Unsatisfactory Supplier's Response" for further detail.

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## 5. Supplier's Responsibilities

The Supplier shall formally acknowledge to U S WEST Communications, Inc. that it has received and is acting on the Complaint within 10 working days after receiving it. Acknowledgement may be made by letter or formal acknowledgement form.

Suppliers are expected to issue a final report within three months (ninety days) from the time U S WEST Communications, Inc. sends the EC to the Supplier. If this is not possible, an interim report shall be issued every 90 days until the final report is issued. Supplier must provide a final report even if interim reports have been issued. A Supplier's Final and Interim Report format is shown in Exhibits 8-4 and 8-5.

- The Supplier's Final Report shall be written by the Supplier as soon as it has been established that:
  - The reported condition is understood.
  - The cause of the condition has been determined.
  - The correction (if any) will be implemented.
- The Supplier's Final Report shall contain:
  - Trouble description.
  - Equipment or circuit drawing number and drawing issue (if applicable).
  - Detailed technical evaluation explaining why the problem occurred.
  - Final resolution stating what action and method of procedure will be taken to solve the problem.
  - Completion date.
  - Product Change Notice (PCN) number and classification if a PCN is issued to correct the problem and a copy of the PCN attached.

**Note:** A PCN must be issued describing the modifications required to correct any hardware/firmware design or manufacturing defect in accordance with the provisions stated in U S WEST Communications, Inc. Technical Publication 77354, Guidelines for Product Change Notices.

- Software patch number(s) for each affected software release, if one or more are issued to correct the problem.
- A Supplier's Interim Report shall contain:
  - Current status of complaint.
  - A detailed explanation for the delay of resolution.
  - Actions being taken to identify and/or resolve the problem.
  - Anticipated correction date.
  - Other information relevant to the reported condition (i.e., a temporary workaround).

### **5.1 Unsatisfactory Supplier's Response**

Upon receipt of the Supplier's Final Report, the U S WEST Communications, Inc. Area Technical Contact (ATC) will review the Supplier's proposed corrective action. If the proposed solution is not satisfactory, the ATC will reopen the EC. The EC will be reissued to the Supplier with supporting documentation detailing the reason for reissue. Reopened EC's will retain the original complaint number. Time frames for the Supplier's acknowledgement to reopen an EC are the same as addressed in the first paragraph in this chapter. Suppliers are expected to respond and issue a new final report within one month (thirty days) from the time U S WEST Communications, Inc. reopened the EC. Reopened EC returned with an unsatisfactory solution for the second time will be escalated to the appropriate level of management within U S WEST Communications, Inc. and Supplier's organization for resolution.

U S WEST Communications, Inc. reserves the right to reopen an EC at any time when it has been determined that the Supplier's Final Report Solution is unsatisfactory.

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## **6. Emergency or Special Handling**

In certain emergency or special situations, normal EC routines must be bypassed. Emergency situations or conditions requiring special handling occur when a hardware or software defect in a product, or the failure to meet requirements, or the Supplier's specifications results in:

- A service outage
- A severe service impairment
- A fire or safety hazard

These requirements may also be defined in other Supplier's contractual agreements.

To expedite a quick resolution to an emergency situation or a condition requiring special handling, a telephone call or an informal letter may precede the EC. In these special cases, a formal EC will also be issued to the Supplier in a timely manner.

The Supplier shall also stock certain critical items such as memory or power units for emergency use. U S WEST Communications, Inc. and Supplier normally establish a routine so that this equipment can be obtained by a telephone call on short notice (less than 24 hours). This may be followed by a billable order from U S WEST Communications, Inc. to the Supplier, if appropriate. This billable order, in turn, would be followed by a formal EC to obtain compensation if credit is due, or to officially document the problem.

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## **7. Selection and Handling of Engineering Complaint Samples**

If necessary, samples of the defective products which adequately illustrate the reported condition will be furnished to the Supplier for a thorough investigation. This is especially true if the defective product results in a personal injury or is the cause of a known or suspected fire or safety hazard.

Following is a list of methods and procedures for the handling of samples:

- U S WEST Communications, Inc. will retain the sample until the Supplier provides disposition instructions. The defective product or sample will be suitably tagged or marked by U S WEST Communications, Inc. to identify and associate it with the EC. The identity and integrity of the sample must be maintained by the Supplier.
- Before shipping, U S WEST Communications, Inc. will carefully package the defective product to prevent damage or destruction of valuable evidence during transit. Storage and shipment will comply with commonly accepted safety practices. Appropriate precautions should be taken to avoid ElectroStatic Discharge (ESD) damage.
- Samples furnished to the Supplier will be sent by registered mail or some equal means to ensure positive receipt of the material.
- Samples submitted to the Supplier may or may not be returnable. This decision will be negotiated between the Supplier and U S WEST Communications, Inc. ATC.
- If samples are essential to complete an investigation and none are available, the EC will be closed. U S WEST Communications, Inc. may initiate a new Complaint when it obtains samples to support its complaint assertion.
- The Supplier will send a notice of disposition to U S WEST Communications, Inc. stating how long samples will be held and if they are returnable.
- If the sample is under warranty and is not replaced, repaired and returned, the Supplier will give U S WEST Communications, Inc. a credit (refund) for the sample.

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## **8. Service Failure Analysis Reports**

An SFAR is used by U S WEST Communications, Inc. to report switching network element (switching system) service failures. A detailed description of SFAR administration is in SR-TSY-000963, *Network Switching Element Outage Performance Monitoring Procedures*.

The SFAR replaces the Operational Trouble Report (OTR) described in TR-EOP-000230, *Guidelines for Engineering Complaints and Operational Trouble Reports*. OTRs were intended to be used for three different purposes:

- • Reporting abnormal conditions for which there was no satisfactory explanation
- • Reporting total outages of two minutes or greater duration
- • Advising the supplier of any unusual condition

SFARs will cover only the situation of system outages. It has been U S WEST Communications, Inc. experience that for the past several years OTRs were being used only to report total outages of two minutes or more. Cases of abnormal or unusual conditions are better covered by normal trouble reporting procedures or by following the EC procedures described in this document.

The SFAR is used to document:

- The facts and circumstances involved in the outage
- The duration and effect on service of the outage
- The cause and statement of the Service Failure Analysis Committee (SFAC) consensus regarding the most appropriate major failure cause classification for the outage
- Corrective and preventive actions and the timetable to be taken by any and all parties in response to the outage
- Any SFAC recommendations that might prevent future outage occurrences and/or reduce the impact and duration of future occurrences.
- The SFAR is normally distributed to all members of the SFAC within U S WEST Communications, Inc. U S WEST Communications, Inc. has the option to distribute the SFAR to Bellcore and the supplier's technical support organization. Issuance and resolution of the SFAR are handled individually by U S WEST Communications, Inc. and the supplier.

### **8.1 Service Failure Analysis Committee**

An SFAC, in which the supplier's field technical support organization may be asked to participate, may be convened to analyze an outage event. The SFAC is responsible for analyzing the event, making a final determination of outage cause(s) and effect(s), and recommending follow-up action to resolve existing problems and avoid future failures. SFARs will normally be generated by, or at least completed by, the SFAC.

Note that SFAC recommendations may also warrant the generation of an EC.

U S WEST COMMUNICATIONS, INC.  
ENGINEERING COMPLAINT NUMBER PLAN

Code	State
UAZ	Arizona
UCO	Colorado
UIA	Iowa
UID	Idaho
UMN	Minnesota
UMT	Montana
UND	North Dakota
UNE	Nebraska
UNM	New Mexico
UOR	Oregon
USD	South Dakota
UUT	Utah
UWA	Washington
UWY	Wyoming
USW	U S WEST Communications, Inc. (Region Wide) Assigned only by a Regional Staff representative

**Exhibit 8-1** U S WEST Communications, Inc. Identifiers

U S WEST Communications  
10/11/1989

From: U S WEST Communications  
Engineering Complaint Administrator  
1801 California St., Room 640  
Denver, Colorado 80202

To: Telephone Supplier  
1234 Ringer St.  
Bell Town, USA  
ATTN: Customer Service

Subject: U S WEST Communications Engineering Complaint USW89000

Engineering Complaint USW89000 addresses a problem related to the following product:

System: Multi-Discumbobulator  
Product Name: BELL000 - Thimtic Pins  
Quantity of Units: 10

This product is located in the Bell Town Main Site in USA. The Base drawing number for this location is 0H00 and the COMMON LANGUAGE® Location Identifier is BLTMAUSA911.

The following is a description of the problem covered by Engineering Complaint USW89000.

Trouble Description: The Bell000 - Thimtic pins, which secure the side panels on the multi-discumbobulator, have all loosened causing a potential safety hazard to personnel maintaining this unit. This condition is also creating customer service outages resulting in numerous complaints.

We have the following comments and recommendations concerning Engineering Complaint USW89000: This product design does not conform to the product specifications as defined in the Multi-Discumbobulator Requirements documentation (BX-00000-1). Due to the serious nature of this condition, immediate attention is imperative.

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**Exhibit 8-2** Mechanized Engineering Complaint (Page 1 of 2)

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Your acknowledgement of Engineering Complaint USW89000 is expected on or before 10/29/1989. Your Final Report is expected on or before 01/09/1990 and should include the following information:

- Cause of the reported condition
- A technical evaluation of the problem and
- The detailed solution including dates and timetables.

An interim status report must be submitted if a Final Report is not anticipated before 01/09/1990.

Your solution to Engineering Complaint USW89000 must encompass the entire 14 states of U S WEST Communications.

U S WEST Communications Technical Publication PUB 77357, 'Guidelines for Engineering Complaints', provides instructions to suppliers regarding the Engineering Complaint Process. Ordering information can be obtained from the U S WEST Communications, Inc. Information Release Management organization by calling (303) 298-0117.

Any request for detailed information relating to Engineering Complaint USW89000, including the availability of sample material, should be directed to the Technical Contact Buzz Ringer at (800) 888-8000.

All written correspondence including Acknowledgements, Status Reports and Final Reports should be directed to:

Regional Engineering Complaint Coordinator (Name)  
Manager ME/QA Staff  
1801 California St., Room 640  
Denver, CO 80202  
(303) 896-1294

Regional Engineering Complaint Coordinator (Name)  
Manager ME/QA Staff

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**Exhibit 8-2** Mechanized Engineering Complaint (Page 2 of 2)



Engineering Complaint

RG 01-0009 (6-84)

TYPE OR PRINT LEGIBLY	EC Number	Supplier Code
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**Originator**

1. Product Identity (Show Name And Identifying Number, i.e., Ckt, Eqpt, Software With Issue, Figure, Option, Group Or List Numbers And Date Code: (As Appropriate))

2. Does EC Report Describe A Suspected Fire Or Safety Hazard? <input type="checkbox"/> Yes <input type="checkbox"/> No	3. System Identification:	4. Where Was Product When It Failed? (C.O. Name, Etc.)
5. Specify Supplier:	6a. How Many Defective Units Does This EC Cover?	6b. How Many Similar Units Are In Service At Same Location?
		7. <input type="checkbox"/> New <input type="checkbox"/> Reused <input type="checkbox"/> Repaired <input type="checkbox"/> _____ Date

8. Statement of Problem: (Detailed Description of Trouble, Including Events preceding Failure, Action Taken During Trouble Shooting, Test Failed, Etc.)

Additional Material Attached

9. Was Condition Corrected Locally? (Sketches, Marked Drawings, Etc.)      Yes      No (If Yes, Describe Briefly)

Additional Material Attached

10. Problem Originally Reported By:	11a. Reviewed And Approved By:	11b. Telephone No.	11c. Date:
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**Originating Organization Staff**

12. Has The Above Information Been Verified As Completely Accurate? <input type="checkbox"/> Yes <input type="checkbox"/> No	15. Comments Or Recommendations:	
13. Has This Problem Previously Been Reported and Corrected in Area? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Was Unable to Determine		
14a. Do Other Locations In Your Area Appear To Have Same Problem? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Was Unable to Determine		
14b. If Yes, List Locations And Quaity Defective At Each Location.		
<input type="checkbox"/> Additional Material Attached		
	16a. Reviewed And Approved By:	16b. Date:

**Line Engineering**

17. Operating Co. Order No.	18. Supplier Order No.	26. Comments or Reconmmendations (If Possible, Describe Seriousness Of Problem; e.g., Causes Widespread Customer Reaction, Loss Of Revenue Etc.)	
19. Total Number Furnished:	20. How Long In Service?		
21a. Do Other Locations In Your Area Appear To Have Same Problem? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Was Unable to Determine			
21b. If Yes, List Locations And Quantity Defective At Each Location.			
<input type="checkbox"/> Additional Material Attached			
22. Action Desired? <input type="checkbox"/> Repair <input type="checkbox"/> Credit	Date:	<input type="checkbox"/> Additional Material Attached	
23. Samples? <input type="checkbox"/> Not Available <input type="checkbox"/> Being Held By _____	At:		
24. Desired Disposition Of Samples: <input type="checkbox"/> Junk <input type="checkbox"/> Repair & Return	25. This Appears To Be Similar To EC No.		
27. Area Technical Contact:	Tel. No.		28. Approved By: (Name & Title)

**Regional Point Of Contact**

29. Data Entry Contact:	Tel. No.	30. Contracting Contact:	Tel. No.	Date:
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**Exhibit 8-3** Engineering Complaint Form (Front) (Page 1 of 2)

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Instructions For Completing Engineering Complaint (Type Or Print Legibly)

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The Following Instructions For Completing The "ORIGINATOR" Portion Of The Engineering Complaint (IEC) Form On The Reverse Side Cover Only Those Items Which Are Felt May Need Further Explanation. 010-700-010 Contains The Complete Instructions For Submitting Complaint. An Attempt Should Be Made To Furnish All Information. The Technical Investigation And EC Number Is Provided By The Area Technical Coordinator. In The Line Engineering Organization Regional Contact Information Will Be Provided By Business Resources

1. This EC Should Cover Only One Type Of Defective Product Although Any Number Of Items Of The Same Type May Be Included In The Complaint. The Complete Correct Name (Or Approved Abbreviation) And Product Number Should Be Supplied.  
  
Loose Component Parts Such As Capacitors, Resistors, Etc, Not Used As A Part Of Any Specific Apparatus Should Also Be Listed. Cite The Date Code Just As It Is Stamped On Item
2. Check The Appropriate Box Whether Or Not EC Is Reporting A Suspected Fire Or Safety Hazard Condition (If A Possible Hazard Is Being Reported, Notify Supervisor Immediately Corrective Steps Should Be Taken To Prevent Accidents Or Disruption Of Service )
3. Enter The System Which Broadly Categorizes Where The Product Under Complaint Was Being Used When It Failed e.g Announcements Systems, Crossbar No. 5, T-Carrier, 806 Power Plant
4. Give The Name And Address Of Central Office Or Other Location Where The Defect Occurred
5. Full Name Of Supplier, Manufacturer, Contractor Or Whomever The Complaint Is Against.
- 6a. Enter Here Only The Number Of Units That Are Defective
- 6b. Show Here The Number Of Similar Units That Are In Service At The Location Where The Defect Occurred
7. In This Space Enter A Concise, Accurate And Complete Description Of The Difficulty Attempt To Anticipate All The Questions That May Be Asked By Anyone Reviewing The Complaint Accuracy And Completeness Are More Important Than Brevity If Necessary, The Description May Be Continued On Additional Pages Additional Pages Or Attachments Should Be Stapled To This Form  
  
Include Description Of Any Possible Hazardous Or Service Reaction Events Preceding Failure, Actions Taken During Troubleshooting Complete Description Of Failed Tests, Or Anything Else That May Help The Investigator Understand And Resolve The Problem Attach Explanatory Sketches Drawings Or Photographs If They Are Available  
  
-Furnish Complete Nameplate Data  
  
-For Storage Batteries, Furnish Service History Of Individual Cell Voltage And Specific Gravity Readings For Entire String  
  
-For Product That Contains Serial Number, Include That Number  
  
-For Cable, Furnish Reel And Requisition Number Where Field Repairs Have Been Made, Furnish A Breakdown Of All Cost- Incurred The Repair Operation  
  
-For Electron Tubes, Show Circuit Application; Give A Reasonable Estimate Of Service Life And Show Serial Number If There Is One. If There Is No Serial Number, List Them Numerically And Tag Each Tube With Corresponding Number
8. Condition Was Corrected Locally, Briefly Describe The Technique Used Attach Explanatory Sketches, Marked Drawings Or Photographs If They Are Available
9. This Entry Should Contain The Name Of The Individual Who Actually Discovered The Problem Being Reported
10. The Form Should Be Reviewed And Approved In Accordance With Established Operating Company Procedures

**NOTE:**

Instructions For Completing The Staff And Engineering Portion Of This Form Can Be Found In 010-700-010

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**Exhibit 8-3 Engineering Complaint Form (Back) (Page 2 of 2)**

**Engineering Complaint**  
Final  
Response Format

Supplier	Date	Engineering Complaint Number
	System	
Reported Product or Service		
This Report is <input type="checkbox"/> Final		
Trouble Condition		

---

Details of Investigation

---

Final Resolution

---

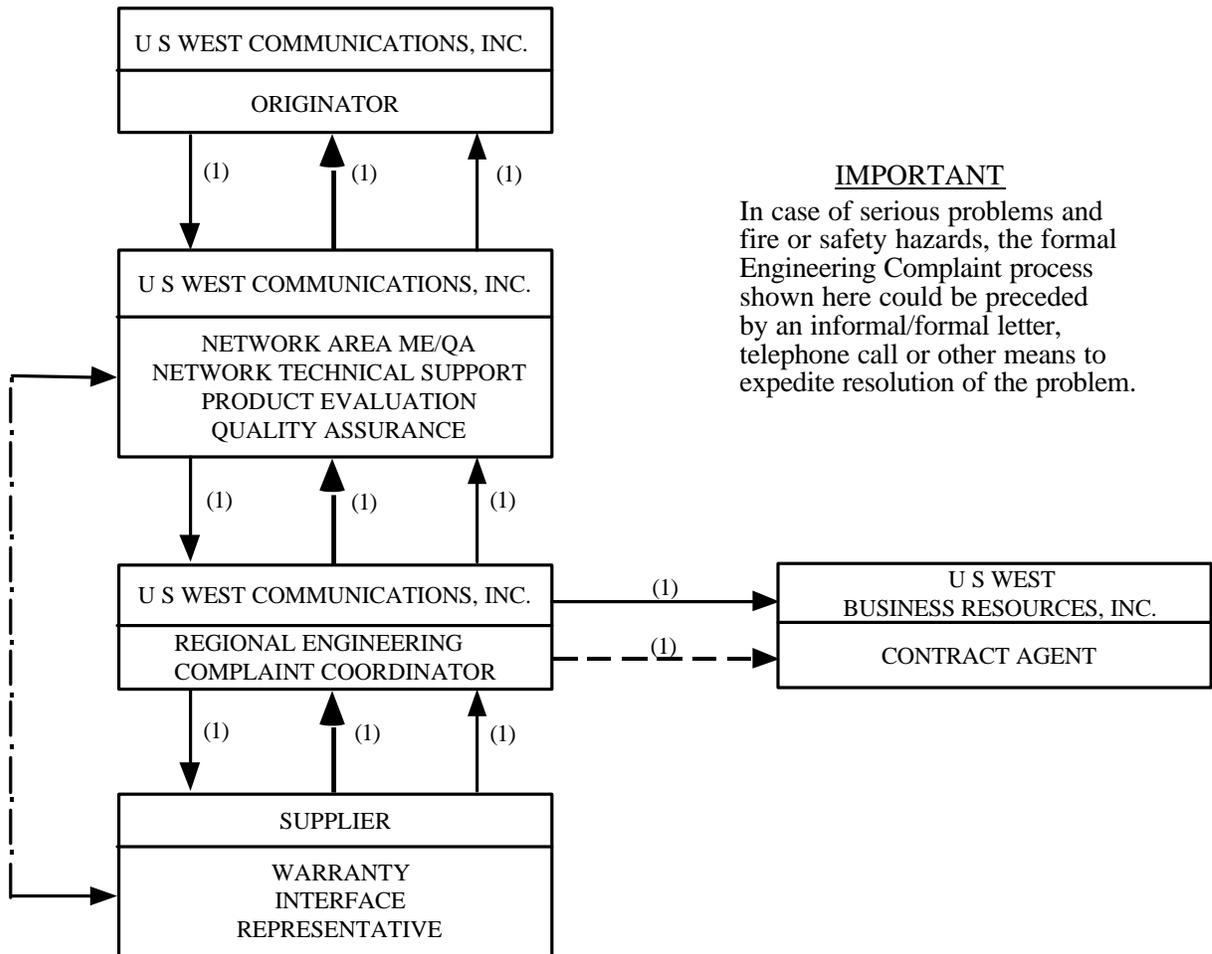
**Exhibit 8-4** Engineering Complaint (Supplier's) Final Response Format

**Engineering Complaint**  
Interim Response  
Format

Supplier	Date	Engineering Complaint Number
	System	
Reported Product or Service		
This Report is <input type="checkbox"/> Interim		
Current Status		
Reason for Delay		
Plan of Action		

**Exhibit 8-5** Engineering Complaint (Supplier's) Interim Response Format

U S WEST COMMUNICATIONS, INC.  
ENGINEERING COMPLAINT FLOWCHART  
NETWORK TELECOMMUNICATIONS EQUIPMENT



**IMPORTANT**  
In case of serious problems and fire or safety hazards, the formal Engineering Complaint process shown here could be preceded by an informal/formal letter, telephone call or other means to expedite resolution of the problem.

- ACTION
- > Engineering Complaint Form
  - > Supplier's Acknowledgement
  - - - - -> Supplier's Final Report
  - . - . - .> Informal Interface
- ( ) Number of Copies

**Exhibit 8-6** Engineering Complaint Flowchart

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## **9. Definitions**

### **9.1 Acronyms**

ATC	Area Technical Contact
EC	Engineering Complaint
ESD	Electro-Static Discharge
OTR	Operational Trouble Reports
PCN	Product Change Notice
RECC	Regional Engineering Complaints Coordinator
SFAC	Service Failure Analysis Committee
SFAR	Service Failure Analysis Reports

### **9.2 Glossary**

#### **Area Technical Contact (ATC)**

The U S WEST Communications, Inc. Subject Matter Expert responsible for reporting product/service complaints and providing technical interface to the supplier.

#### **Engineering Complaint (EC)**

The formal document issued by U S WEST Communications, Inc. to a supplier to report unsatisfactory conditions and improper performance of telecommunications products and services.

#### **Electro-Static Discharge (ESD)**

The sudden release of static electricity charge on an object or a person to another object or person having a different potential static charge or ground.

#### **Operational Trouble Reports (OTR)**

The document used by U S WEST Communications, Inc. to report hardware or software trouble to suppliers in Stored Program Control Switching Systems (SPCS). This has been replaced by the Service Failure Analysis Reports (SFARs).

#### **Product Change Notice (PCN)**

The document issued to U S WEST Communications, Inc. by suppliers to announce software/hardware/firmware modifications made to their products.

**Regional Engineering Complaints Coordinator (RECC)**

The U S WEST Communications, Inc. regional contact responsible for coordinating and tracking all ECs and associated supplier correspondence. This individual resides in the Network & Technology Services, Product Evaluation/Support/Quality Assurance organization.

**Service Failure Analysis Committee (SFAC)**

A Committee formed of U S WEST Communications, Inc. and supplier technical personnel to analyze, draw conclusions, and make follow-up recommendations associated with system outage events.

**Service Failure Analysis Reports (SFAR)**

The document used by U S WEST Communications, Inc. to report service failures.

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## 10. References

### 10.1 Bellcore Publications

SR-TSY-000963 Network Switching Element Outage Performance Monitoring Procedure, Issue 1, April 1989

TR-EOP-000230 Guidelines for Engineering Complaints and Operational Trouble Reports, Issue 1, June 1985

### 10.2 U S WEST Communications, Inc. Technical Publications

77354 Guidelines For Product Change Notices, Issue D, June 1990

### 10.3 Ordering Information

All documents are subject to change and their citation in this document reflects the most current information available at the time of printing. Readers are advised to check status and availability of all documents.

Ordering Information for Employees of U S WEST Communications, Inc.

Information Resource Management (IRM)  
1801 California St., Rm. 1340  
Denver, CO 80202  
(303) 298-1025 or (303) 298-1778

Those who are not U S WEST employees may order:

- American National Standards Institute (ANSI) documents from:

American National Standards Institute  
Attn: Customer Service  
11 West 42nd Street  
New York, NY 10036  
Phone: (212) 642-4900  
Fax (212) 302-1286

ANSI has a catalog available which describes their publications.

- Bellcore documents from:

Bellcore - Customer Services  
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Piscataway, NJ 08854-4196  
Telex: (201) 275-2090  
Fax: (908) 336-2559  
Phone: (800) 521-CORE (U.S. calls only)

- U S WEST Technical Publications from:

Faison Office Products Company  
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Aurora , Colorado 80011  
Phone no. (303) 340-3672  
1 800 777-3672  
Fax No. (303) 340-1905