

**ENGINEERING COMPLAINTS ORIGINATION AND PROCESSING**

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**1. GENERAL**

**1.01** This section outlines procedures for originating and processing Engineering Complaints on Western Electric (WE) furnished products or services.

**1.02** It is reissued to update practices and instructions in accordance with organizational changes in Pacific Company (PAC).

*Note:* Marginal arrows used to denote changes are omitted.

**1.03** Pacific Company (includes Nevada Bell) issues Engineering Complaints (ECs) to report unsatisfactory conditions and improper performance of WE furnished products or services found after acceptance (final or partial). "Product(s)" is defined as apparatus, equipment, circuits, materials, software, or tools.

**1.04** Engineering Complaints also provide a means for requesting credit or repair on a nonbillable basis for defective products. The extent of WE liability under these circumstances is defined in the Standard Supply Contract between PAC and WE. When a final report of investigation states that the product involved is defective, the WE Contract Manager of Warranty will determine the extent of WEs liability. The local Service Center or WE Regional Headquarters will, in turn, advise PAC of this determination by means of an Engineering Complaint Disposition Letter.

*Note:* The WE warranty also covers materials purchased for resale to PAC in the following cases:

- (a) Where materials furnished and inspected by WE are not in accordance with the applicable specifications, and such variance could have been discovered by a reasonably careful inspection prior to shipment, WE will provide the warranty applied to manufactured materials.
- (b) Where materials furnished and inspected by WE have a defect that could have been discovered by a reasonably careful inspection prior to shipment, WE will provide the warranty applied to manufactured materials.
- (c) Where furnished materials are of total WE, Bell Telephone Laboratories (BTL), or Tele-type design, WE will provide the warranty applied to manufactured materials.

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Bell System except under written agreement

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(d) Where furnished materials are of partial WE, BTL, or Teletype design and the defect is in (or attributable to) the design, WE will provide the warranty applied to manufactured materials.

(e) Where furnished materials are of total vendor design, or as specified in (d), WE will pass the vendor's warranty to PAC.

**1.05** Engineering Complaints are a means of providing WE and/or BTL with information pertaining to defective or malfunctioning products. These complaints also provide an important means for checking the adequacy of quality assurance measures specified for products manufactured, installed, repaired, reconditioned, and/or inspected by WE.

**1.06** An Engineering Complaint should be issued to cover products furnished by WE that:

- Do not function properly
- Fail to meet a specified requirement
- Fail in a relatively short time period
- Require maintenance more often than similar products
- Result in a fire or safety hazard.

**1.07** Engineering Complaints may also be submitted for services associated with products for:

- (a) Drafting or typographical errors in SD-drawings, circuit descriptions (CDs), or software documents (PDs).
- (b) WE drawing errors.
- (c) Microfilm irregularities.
- (d) Products repaired or reconditioned by WE.
- (e) WE installation errors found after acceptance.
- (f) WE equipment engineering errors or omissions found after acceptance of Engineer, Furnish, and Install (EF&I) orders. Those found

before acceptance on EF&I jobs should be handled by the WE Installation Technician via the Job Information Memorandum (JIM) routine.

(g) WE equipment engineering errors or omissions found on Engineer and Furnish (E&F) jobs.

(h) Design irregularities on Telephone Company Engineered (TCE) orders discovered by the WE Installation Technician and reported to the PAC Engineer.

**1.08** An Engineering Complaint normally *should not* be initiated for:

(a) Problems covered by a General Engineering Complaint (GEC). (See 7.01.)

(b) Products that have been processed by the "Tag" routine. (See 7.08.)

*Note:* PAC has the option of issuing an Engineering Complaint if it is determined the individual situation warrants such action.

(c) Shipping or billing discrepancies and products found to be damaged due to shipping. These are considered claims and should be handled in accordance with Section 746-001-001 and SI 60, Section 2.

(d) Products not purchased through WE. [For General Trade Products (GTP), see Section 010-700-011PT.]

(e) Conditions that are discovered prior to the acceptance of a job installed by WE [except as described in 1.07(h) for TCE orders]. These orders should be referred to the installer for corrective action. (A job is automatically accepted unless a notification of nonacceptance is forwarded by PAC to the Installation Area Office involved within 21 calendar days after the completion date.)

(f) Local modifications of standard Bell System products.

(g) Products that fail due to improper use, maintenance, or handling by PAC.

(h) Defective WE furnished products repaired by a company other than WE when the repair order is not entered through WE.

- (i) Errors and omissions in Bell System Practice (BSP) information. These should be reported on Form E-3973-1PT in accordance with Section 000-010-901PT.
- (j) Requests for new designs or features. These requests should be directed through channels to AT&T.
- (k) Employee suggestions.
- (l) Office and janitorial supplies. Submit complaints on this type of material to the WE Service Center by letter (three copies).

## 2. ORIGINATING ENGINEERING COMPLAINTS

**2.01** All PAC employees should report unsatisfactory products manufactured by or purchased through WE. Form E-5141, Engineering Complaint, is to be used for reporting details of defective products except where special routines apply. (See Part 7.)

**2.02** PAC Engineering has the final responsibility for determining that the complaint is valid, assigning a number to the complaint, and forwarding it to the WE Quality Service Engineer (QSE) with copies to the BTL Field Representative and the Engineering Complaint Coordinator. (See Charts A, B, C, or D as appropriate.) Instructions for completing this form are provided in Part 3.

**2.03** Before an Engineering Complaint form is forwarded, the originator should be reasonably certain that the defect and related conditions meet the requirements outlined in Part 1 and that all applicable current instructions for installing, operating, and maintaining the product have been followed. To ensure a thorough investigation, all information requested on the Engineering Complaint form should be furnished.

*Note:* If the product under complaint is owned by one telephone company and maintained by another, the complaint should be originated by the maintaining company. The technical support staff in the maintaining company should review the Engineering Complaint and forward it to the owning company for further processing. If credit is due, it will be given to the owning company.

**2.04** Pacific Company will assign the Engineering Complaint (EC) number which consists of three alphas and four numerics. The three alphas will designate the Company and functional discipline of the organization (eg, SW, TR, CP, etc) originating the complaint. The first numeric is the last digit of the current year. The second numeric identifies the issuing District within the Company/discipline.

*Note:* The Headquarters Engineering Complaint Coordinator (Part 4 C) is responsible for obtaining and assigning additional blocks of EC numbers, as required.

## 3. PREPARATION OF FORM E-5141

**3.01** An Engineering Complaint may be originated by any PAC employee using Form E-5141 (Exhibit 1).

**3.02** The originator should complete lines 1 through 10 in accordance with the instructions contained on the reverse side of Form E-5141 (Exhibit 2).

**3.03** After lines 1 through 10 are completed, the Engineering Complaint should be reviewed and approved in accordance with PAC procedures (line 11).

**3.04** See Part 5 for selection and handling of complaint samples.

## 4. PROCESSING ENGINEERING COMPLAINTS

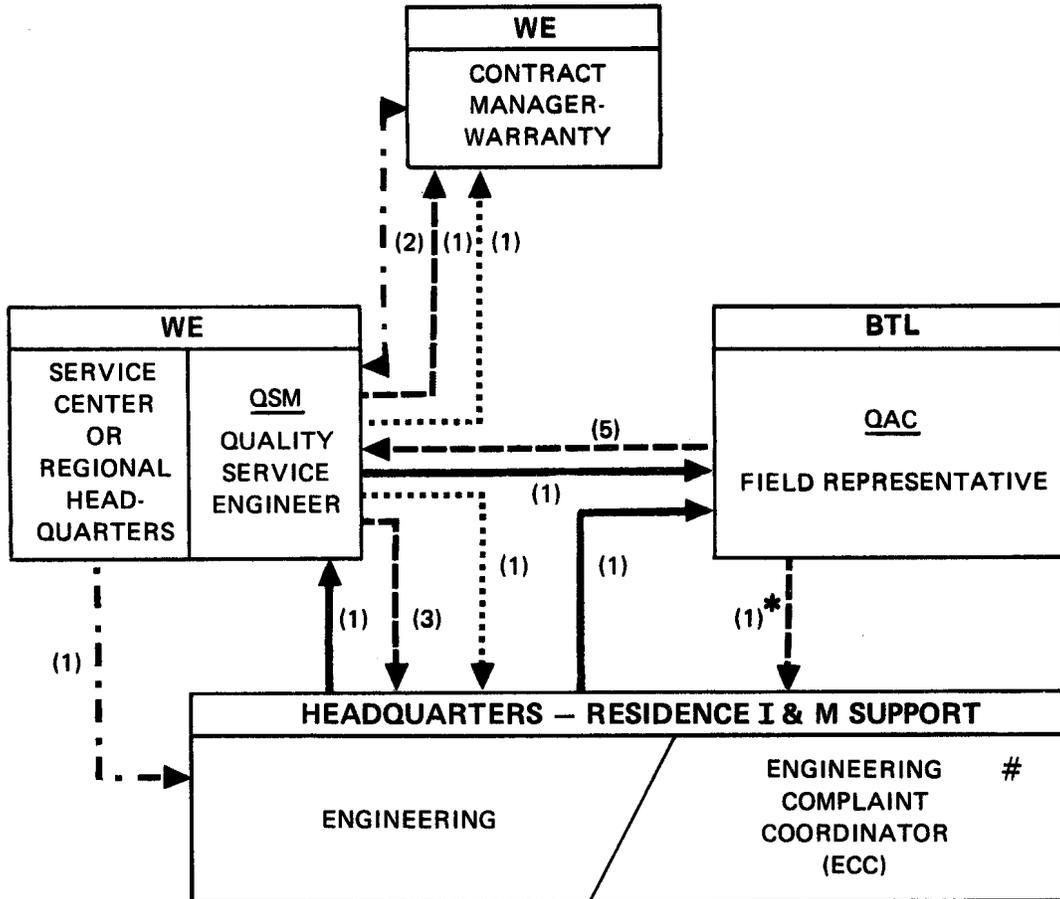
### A. Technical Support Staff

*Note:* The terms "Plant, Customer Services, or Network Services Staff" and "Technical Support Staff" denote the staff organization(s) which provides direct technical support to its coordinate operating (line) organizations. In some disciplines or locations, the staff function may be in the same District as the maintenance engineering function. (See subpart 4B.)

**4.01** The technical support staff employee responsible for reviewing the complaint should process it without delay, generally within 3 working days. The employee should complete lines 12 through 15 on Form E-5141 (Exhibit 1), verifying that the information provided by the originator is complete and accurate.



**CHART B  
ENGINEERING COMPLAINT FLOWCHART  
RESIDENCE (EXCEPT PUBLIC SERVICES)**



# ECCs ARE LISTED IN TABLE A

**ACTION**

- ENGINEERING COMPLAINT —————
- FINAL REPORTS -----
- LETTER OF NOTIFICATION .....
- EC DISPOSITION LETTER - . . . .
- NUMBER OF COPIES ( )
- ADVANCE COPY \*





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**4.02** If the answer to line 13 is "yes" or if the condition reported does not comply with the requirements for an Engineering Complaint, as described in this section, the complaint should be returned to the originator with a letter of explanation.

**4.03** The Staff portion of Form E-5141 should be reviewed and approved (line 16) in accordance with established telephone company procedures. The form should then be forwarded to Engineering. (See Charts A, B, C or D.)

### **B. Maintenance Engineering**

*Note:* Engineering, as used in 4.04 through 4.16, refers to the groups responsible for maintenance engineering for the particular category of plant or service. This discipline includes all Districts assigned and issuing EC numbers.

**4.04** Engineering should begin processing a complaint as soon as possible after receipt. Generally, the processing should be completed within 5 working days. Engineering should notify the technical support staff of the determined disposition of the complaint. Also, the staff should be notified if the processing time is to be extended beyond the normal 5 days. In any event, Engineering should complete processing of the complaint within 20 working days.

**4.05** Upon receipt of an Engineering Complaint, Engineering should review AT&T, WE, and BTL informational material pertaining to the subject of the complaint to determine if other operating areas have had similar trouble and what action has been taken in those cases. Every effort should be made to determine if the reported difficulty has been experienced previously. Some sources of information are:

- (a) AT&T letters and memoranda (ELs, SLs, etc).
- (b) Drawing Notices (DNs).
- (c) Engineering Complaint Final Reports.
- (d) BTL "Technical Information Reports" (TIRs) covering trouble conditions and design changes of general interest resulting from BTL action.

(e) WE Quality Service Management Engineering Bulletins (EBs) covering remedial action for quality problems arising within WE.

(f) BTL list of General Engineering Complaint numbers assigned for return or field repair of defective products. (See 7.01.)

(g) WE Quality Service Management list of General Engineering Complaint numbers assigned for return or field repair of defective products. (See 7.01.)

(h) BTL EC Status Reports showing the description and status of open Class 1 complaints.

(i) BTL Engineering Complaint Historical Output (ECHO) for a 5-year history of closed Class 1 complaints.

(j) WE Quality Service Management EC Status Reports showing the description and status of all open Class 3 complaints.

*Note:* The Headquarters Engineering Complaint Coordinator is responsible for distribution of the items listed in (d) through (j) to the Maintenance Engineering groups.

(k) Change Notices (CNs), Customer Premise Change Notices (CPCNs), Customer Change Notices (CCNs), Teletype Change Notices (TCNs).

(l) Broadcast Warning and Information TWXs for Software problems.

**4.06** Engineering should complete entries 17 through 28 on Form E-5141 (Exhibit 1). The name of the responsible Maintenance Engineering District Level must be typed on line 28a.

**4.07** Engineering may discuss the complaint with the appropriate Headquarters Staff group who may recognize it as a current problem in another area. The Headquarters Staff can then inform them of the activities in other areas. If this review reveals no similar situation, the complaint may be discussed with the WE Quality Service Engineer or the BTL Field Representative who may recognize the condition and be able to provide an answer on an informal basis.

**4.08** A new complaint should be issued even if there are open complaints covering the same problem. The EC numbers of the open complaints should be entered in line 25.

**4.09** The PAC Engineer, who is responsible for the complaint, should survey other locations within the area, using the same product, to determine if any locations are exhibiting similar symptoms. Indicate the results of the survey on line 21a. Refer to entry 21b and list the locations and number of defective products at each location. Any credit considerations or other remedial action, covered by the one final report, will also apply to the other locations listed.

*Note:* This procedure applies only to locations in the same area using the same 3-letter code in the EC number. A separate complaint should be issued for locations in other operating areas. A new complaint is also required if further defects are detected after the original Engineering Complaint has been forwarded to WE and BTL.

**4.10** Indicate the action desired on the defective product when applicable. Should credit or repair be desired, check the appropriate box of entry 22 and indicate the return material document number assigned for the return of the defective product (eg, RMN, Service, and Return order). In the case of returns for multiple locations (see 4.09), list each return material document number and the associated order number. If necessary, use an additional sheet of paper to list this information.

**4.11** Samples or photographs of the defective products are very desirable. If photographs are available, they should accompany the Engineering Complaint. Samples should be held for disposition instructions. Complete line 23 to indicate where the samples are being held (see Part 5). Check the box marked "Junk" in line 24 when the product is to serve only as a sample in the investigation of the complaint, and repair or credit is not desired.

**4.12** Prior to forwarding the Engineering Complaint, Engineering will assign an EC number. (See 2.04.) Any supporting information obtained from the investigation, or from discussion with the technical support staff, or the originator should be added or attached. The form should be reviewed and any missing information should be added. Additional information available concerning the extent or severity of the trouble condition

should also be added. In line 27, enter the name and telephone number of the person most knowledgeable of the reported complaint.

(a) Prior to issuing an EC number by telephone, the issuing District should verify that the originator has prepared, or is ready to prepare, an E-5141.

(b) EC numbers assigned to complaints which are subsequently canceled should be recovered and reassigned. This does not apply to complaints resolved and answered by Staff or Engineering.

**4.13** Each District assigned, and issuing, EC numbers will prepare and maintain an Engineering Complaint Log using Form CE-2346. (See Exhibit 3).

(a) All EC numbers issued will be entered on the Engineering Complaint Log at time of issuance.

(b) Entries on the log should be made in accordance with instructions in Exhibit 3.

(c) Copies of the log sheets are to be forwarded to the Engineering Complaint Coordinator, WE QSM, and the BTL Field Representative at the end of each quarter as a cumulative summary of open Engineering Complaints.

**4.14** A copy of the Engineering Complaint should be retained in Engineering files. In cases where the Engineering Complaint can be answered by Engineering and the complaint is not submitted to WE or BTL, appropriate remarks should be entered in the "Comments or Recommendations" space (line 26) on Form E-5141; a copy should be filed as a closed complaint and a copy should be forwarded to the Staff and the Engineering Complaint Coordinator for record purposes and for notification to the originator.

**4.15** When Engineering cannot answer the complaint, one copy of the Engineering Complaint should be forwarded to the WE Quality Service Engineer. Also, copies should be provided to the BTL Field Representative and the Engineering Complaint Coordinator.

**4.16** If there is need to provide additional information after a complaint has been issued,

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the supplemental information should be provided by letter. The EC number and Engineering "Date" (line 28b) should be prominently shown on the letter to associate it with the original complaint.

### C. Headquarters Engineering Complaint Coordinators

4.17 Engineering Complaint Coordinators (ECC) are responsible for the following functions.

- (a) Liaison between Maintenance Engineering groups and WE QSM or BTL Field Representative for Engineering Complaint related matters other than specific complaints.
- (b) Distribution of related Engineering Complaint technical information within PAC. [See 4.05(j) Note.]
- (c) Resolving problems that involve Engineering Complaint methods and procedures.
- (d) Arranging for and assigning additional blocks of EC numbers. The Network Segment ECC will be the primary contact with the BTL Field Representative regarding EC numbers. Other ECCs should contact the Network Segment ECC to obtain additional EC number assignments.
- (e) Responding to requests from Headquarters peer groups for Engineering Complaint status reports, documents, or other related information.

4.18 Engineering Complaint Coordinators are listed in Table A.

### D. Western Electric Quality Service Management and BTL Procedures

4.19 Upon receipt, the WE Quality Service Engineer (QSE) will review Engineering Complaints for adequacy of information and completeness. Each complaint will be classified in accordance with the guidelines outlined in (a) through (c). When a question arises regarding the classification of a complaint, the QSE and the Field Representative should resolve the classification by consultation. Receipt of the complaint will be acknowledged to PAC by the QSE. The classification of the Engineering Complaint will be included in the

acknowledgement. Definition of the Engineering Complaint classification follows:

- (a) *Class 1:* The reported difficulty warrants investigation or action by BTL.
- (b) *Class 2:* The reported difficulty involves isolated occurrences of defective products or repetitive occurrences of known defective products where credit or repair is the limit of reasonable action.
- (c) *Class 3:* The reported difficulty warrants investigation or action by WE.

4.20 Upon receipt of a copy of the complaint from PAC, the Field Representative will determine if the complaint should receive Class 1 treatment. If the complaint is Class 1, the representative will notify the QSE and forward the complaint to BTL for investigation.

4.21 BTL, through its Field Representative, may investigate any specific complaint by notifying the QSE accordingly.

4.22 The WE QSE will issue to all parties concerned instructions detailing the disposition of any samples being held in connection with a specific Engineering Complaint.

### 5. SELECTION AND HANDLING OF COMPLAINT SAMPLES

5.01 Samples of the defective products may be required for a thorough investigation. This is especially true if the defective products results in a personal injury or are the cause of a safety or fire hazard. The identity and integrity of the sample should be maintained. The sample should be suitably tagged and identified with its associated Engineering Complaint. Pacific Company should retain the sample until disposition instructions are received.

*Note:* If samples are required to complete an investigation and none are available, the complaint will be closed. Pacific Company may initiate a new complaint when samples depicting the complaint condition are obtained.

5.02 Before shipment, the defective products must be carefully packaged to prevent

damage in shipment and destruction of valuable evidence. If the sample is to illustrate deposits which might be disturbed in transit, it should be sealed in a plastic bag. The outside of the shipping container or package, as well as the returned material document, should show the EC number.

*Note:* No credit will be issued for material damage resulting from poor packaging or handling.

**5.03** Pacific Company should consult the QSE for advice concerning the appropriate selection, protection, and storage of samples or for any special handling procedures.

## 6. FINAL REPORT OF INVESTIGATION

**6.01** Upon completion of the investigation of Class 1 and Class 3 complaints, a Final Report of the investigation will be written for transmittal to PAC. Final Reports are written as soon as it has been established that:

- (a) The complaint condition is understood,
- (b) The cause for the condition has been determined, and
- (c) The corrective action, if any, will be implemented, or
- (d) The Class 1 complaint qualifies to be transferred to the Long Term EC Development List. (See 7.06.)

*Note:* There are no final reports for Class 2 complaints. When it has been determined that an Engineering Complaint should receive Class 2 treatment, the QSE will send a copy of the complaint to the WE Contract Manager of Warranty with a Letter of Notification for a warranty determination. A copy of the letter will be sent to PAC, the local Service Center, or the WE Regional Headquarters to advise that the complaint is receiving Class 2 treatment.

**6.02** The Final Report will contain a technical evaluation of the reported problem, a recommended solution, if one is required, and a statement as to whether or not the product is defective. When samples are involved, the report will also give disposition of such samples. A copy of the Final

Report will be sent to the WE Contract Manager of Warranty, who will determine the liability of WE under the terms of the Standard Supply Contract. After the warranty determination has been made, the local service center will forward an EC Disposition Letter to the person whose name appears in line 28 of Form E-5141.

**6.03** The QSE will provide Engineering with three copies of the Final Report; the Field Representatives will provide PAC with advance copies of Class 1 Final Reports. Engineering should send two copies to the technical support staff and retain one copy for Engineering files. The Staff should forward one copy of the Final Report to the originator and maintain one copy for Staff files. Class 2 notification should be treated in a similar manner.

*Note:* Engineering will send one copy of Class 3 Final Reports to the Headquarters Engineering Complaint coordinator.

**6.04** Upon receipt of a Final Report, both the Staff and Engineering should review the contents to ensure that disposition is appropriate. If the disposition does not appear satisfactory, the staff should confer with Engineering to reach a mutual agreement.

**6.05** If PAC is not in agreement with the Final Report, the matter should be discussed with the QSE for Class 3 complaints or the BTL Field Representative for Class 1 complaints. If concurrence cannot be obtained or if PAC rejects the Final Report, PAC should return the report to the QSE with a copy to the Field Representative, together with a letter stating clearly the reasons for rejection. The report will be returned to the investigating organization for further study. Should PAC reject the revised Final Report, the matter may then be referred to AT&T.

## 7. SPECIAL PROCEDURES

### A. General Engineering Complaints

**7.01** In certain instances BTL or WE will issue a General Engineering Complaint (GEC) to provide credit, repair, or replacement and to eliminate the need for PAC to enter individual complaints on known widespread problems. The GEC will give instructions on how the product in question can be identified and how to use the assigned

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GEC number to obtain remedial action without issuing formal complaints. The GECs will be announced in either a Bell Laboratories Technical Information Report (TIR), a WE Quality Service Management Engineering Bulletin (EB), or an AT&T SL or Adnet message.

### B. Consumer Product Reports

**7.02** Consumer Product Reports (CPRs) are originated by PAC in accordance with the Consumer Product Safety Act of 1972 to report substantial product hazard to consumers from chemical, acoustical, mechanical, or electrical causes. A detailed description for processing CPRs is contained in Section 010-700-010PT, Appendix 1.

**7.03** Pacific Company may also make the CPR into an Engineering Complaint by adding an EC number in the space provided in the upper right-hand corner of the CPR. When such action is taken, the CPR will also be processed as an Engineering Complaint in accordance with this section.

### C. Emergency Order Routine

**7.04** Should an emergency arise, PAC should use existing Emergency Order Routines. (See the Engineered Order Manual.)

**7.05** To obtain redress from WE for possible defective material, PAC should contact the Regional QSE on the first working day following placement of the emergency order. If the situation warrants, PAC may also originate an Engineering Complaint. Issuing an emergency order prior to determining the outcome of the Engineering Complaint will in no way prejudice the outcome of the Final Report of Investigation for the Engineering Complaint.

### D. Long-Term EC Development List

**7.06** When it has been determined that the resolution to a Class 1 Engineering Complaint will require substantial development effort and the resolution cannot be scheduled with any degree of certainty, the complaint may be transferred to the Long-Term EC Development List (LTD). A Final Report may be written describing the complaint condition and anticipated remedial action. If possible, an estimated date for the completion of the work will be provided. The report will conclude with a statement to the effect that the complaint is being

transferred to the LTD, and that when the work is completed, PAC will be notified. Information concerning any corrective action will reach the field in the usual manner (ie, CNs, ELs, TIRs, etc).

**7.07** Pacific Company will receive status information on its LTD complaints. Investigation of any complaint on the LTD may be dropped at any time for valid reasons. Should the complaint be dropped, PAC will be notified. However, PAC has the right to appeal this decision to BTL through the Field Representative. If the appeal is not satisfactorily resolved, PAC may further appeal the matter to AT&T.

### E. "Green Tag" Routine

**7.08** A tag routine has been established for the expedited handling of certain defective station, PBX, and central office (CO) equipment and apparatus. GEC-8400 covers the repair of defective station material; GEC-8800 covers credit or repair of PBX and CO material. Details are fully described in Section 010-700-030.

## TABLE A

### ENGINEERING COMPLAINT COORDINATORS (ECC)

#### NETWORK SEGMENT ECC (Except Network Distribution):

District Staff Engineer — Maintenance Systems  
85 Second Street, Room 450  
San Francisco, CA 94105  
Contact Tel. No: 415-542-0993

#### NETWORK DISTRIBUTION ECC:

District Staff Manager — Outside Plant Construction  
85 Second Street, Room 510  
San Francisco, CA 94105  
Contact Tel. No: 415-542-7419

#### MOTOR VEHICLES ECC:

District Staff Manager — Motor Vehicles  
370 — 3rd Street, Room 653C  
San Francisco, CA 94107  
Contact Tel. No: 415-542-3831

#### BUSINESS SEGMENT ECC:

District Staff Engineer — Premises Engineer/  
Nonswitching  
85 — 2nd Street, Room 412  
San Francisco, CA 94105  
Contact Tel. No: 415-542-9069

**TABLE A (Continued)**

**RESIDENCE SEGMENT ECC (except Public Services):**

**District Staff Manager — Residence I&M Support**

**220 Montgomery Street, Room 786**

**San Francisco, CA 94104**

**Contact Tel. No: 415-954-9525**

**PUBLIC SERVICES ECC:**

**District Staff Manager— Methods and Operations**

**65 Battery Street, Third Floor**

**San Francisco, CA 94111**

**Contact Tel. No: 415-954-9354**

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ENGINEERING COMPLAINT

SEE REVERSE SIDE FOR INSTRUCTIONS!

		EC NO.		
ORIGINATOR	1a. CRT (SD, T, ETC. - SHOW COMPLETE NUMBER & NAME)		2. DOES EC REPORT A FIRE OR SAFETY HAZARD? <input type="checkbox"/> YES <input type="checkbox"/> NO	
		ISSUE      FIGURE      OPTIONS	3. SYSTEM (LESS 1, LMX-2, B12 PBX, ETC.)	
	1b. EQUIP IJ, ED. - SHOW COMPLETE NUMBER & NAME		4. WHERE WAS PRODUCT WHEN IT FAILED (C.O. NAME, PBX LOCATION, ETC.)	
		LIST      GROUP		
	1c. SPECIFICATION (KS, AT - SHOW COMPLETE NUMBER & NAME)		5. MANUFACTURER: <input type="checkbox"/> WE <input type="checkbox"/> OTHER SPECIFY OTHER	
		LIST		
	1d. SOFTWARE DOCUMENT (PG, PD, PF - SHOW COMPLETE NUMBER & NAME)		6a. HOW MANY DEFECTIVE UNITS DOES THIS EC COVER?	
		ISSUE		
	1e. APPARATUS CODE (TEL. SET, DATA SET, ETC. - SHOW NUMBER & NAME)		6b. HOW MANY SIMILAR UNITS ARE IN SERVICE AT SAME LOCATION?	
	DATE CODE			
1f. COMPONENT APPARATUS (USED ON EQUIP OR OTHER APP - SHOW NUMBER & NAME)		7. <input type="checkbox"/> NEW <input type="checkbox"/> CLASS C		
	DATE CODE			
1g. OTHER (DESCRIBE FULLY)				
8. STATEMENT OF PROBLEM (DETAILED DESCRIPTION OF TROUBLE, INCLUDING EVENTS PRECEDING FAILURE, ACTION TAKEN DURING TROUBLESHOOTING, TEST FAILED, ETC.)				
<input type="checkbox"/> ADDITIONAL MATERIAL ATTACHED				
9. WAS CONDITION CORRECTED LOCALLY? <input type="checkbox"/> YES <input type="checkbox"/> NO IF SO, DESCRIBE BRIEFLY. ATTACH EXPLANATION! (SKETCHES, MARKED DRAWINGS, ETC.)				
<input type="checkbox"/> ADDITIONAL MATERIAL ATTACHED				
10. PROBLEM ORIGINALLY REPORTED BY:		11a. REVIEWED AND APPROVED BY:	11b. TELEPHONE NO.	
			11c. DATE	
PLANT CUSTOMER SERVICE OR REPAIR SERVICES STAFF	12. HAS THE ABOVE INFORMATION BEEN VERIFIED THAT IT IS COMPLETE AND 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			
	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 QUANTITY DEFECTIVE AT EACH LOCATION			
<input type="checkbox"/> ADDITIONAL MATERIAL ATTACHED				
16a. REVIEWED AND APPROVED:		16b. DATE		
ENGINEERING	17. OTC REQ. NO.	18. WE ORDER NO.		
	19. TOTAL NUMBER OF UNITS FURNISHED ON ABOVE ORDER	20. HOW LONG HAS EQUIP. OR APP. BEEN 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 ON DEFECTIVE PRODUCT <input type="checkbox"/> CREDIT <input type="checkbox"/> REPAIR			
	RETURN MATERIAL DOCUMENT NO.      DATE			
23. SAMPLES <input type="checkbox"/> NONE AVAILABLE				
<input type="checkbox"/> BEING HLD BY:      AT:				
<input type="checkbox"/> ADDITIONAL MATERIAL ATTACHED				
24. DISPOSITION DESIRED ON SAMPLES <input type="checkbox"/> JUNK <input type="checkbox"/> REPAIR & RETURN		27a. AREA CONTACT	27b. TEL. NO.	
25. THIS APPEARS TO BE SIMILAR TO EC NO.		28a. REVIEWED & APPROVED BY: (TYPE OR PRINT NAME)	28b. DATE	

E-5141 (1-78)

Engineering Complaint Form E-5141  
Exhibit 1

**INSTRUCTIONS FOR COMPLETING  
ENGINEERING COMPLAINT FORM**

(Type or Print Legibly)

The following instructions for completing the "ORIGINATOR" portion of the engineering complaint (EC) form on the reverse side cover only those items which are felt may need further explanation. BSP Section 010-700-010 contains the complete instructions for submitting complaints. An attempt should be made to furnish all information.

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.
- 1E. This entry should be used for code of apparatus such as telephone sets, data sets or other units designated as apparatus. Also, loose component parts such as capacitors, resistors, transistors, etc., not used as a part of any specific apparatus should be listed here. Copy Date Code just as it is stamped on item.
- 1F. This entry refers to apparatus that is used on equipment or other apparatus. When this entry is used, an entry should be made in either 1B, 1C or 1E, to show where the apparatus was being used. Copy Date Code just as it is stamped on item.
2. Check the appropriate box whether or not EC is reporting fire or safety hazard condition. (If hazard is being reported, notify supervisor immediately; condition should then be corrected 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., announcement systems, PBX-775, data sets, crossbar No. 5, T-carrier, 806 power plant, station coin telephone set, etc.
4. Give the name and address of central office or other location where the defect occurred.
5. Make the appropriate entry. If manufacturer is other than WE, specify the name of the manufacturer, if known.
- 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.
8. 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 (not Form E-5141). Additional pages or attachments should be stapled to this form.  
  
Include description of any 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.
  - For product of outside manufacturer purchased through WE, furnish complete name-plate data and WE inspection number if available.
  - 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 WE reel and requisition number. Where field repairs have been made, furnish a breakdown of all costs incurred in the repair operation.
  - For teletypewriter apparatus, completely identify all parts and units involved; give BSP Section, TTY Bulletin or "S" specifications involved.
  - 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.
9. If condition was corrected locally, briefly describe the technique used. Attach explanatory sketches, marked drawings or photographs if they are available.
10. This entry should contain the name of the individual who actually discovered the problem being reported.
11. The form should be reviewed and approved in accordance with established OTC procedures.

NOTE: Instructions for completing the Staff and Engineering portion of this form can be found in BSP Section 010-700-010.

**Instructions for Completing Engineering Complaint Form E-5141  
Exhibit 2**



**INSTRUCTIONS FOR USING  
ENGINEERING COMPLAINT LOG  
(Type or Print Legibly)**

- 1 Enter second and third letters of Engineering Complaint (EC) number block assigned to the District (ie, SW, TR, CP, AO, SS) in PAC. Nevada enter BNE.
- 2 Enter four numerics of EC number.
- 3 Enter date Engineering Complaint is received in Engineering.
- 4 Enter name of item or product and brief description of the complaint condition.
- 5 Enter location (city) in which complaint condition was found.
- 6 Check if credit requested on Engineering Complaint.
- 7 Check when reply to credit request is received.
- 8 Enter remarks as appropriate.
- 9 Name of originator of the complaint.
- 10 Name of person in engineering who investigated the complaint.
- 11 Date original sent to WE QSM or GTP.
- 12 Check when copy was sent to BTL Field Representative.
- 13 Check when copy was sent to the Engineering Complaint Coordinator.
- 14 Enter EC class when received from WE QSM.
- 15 Enter date of Final Report on complaint.
- 16 Enter 3 alphas of EC number block assigned to issuing district (ie, PSW, PTR, PCP, BNE, etc).
- 17 Enter name, address and telephone number of responsible District Level.
- 18 Enter quarter and year covered.
- 19 Enter sheet number and total number of sheets per quarter.



