NACE INTERNATIONAL
THE CORROSION SOCIETY

TPC Publication

11

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A Guide to the Organization of Underground Corrosion-Control Coordinating Committees

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Foreword

Underground corrosion-control coordinating (electrolysis) committees are composed of technical personnel who represent a variety of companies concerned with underground metallic cables, pipelines, or tanks. Many companies, such as those that operate direct current (DC) traction systems and which could introduce DC into the earth, possibly causing electrolytic corrosion on underground metallic structures, are also interested participants in the corrosion-control coordinating committee program.

Corrosion-control coordinating committees are not components of NACE International, nor does this publication contain required procedures for establishing and operating committees. Rather, it is intended to serve as a guide for existing committees and for the establishment of new committees where none exist.

As numerous corrosion-control coordinating committees were formed, the need to catalogue the committees, their territories, their present officers, and other vital data arose. As a corrosion-control organization encompassing both Canada and the United States, NACE met the qualifications for accomplishing this task. In response to the need for such information, NACE established Task Group T-10B-1 to develop and maintain information on existing corrosion-control coordinating committees and to prepare this publication. The purpose of NACE is NOT to infringe upon the autonomy of individual committees, but rather to act as a clearinghouse for information between corrosion-control coordinating committees and to supply administrative support services when needed.

NACE Headquarters staff maintains a current directory of known corrosion-control coordinating committees and their officers. For further information on this report or to supply new or updated information, contact the NACE Technical Activities Division, P.O. Box 218340, Houston, TX 77218-8340.

This manual was originally prepared in 1986 and editorially updated in 1998 by NACE Task Group T-10B-1, a component of Unit Committee T-10B on Interference Problems. It is published by NACE under the auspices of Group Committee T-10 on Underground Corrosion Control.

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Introduction

A corrosion-control coordinating committee exists for three purposes: to keep all companies that lie in the committee's geographical area of concern informed of activity by others that could cause corrosion interference due to stray DC currents in any company's underground metallic structures, to discuss and schedule ways and means to mitigate any adverse effects, and to serve as a permanent source of information regarding locations, histories, and company corrosion-control personnel in the committee's operating area. In addition, many corrosion-control coordinating committees support active information and education programs which update members on new corrosion-control products and techniques. A corrosion-control coordinating committee has no official jurisdiction over the actions of member and nonmember companies. Committee participation is a cooperative venture with a proven record of avoiding and discouraging cumbersome litigation between companies on corrosion-control matters.

History

The founding individuals of the first committees laid the groundwork for corrosion-control coordinating committees by securing the approval of their respective management on the concept of such a committee, and then by seeking out and communicating with others in similar operating areas who could mutually benefit. Preorganization sessions were called for briefing and discussion in order to gain the support of others in the industry. When enough support had been pledged in a particular area, charter meetings were called. Corrosion-control coordinating committees were thus launched and their benefits were soon realized.

In order to engineer cathodic protection facilities intelligently with minimal interference, underground corrosion-control personnel who participate in corrosion-control coordinating committees are made aware of the existence and location of other undergournd metallic structures, as well as receiving information about corrosion-control methods being used, interference possibilities, and the corrosion-control personnel involved. The corrosion-control coordinating committee structure allows personnel to join a cooperative multicompany interference-control group and to follow up with progress reports at regularly scheduled meetings.

Definition of Interference

The original focus in the study of underground structure deterioration was the operation of DC-powered traction systems. Later on, the increased installation of cathodic protection rectifiers became a major concern. With the recent resurgence of municipal DC traction systems, these systems have again become a major source of interest for corrosion-control coordinating committees. In addition, the increasing frequency of pipeline installation in high-voltage AC power corridors has introduced another possible cause of interference. There are many different causes of electrical interference, but not every source of electrical influence is necessarily detrimental. Recognizing this, the Society in Ontario for Controlling Electrolysis has drafted the following definition of interference:

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1.0 a. Interference is any electrical effect on a structure due to the action of other parties.

b. These effects can be innocuous, beneficial, or detrimental and can be caused by alternating and/or direct current.

2.0 a. Detectable electrical effects are considered innocuous on a structure where additional corrosion or a safety hazard does not result.

b. Detectable electrical effects are considered beneficial on a structure where corrosion or a safety hazard is reduced.

c. Detectable electrical effects are considered detrimental where corrosion or a safety hazard is increased.

Committee Bylaws

Two sets of bylaws are appended to this report. Appendix A is an example of bylaws for a committee that operates in both city and rural environments and has considerable dynamic stray current activity from underground mines. Appendix B lists sample bylaws for a committee that covers several sizable cities and much rural territory, but has very limited experience in dealing with dynamic stray currents. It is suggested that a committee organizer search the present directory of corrosion-control coordinating committees for an operating area similar to his and request a copy of that committee's bylaws.

SUGGESTED STEPS FOR COMMITTEE ORGANIZATION

Procedures

1. Stimulate interest in forming a corrosion-control coordinating committee and gain the support of your own management and that of related companies.

2. Plan an initial briefing session for interested individuals in which the benefits of committee participation are explained. The assistance of individuals familiar with other committees' operations is beneficial.

3. Assemble a group of interested individuals to choose a course of action, to select possible temporary officers, and to call a charter meeting. An effort to interest municipal utilities, railways, and power companies is helpful.

4. Subsequent meeting agendas may include the following:

a) Selecting and advising a bylaws committee
b) Determining territorial boundaries which do not overlap with existing committee boundaries
c) Deciding on the frequency and location of meetings
d) Choosing a name for the committee
e) Naming temporary officers

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f) Contacting NACE Headquarters and advising the Technical Activities Coordinator of activities and intentions
g) Selecting meeting dates that will not conflict with those of other committees in adjacent areas.

Many of the initial decisions can be made by an organizing nucleus. It may be wise, however, to establish only temporary working rules until the bylaws committee presents its work to the membership for review and approval. This allows all members to have a part in the formulation of the rules.

Size of Territories

The size of a territory to be represented by a proposed corrosion-control coordinating committee is often a problem to organizers and can be the subject of considerable objection from prospective members. A small company, with limited territorial interest, may object to the travel involved and the volume of business handled by a committee that represents a large territory. On the other hand, a company that operates across a large territory may object to dividing its territory into many small committee areas which will require personnel to attend several different meetings and operate under different bylaws. Compromise may be necessary in the process of gaining the necessary industrial support during organization proceedings.

The number of committees required in an area is determined by the amount of territory to be covered as well as the complexity of the interference problems expected. The state of New York, for example, has committee territories covering several counties in addition to a separate committee to contend with the complicated and high volume of interference problems of the metropolitan New York City area. In some cases, where specific problems exist, subcommittees may be established to facilitate the operation of general committee business.

Dual Committee Systems

Some corrosion-control coordinating committees which began in small cities have merged with large territorial committees and now operate as subcommittees. Each city subcommittee meets regularly to discuss problems within the city boundaries. At territorial meetings, subcommittee representatives report to the entire committee on any business that is of interest to the entire territorial committee. An open case number is assigned to the subcommittee for this purpose. This dual committee system enables personnel to attend only the meetings that most often affect their companies' operations.

Committee Meeting Schedules

Another decision to be made during the formative period of a corrosion control coordinating committee is the frequency of meetings. It is suggested that monthly sessions be scheduled for a trial period of one year to initiate and refine the committee's operations.

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After a year, or sooner if the committee progresses more rapidly, it may be determined that less-frequent meetings will suffice.

Committee cases can take a great deal of time when meetings are too far apart. Even for committees that meet monthly, delay in resolving cases is often a problem. Therefore, tactful pressure is often necessary to motivate a member company toward resolution of its cases. For mature committees, spring, fall, and winter meetings may provide sufficient opportunity to conduct business. The main responsibility of each member is to advise other members of rectifier installation and locations. Attendance at every meeting is not necessarily required to achieve this.

Election of Officers

Those persons who are involved in the conception and initial formation of the committee are charged with the election of temporary officers to serve until a permanent body of officers is seated. The temporary officers may be selected from the ranks of those who worked toward its formation. The chairman, for example, may be an individual who has been actively involved throughout the organization of the committee. The secretary has the most burdensome job of the officers. However, most companies graciously support their representative secretary when that individual has been willing to undertake the task.

ADMINISTRATIVE FUNCTIONS

Meeting Minutes

When a committee conducts a heavy volume of business, the work entailed can become unwieldy. The recording, typing, reproduction, and mailing of minutes can be a burden to the secretary. However, the use of computer coding can make the job less troublesome.

One Northeastern coordinating committee had meeting minutes that contained paragraphs written in nontechnical language to describe and update each case. This often resulted in eight or more pages of minutes. A member then devised codes for data and companies that could be used to reduce each case description and its update to two or three short, printed lines. The committee directories were also adapted to make use of this code. It then became possible to obtain personnel listings and addresses on a computer printout for periodic distribution (Appendices C and D).

Computer coding allows cases to be recalled in numerical order, by county, by company grouping, etc. The minutes of the meeting become more manageable with this shortened, descriptive format. Appendices E and F contain a copy of the minutes from the above-mentioned committee before and after initiation of the new coded format. A code sheet is included in the latter minutes.

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Legal Considerations

Corrosion-control coordinating committee membership is voluntary, but, as is the case with any voluntary organization, a member agrees to follow the approved constitution and bylaws. In this regard, a committee's requirements concerning reporting activities of interest to committee members must be clear and concise. The following excerpt from a Michigan committee's bylaws provides a satisfactory guide for members reporting their activities:

Notifications

1. Notice of planned installations may be given in advance at a regular Michigan Electrolysis Committee meeting by use of the reporting form. A copy of the form should be sent to the listed representatives of the companies likely to be interested and to the secretary of the committee.

2. Communication during the design phase should be organized directly by the company's representatives following formal notification. When design requirements are to be determined by field testing, an evaluation of interference effects should be made. If practical, the representatives of companies likely to be affected should be invited to participate in the testing. If attendance is not possible, test results should be made available to affected parties.

When testing indicates that mutual interference mitigation will be necessary, the parties should cooperate on incorporation of such requirements into the design.

3. Notice of actual installation need be given only when contact is to be made with the other company's structure or property.

The installation of test wires, etc., on other companies' structures should be witnessed by representatives of both companies.

4. When field testing or experience indicates that appreciable interference with another company's structure may result from rectifier operation, a representative of the other company should be invited to participate in the turn-on. The operator of the rectifier should make every reasonable effort to identify detrimental interference. The rectifier should not be left in operation until a reasonable effort has been made to resolve serious interference problems.

In any event, the reporting form should be used to advise affected companies and the secretary of the committee.

5. If appreciable changes are made in rectifier output or structure such that the condition of the other company's structures may be adversely affected, the above notification procedures should be followed.

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A committee has no responsibility to test products, evaluate procedures used in interference mitigation, or approve or disapprove of a member's conduct. However, when a member's activities are contrary to the purpose of the committee, the committee may have the capability to review and terminate membership of any organization or individual, subject to review and notification.

Rectifier and Bond Directories

A concise and current listing of rectifier and bond installations (and DC traction system substations) is of tremendous assistance in planning new facilities. One committee has developed a reporting form that serves as the input form for a computerized record of rectifier installations (see Appendices G and H). The record is updated periodically and revised printouts are distributed to all member organizations. With the introduction of small-capacity, large-quantity installations for the protection of fuel storage tanks, it is essential that a decision be made whether or not all impressed current installations are to be included.

Directory

Appendix I shows all the corrosion-control coordinating committees of record, past or present. Appendix J is a directory of contacts at these committees. Any reader having information that would update this listing may so advise a NACE Headquarters Technical Activities Coordinator.

Those interested in a local corrosion-control coordinating committee may contact either a NACE Headquarters Technical Activities Coordinator or their local NACE section. Local natural gas distributors and pipeline companies typically participate in corrosion-control coordinating committees and may also be contacted for information.

Conclusion

Each corrosion-control coordinating committee is the product of the efforts of an individual or group of individuals who see the need for organized cooperation between companies and recognize the benefits of such committees for their companies and the industry as a whole. While many geographical sections of Canada and the United States are blanketed with active corrosion-control coordinating committees, many other sections of these countries do not enjoy the advantages of such organizations. The expansion and procreation of these groups can well serve the cause of technical information exchange.

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APPENDIX A , Sample Bylaws #1

(_____) Underground Corrosion-Control Coordinating Committee Bylaws

NOTE: Parenthetical portions of these model bylaws are either substitutionary or explanatory.

Article I
Organization

Sec. 1 The name of this organization will be the (_____) Underground Corrosion-Control Coordinating Committee.

Sec. 2 The purpose of the committee will be to institute and foster cooperative corrosion mitigation and corrosion interference mitigation involving underground metal structures.

Sec. 3 The area of operation will fall within (the north and south boundaries of _____ ____, west of the _____ River, and east of the _____ state line) including the outer fringe areas of these boundaries as outlined below in a and b.

a. Problems originating within these boundaries and affecting structures adjacent to the boundaries.
b. Problems originating on structures adjacent to these boundaries, and affecting structures within the boundaries.

(NOTE: Problems described in a and b may also be carried simultaneously as active cases in the adjacent area's underground corrosion-control coordinating committee.)

Article II
Membership

Sec. 1 The membership shall consist of representatives of state or local governments, public service and industrial or commercial companies with underground metal property interest in the operating area which may be corroded by direct electrical current flowing in the earth which originates from neighboring sources; or whose property is capable of creating electrical conditions which would enhance corrosion on neighboring underground metal property.

Sec. 2 Membership in the (_____) Underground Corrosion-Control Coordinating Committee may be obtained by written request to the Committee.

Sec. 3 Consultants may attend any meeting when representing a member company.

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Sec. 4 As the need arises for secretarial expenses for the function of the committee, each member will be assessed. This assessment will include only material cost affecting (_____ _____) Underground Corrosion-Control Coordinating Committee operations.

Sec. 4 Manufacturers of corrosion-control materials and their representatives are permitted to attend or participate in the informational, educational, or social portions of the meetings.

Article III
Officers

Sec. 1 Officers will be elected by vote of the members within the (_____) Underground Corrosion-Control Coordinating Committee.

Sec. 2 The officers of the committee will include a chairman, a vice chairman, and two other members.

Sec. 3 Officers must be selected from the active members of the (_____) Underground Corrosion-Control Coordinating Committee.

Sec. 4 After each election, the list of new officers shall be submitted to the chairman of NACE Task Group T-10B-1 and to the NACE technical activities director.

Article IV
Duties of Officers

Sec. 1 The duties of the officers will be as follows:

a. The chairman will conduct meetings and coordinate all affairs of the committee.

b. The vice chairman will substitute for the chairman in his absence and perform any other duties as may be assigned to him by the committee.

c. The secretary shall record proceedings of meetings and mail copies of the minutes to the membership. (NOTE: Some committee secretaries also mail copies of directory additions, which will be mentioned later, to their members along with the minutes; in other committees, members collect the additions personally as they are distributed at meetings.) The secretary shall be the correspondent for the committee and will maintain a correspondence file.

Article V
Term of Office

Sec. 1 The tenure of office for all officers will be (one or more) year(s), with nominations and elections for offices being held in the month of (December).

Sec. 2 A nominating committee shall be appointed by the chairman from members of the (_____) Underground Corrosion-Control Coordinating Committee to select

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the officers and chairmen for the standing committees. (To assist nominating committees in choosing new officers, some committees follow an unwritten tradition of advancing each officer through the chairs, so that it is only necessary to select a new nominee for the lowest chair; this nominee is chosen with the understanding that he will be advanced at each election.)

Article VI
Meetings

Sec. 1 Meetings will be held on the (second Thursday) of each month. The site will be designated by the chairman, who may consult the membership for suggestions. (Some committees do not have the volume of activity that would support monthly meetings, and may meet quarterly or bimonthly. A regular schedule should be maintained, however, in order to program a regular pattern of attendance into the schedules of members.)

Sec. 2 The minutes of the meetings will be sent to each member company and any approved underground corrosion-control coordinating committee within or adjacent to the operating area of the (_____) Underground Corrosion-Control Coordinating Committee.

Sec. 3 Special meetings may be called by the Chairman and may also be called on the written request of any three voting members.

Sec. 4 All information and data discussed at meetings shall be confidential to the members of the committee and those present. All business and publications of this committee will be confined to members only, except upon the unanimous approval of the committee members. The bylaws and membership lists may be available to anyone.

Sec. 5 Administrative business will be voted upon, with each member company present casting one vote.

Article VII
Subcommittees

Sec. 1 The following standing committees will be maintained:

Technical Program Committee
Utility Coordinating Group Committee
Directory Committee (Coal Mine and/or Electric Railway Substation Location)
Personnel Directory Committee
Underground Structures Directory Committee
Rectifier and Bond Directory Committee

a. Chairmen of standing committees will be elected or appointed at the same time the officers are elected. (NOTE: In some or all of the standing committees, one member may adequately constitute a committee or even several committees. One

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committee may have multiple functions, and members may serve on more than one committee.)

b. The responsibilities of the standing committees will be as follows:

Technical Program Committee

Will provide a speaker and/or educational information for each meeting.

Utility Coordinating Group Committee

Will keep the general membership informed with respect to all codes, rules, and regulations pertaining to corrosion control. This committee will also be the (_____) Underground Corrosion-Control Coordinating Committee representative to NACE International.

Directory Committee for Coal Mine and/or Electrical Railway Substation Location

Will record the location of coal mines or electric railway substations in the operating area of the (_____) Underground Corrosion-Control Coordinating Committee and provide:

(For Mines)	(For Electric RR Substations)
1. Mine Name	1. Name of Railroad
2. Mine Owner	2. Name or Location of Substation
3. Township	3. Township or City
4. County	4. County

Personnel Directory Committee

Will maintain the membership list as well as addresses, phone numbers, and other contact information.

Underground Directory Committee

Will record the location of underground structures by county and township.

Rectifier and Bond Directory Committee

Will maintain the directory addition submitted for the closing of cases for coal mine or traction-type facilities.

Working Procedures

1. Any member installing or substantially altering corrosion-control devices shall notify the directory committee in advance of his operation and arrange for cooperative tests.

2. All problems presented to the committee will be assigned a case number and maintained as a case as long as action on the problem warrants. Any member who finds a hazardous condition or damage apparently due to corrosion, and which jeopardizes the interest or property of any member of the organization, shall report such conditions at once

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to that member and also to the secretary, who shall transmit such information to all members concerned.

3. Case numbers will be acted on or assigned as follows:

a. After the committee is assured that testing can begin before the next regularly scheduled meeting date.

b. After the member representative has submitted to the secretary the following information (See Appendix G for form):

(1) Location of rectifier or other DC source.
(2) Output of rectifier or current drain to other DC source.
(3) Type and location of groundbed.
(4) Names of other companies that may be affected.
(5) Type and length of structure affected.

c. Cases in which no action is reported for two consecutive meetings will become inactive.

d. A case can be closed when interference to affected structures is mitigated to the satisfaction of the involved parties and the secretary has received 50 copies of the completed directory addition form for that case. (Directory addition copies are to be supplied by the company whose rectifier is the subject of the case, or by the company who maintains the traction-type bond.)

4. Technical questions before the committee shall be decided by mutual agreement and not by vote.

5. The following test procedures will be adhered to:

a. If the tests will disrupt the electrical state or environment of another structure, the owner of that structure must be informed prior to testing.

b. Permanent ties to neighboring underground structures or penetration of any coating shall not be made unless written permission from the owning company has been granted.

c. Tests should be made to existing testing facilities wherever available, and probe bars will not be used to make contact to coated structures.

d. Temporary ties are meant to be in place only for testing purposes. This testing period should not exceed one month without approval of the companies involved.

e. Any company installing cathodic protection which may affect other underground structures at crossings should notify owners of those structures by phone, or by letter, and through minutes of the Committee. If no response is received from the

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notified company within 30 days, it shall be assumed that the company has been properly notified, but has no interest in the case.

6. It is the responsibility of all new members to immediately make their additions to the Personnel Directory and the Underground Structure Location Directory.

7. These bylaws may be amended at any general meeting of the committee by a two-thirds vote of those members present (one vote per member company, see Article VI, Sec. 5), provided the amendment and its content have been recorded in the minutes of the previous meeting.

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APPENDIX B , Sample Bylaws #2

(Showing Differences from #1)

CORROSION-CONTROL COORDINATING COMMITTEE BYLAWS

Article III
Officers

Sec. 1 Officers will be selected by vote of the members within the Corrosion-Control Coordinating Committee.

Sec. 2 The officers of the committee will include a chairman, a vice chairman, and a secretary.

Sec. 3 Officers must be selected from the active members of the Corrosion-Control Coordinating Committee.

Article VII
Committees

Sec. 1 The Technical Program Committee will be maintained with the chairman elected annually.

Sec. 2 Directory committees will be activated when necessary to update directories (Personnel Directory and Rectifier and Bond Directory).

Working Procedures

1. Any member installing or substantially changing corrosion-control devices shall notify the committee in advance of the operation and arrange for cooperative tests.

2. All interference problems presented to the committee will be assigned a case number and maintained as a case as long as action on the problem warrants. The case number will not be assigned or the case reactivated while the problem is merely contemplated, but only after a device is ready to be energized or upon completion of other activity, such as construction of a new underground structure which may be adversely affected by existing direct current sources.

a. Any member who finds a hazardous condition or damage apparently due to corrosion, and which jeopardizes the interest or property of any member of the committee, shall report such conditions at once to the affected member(s), and also to the secretary, who shall transmit such information to all members concerned.

b. A case reporting no action in two successive meetings will be transferred to the inactive list, following the listing of active cases in the minutes, except in closed

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cases awaiting directory additions. Any case in this latter stage cannot be dropped from the minutes until the secretary has received enough copies of additions or revisions to keep all members' directories up to date.

3. The following test procedures will be adhered to:

a. If the tests will in no way disrupt the electrical picture or environment of other structures, other companies need not be informed.

b. Permanent ties, thermite welds, or the penetration of any coating shall not be made without specific permission from the owning company.

c. Tests should be made to existing testing facilities wherever possible.

d. Temporary bonds are meant to be in place for testing purposes only. This testing period should not exceed one month without specific approval of the companies involved.

e. Drop test wires at foreign line crossing installations shall not be demanded.

f. It is the responsibility of any company installing cathodic protection that may affect other underground structures to notify the committee so that the information can be incorporated into the minutes as new business. This may be augmented by written or telephone notification if the installing company wishes to assure that all neighboring companies are positively notified and have not overlooked the entry in the minutes. If no response or action by any other company comes forth in the next two regular committee meetings, all companies shall be deemed to have been given proper notice.

4. It is the responsibility of every new member company to immediately make its addition to the directories.

5. These rules and regulations may be amended at any general meeting of the committee by a two-thirds vote of those members present, provided the amendment and its content have been recorded in the minutes of a previous meeting.

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APPENDIX C – Page from a Typical
Corrosion-Control Coordinating Committee Personnel Directory
APPENDIX D , Page from a Computer-Printed
Corrosion-Control Coordinating Committee Personnel Directory

February 1981

AGW	AGWAY PETROLEUM COMPANY	
AGW	GLEASON W C TERMINAL ENGINEER	315 477 7430
AGW	BOX 4852 SYRACUSE NY 13221	
APC	AIR PRODUCTS AND CHEMICALS INC	
APC	HANDLEY GEORGE G	215 481 5150
APC	PO BOX 538 ALLENTOWN PA 18105	
APC	MASTER HOWARD H	215 481 5140
APC	PO BOX 538 ALLENTOWN PA 18105	
APC	MCCARRICK ADDISON T	215 481 7438
APC	PO BOX 538 ALLENTOWN PA 18105	
APC	RAVOTTO MILIO L	412 845 6016
APC	RD3 BOX 325A LEECHBURG PA 15656	
AIG	AIRCO INDUSTRIAL GASES DIVISION	
AIG	KEIL BEN PLANT MANAGER	304 387 0889
AIG	ROUTES 2 AND 66 HANCOCK COUNTY W VA	
AIG	PO BOX 247 CHESTER W VA 26034	
ATT	AMERICAN TELEPHONE AND TELEGRAPH COMPANY	
ATT	BROGST FRANK C	703 691 9645
ATT	3033 CHAIN BRIDGE RD OAKTON VA 22185	
ATT	CORNIBE HOWARD	412 227 7602
ATT	BOX 608 FOMBELL PA 16123	
ATT	DIETRICH PAT	814 684 3563
ATT	RD 3 BOX 276A TYRONE PA 16686	
APG	APOLLO GAS COMPANY	
APG	COFFMAN E S SUPERINTENDENT	412 845 6061
APG	PO BOX 458 LEECHBURG PA 15656	
APG	SCHEFTIC THOMAS M CORR TECH	412 845 6061
APG	PO BOX 458 LEECHBURG PA 15656	

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APPENDIX E – Minutes Before Use of Computer Coding

Western Pennsylvania Corrosion Committee

OFFICERS
N.D. Burke, Chairman
Columbia Gas of Pennsylvania, Inc.

E.C. Amsler, Vice Chairman
United Natural Gas Company

C.A. Rauch, Secretary
American Telephone and Telegraph Company

ADDRESS REPLY TO: 635 Grant Street
4th Floor
Pittsburgh, PA. 15219
Phone: 412/434-7660
Fax: 412/434-7600

March 13, 1970

PRESENT MESSRS:

C.A. Rauch	American Telephone and Telegraph Company
A. Eakin	Bell Telephone Company of Pennsylvania
J.D. Hebel	Bell Telephone Company of Pennsylvania
T.J. Masterson	Bell Telephone Company of Pennsylvania
S.T. Bognar	Columbia Gas of Pennsylvania
N.D. Burke	Columbia Gas of Pennsylvania
F.E. Costanzo	Columbia Gas of Pennsylvania
C.P. Kirt	Columbia Gas of Pennsylvania
F.C. Stalnaker	Columbia Gas of Pennsylvania
J.R. Moose	Consolidated Gas Supply Corporation
J.G. Arscott	Equitable Gas Company
N.J. Walker	Manufacturers Light and Heat Company
A.D. Struzzi	Mobil Pipeline Company
J.R. Tucke	Mobil Pipeline Company
R. Tompsett	National Transit company
W.D. Boice	Peoples Natural Gas Company
D.D. Dixon	Peoples Natural Gas Company
L.G. Eddy	Peoples Natural Gas Company
V.F. Goshorn	Peoples Natural Gas Company
J.W. Haught	Peoples Natural Gas Company
M.R. Huber	Peoples Natural Gas Company
D.P. Lambert	Peoples Natural Gas Company
F.C. Scharf	Peoples Natural Gas Company
W.D. Dixon	PPG Industries, Inc.
J.S. Christensen	Sun Pipeline Company
R.L. Seifert	Tennessee Gas Pipe Line Company
B. Wilken	Tennessee Gas Pipeline Company
W.R. Scott	Texas Eastern Transmission Corporation

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APPENDIX E (cont.)

The 180th meeting of the Western Pennsylvania Corrosion Committee was called to order at 10:20 a.m., March 12, 1970, by Mr. N.D. Burke, Chairman, at the Lamplighter Restaurant located on Route 22 in Delmont, Pennsylvania.

CORRESPONDENCE

The following letters were received:

Sun Pipeline Company announcing the opening of an Eastern Regional Office at 216 Goddard Boulevard, King of Prussia, Pennsylvania 19406, telephone, 215/265-7210. It was formerly known as the Product Lines Department at 1608 Walnut Street, Philadelphia, Pennsylvania 19103.

Penn Fuel Gas, Inc. sent in notification of the installation of a rectifier in Mifflin County. (Listed under new case #893).

ACTIVE CASES

Case No. W.P. 16 (January, 1966) — Corrosion Mitigation - Johnstown

The next meeting is March 19, 1970, 12:00 Noon at Campenellas. It is hoped to have information about rectifiers on the 66 inch water line by Bethlehem Steel Corporation.

Case No. W.P. 176 (March, 1968) — Peoples Natural Gas

Chalfonte Station Rectifier located in Allegheny County, Chalfonte Borough on the Parkway East near Wilkinsburg Exit. Change in groundbed necessitates retesting. Tests to be arranged by telephone.

Case No. W.P. 440 (November, 1968) — Penn Fuel Gas Company

Mount Union Rectifier. Additional testing with Texas Eastern.

Case No. W.P. 693 (August, 1967) — Peoples Natural Gas

Wilmore Dam Rectifier — Inactive

Case No. W.P. 750 (February, 1968) — Peoples Natural Gas Company

Cooney Rectifier — Inactive

Case No. W.P. 755 (March, 1968) — Manufacturers Light and Heat Co.

Rectifier 3-37, Penn Township, Westmoreland County, located on T.R. 933. Inactive.

Case No. W.P. 756 (March, 1968) — Manufacturers Light and Heat Co.

Rectifier 3-38, Salem Township, Westmoreland County. Rectifier located in Delmont Station yard along L.R. 64076. Additional testing required.

Case No. W.P. 760 (March, 1968) — Manufacturers Light and Heat Co.

Rectifier 3-42. South Huntington Twp., Westmoreland County located in West Newton Borough. Awaiting test station installation.

Case No. W.P. 799 (October, 1968) — Peoples Natural Gas Company

Rectifier Miller — Inactive

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APPENDIX E (cont.)

INFORMATION

Manufacturers Light and Heat Company reports that the current peaks at 500 Amps through a mine drain at the Thompson Substation.

F.E. Costanza reported on the Interference Committee of NACE.

A discussion on the testing of interference bonds followed.

A motion was made and seconded to have the corrosion meetings bimonthly.
(Vote at the next meeting).

Group discussion on the common trenching and services of Underground Residential Distribution.

Mr. Edward M. Taylor of Raychem Corporation gave a demonstration of heat shrinkable plastic and metal coatings for use on pipelines. Paul Wilcox of Pipeline Service assisted with the demonstration.

In connection with the motion to have corrosion meetings bimonthly, another motion was made and seconded to carry over discussion to the next meeting.

F.E. Costanza reviewed the T-10 Underground Corrosion Committee of NACE.

The next meeting of the WPCC will be held on Thursday, April 9, 1970, at 10:00 a.m. at the Lamplighter Restaurant on Route 22, Delmont, Pennsylvania. Delmont is located approximately 30 miles east of Pittsburgh on Route 22.

Clarence A. Rauch
Secretary

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WESTERN PENNSYLVANIA CORROSION-CONTROL COMMITTEE

OFFICERS
Chairman J.G. Keener
Columbia Gas Transmission Corp.
P.O. Box 496
Washington, Pennsylvania 15301
Vice-Chairman Jon A. Snyder
Buckeye Pipeline Company
P.O. Box 368
Emmaus, Pennsylvania 18049

ADDRESS REPLY TO:
Robert Beers
Mid-Continent Telephone Corporation
P.O. Box K, Old William Penn Highway
Export, Pennsylvania 15632
(412) 327-3131, Ext. 195 Secretary

March 11, 1982

MEMBERS PRESENT:

AIRCO
Cesil G. Collins

Apollo Gas Company
Thomas Scheftic

A. T. & T.
F. Brobst

Bell of PA.
Joe Hoyson
W. Palmer Long
Tom Masterson

Buckeye Pipeline Co.
Dave Ream
Jon Synder

Columbia Gas of PA., Inc.
S.T. Bognar
Frank J. Elliott

Consolidated Gas Supply Corp.
J.R. Moose

Columbia Gas Trans. Corp.
Hubert D. Bissett
James D. Bosworth
Albert Clothe
J.G. Keener
Carol Kern
Helen Navalance
Clair Overturf
Robert Ralston
Bob Shields
Tom Shields
James Sprowls
Myron Sprowls
Stanford B. Zimmerman

Equitable Gas Company
J.G. Arscott
J.D. Cowie
Lynn Hamelton
Steven Masley
Paul Poole
W.R. Scott

Fox Chapel Water Authority
Mel Hook

HARCO Corp.
Bernie Smith

Mid-Continent Tele. Corp
Robert Beers

National Fuel Dist.
J.C. Murphey

National Fuel Gas Supply Corp.
J.A. Puleo

National Transit Co.
Robert P. Addis

Penn Fuel Gas, Inc.
John Colbert

Penna. Power Co.
L. Amil Lesney

Pennzoil
W.D. Dixon

Peoples Natural Gas Co.
Bob Allwine
Eugene Bates
W.D. Boice
John W. Haught
J. Hilty
F.E. Kyper

T.W. Phillips Gas Co.
John T. Kabay

U.G.I. Corp.
Charles E. Kells

United Tel. Co. of PA.
R.C. Stought

ALSO ATTENDING:

Eureka Pipeline Co.
John Esbensbeda

Matcor, Inc.
Jay Keldsen

The 319th meeting of the Western Pennsylvania Corrosion-Control Committee was called to order at 10 a.m. on Thursday, March 11, 1982, by Mr. Joe Keener, Chairman, at the Lamplighter Restaurant, Delmont, Pennsylvania.

CASE 930 Pittsburgh Corrosion Subcommittee

The meeting of March 4, 1982, detailed the proposed South Wills Village and Castle Shannon Substations' electrolysis wire. This wire will be placed on the same crossarm with the feeder cable and located just above the catenary. C.G.P. and B.T. Co. scheduled to meet at Connors Road on March 5, 1982, to locate possible test station and locations. Next meeting is scheduled for April 1, 1982, at 9 a.m., Pittsburgh Office, 9th floor, Kossman Building, Pittsburgh, Pennsylvania.

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APPENDIX F (cont.)

	Case	County Code	Municipality	Location	Prot Syst Code	Amp	Com-pany Code	
Inactive	757	WM	Salem T.	Old Rt. 22 near Delmont	2	*	CGT	9/81
Cases:	958	HU	Shirley T.	L.R. 31030 near Mt. Union	1	*	MPL	8/81
	1621	AL	Monroeville	Beatty Rd. near Cooper Rd.	4	100	EQD	7/81
	1820	AL	Plum B.	Center Rd. near Boice Park	4	*	EQD	7/81
	2134	CU	Middlesex T.	Wolbridge Rd 5 Mi N of Tnpk.	1	16	ARC	7/78
	2453	WM	New Stanton	Poole St. & Byers Ave.	1	10	EXX	5/80
	2488	WM	Derry T.	Rt. 981 S. of New Alexandria	1	2	MPL	2/81
	2489	ER	Conneaut T.	Rt. 25005 HVDC Terminal	14	999	PEC	2/81
	2504	CU	Carlisle	Cherry St. in College Park Apts.	1	*	UGI	8/81
	2508	HU	Shirley T.	L.R. 31049, Black Log Valley	1	*	MPL	8/81
	2509	PR	Toboyne T.	L.R. 50060, Horse Valley	4	*	MPL	8/81
	2512	EK	Ridgeway T.	W. Side T. Rt. 219, S. of Ridgeway Boro Line	1	*	NFD	10/81
	2513	EK	Ridgeway T.	W. Side Hyde St. Ext., S. of Route 219	1	*	NFD	10/81
	2514	FO	Jenks T.	Thompson Prop 2000 W. of Rt. 66	2	2.5	TNG	10/81
	2528	SO	Conemaugh T.	B & O RR & Ball Pk @ Holsopple	1	13	MWC	10/81
	2529	SO	Conemaugh T.	S. of Stony Creek @ King's	1	15	MWC	10/81
	2530	SO	Conemaugh T.	Maple Ridge @ Swank's Mine	1	30	MWC	10/81
	2531	CB	Stoney Creek	E. of Island Creek Coal Co.	1	30	MWC	10/81
	2532	SO	Conemaugh T.	Water Treatment Bldg. Border Dam	1	10	MWC	10/81
	2533	SO	Conemaugh T.	E. Side of Dam, Quemahoning Res.	1	30	MWC	10/81
	2535	WE	Rostraver T.	Rt. 201 near Sweeny's Rest.	1	12	PNG	11/81
	2536	AL	Upper St. Clair	Universal Cyclops Prop., SDCR-29	1	15	PNG	11/81
	2537	CF	Curwensville	Rt. 453 S. of Boro Bldg.	1	8	PFG	Compl.
	2538	EK	Highland T.	T-458, Owls Nest, R-700	2	*	NFS	12/81
	2539	EK	Highland T.	T-458, Owls Nest, R-701	2	*	NFS	12/81
	2540	EK	Highland T.	T-458, Owls Nest, R-702	2	*	NFS	12/81
	2541	EK	Highland T.	T-458, Owls Nest, R-703	2	*	NFS	12/81
	2542	EK	Highland T.	T-458, Sackett Sta., R-704	2	*	NFS	12/81
	2543	EK	Highland T.	T-458, Sackett Sta., R-721	2	*	NFS	12/81
	2544	EK	Highland T.	ANF Road #124, R-722	2	*	NFS	12/81
	2545	EK	Highland T.	ANF Road #124, R-723	2	*	NFS	12/81
	2546	FO	Jenks T.	ANF Road #124, R-724	2	*	NFS	12/81
	2547	CN	Beech Creek	Off Rt. 144 on DeHass Rd.	2	*	CGT	12/81
Old Cases Reopened:	317	GR	Cumberland T.	Rt. 21, Buckeye Shaft, Carmichaels	6	*	CGP	3/82
Active Cases:	2550	BL	Alleghney T.	Altoona Weakland Farm	5	12	PNG	Compl.
	2557	FA	Springfield T.	4.6 Mi. E. of Connsvl. Rt. 711	1	0.5	ATT	Compl.
	2558	WM	Franklin T.	10 Mi. E. of Derry	1	0.074	ATT	Compl.
	2559	AR	Plum Creek T.	Elderton Power Feed	1	1	ATT	Compl.
	2560	AL	W. Mifflin B.	Commonwealth Avenue	1	0.4	ATT	Compl.

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APPENDIX F (cont.)

INFORMATION:

It should be noted that Mr. Albert Ziegler, Duquesne Light Company, has been transferred from the Corrosion Department. All correspondence re. testing arrangements should now be directed to Mr. M.E. (Marty) Hornak at (412) 456-6000, Extension 4844, or Mr. Jim Doyle at (412) 456-6000, Extension 4866.

It was stated in last month's minutes that Equitable Gas is planning to place a 30" and an 8" gas line, etc. This should be corrected to show Consolidated Gas Supply Corp. rather than Equitable Gas.

At the next meeting, April 8, 1982, the remaining two-part series of films furnished by Buckeye Pipe Line Co. will be shown.

The training and discussion session scheduled for the April meeting (Ground Bed) will be rescheduled for the May meeting.

See the attached sheet for additional information on the 27th Annual Appalachian Underground Corrosion Short Course to be held at the West Virginia University in Morgantown, West Virginia.

The next meeting will be held at the Lamplighter Restaurant, Route 22, Delmont, Pennsylvania, on April 8, 1982, at 10 a.m.

Robert Beers, Secretary

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APPENDIX F (cont.)

CODES FOR WPCCC DIRECTORIES

COUNTY

NO.	COUNTY	CODE	NO.	COUNTY	CODE	NO.	COUNTY	CODE
1	Adams	AD	16	East. Penna.	EP	31	Mercer	ME
2	Allegheny	AL	17	Elk	EK	32	Mifflin	MI
3	Armstong	AR	18	Erie	ER	33	New York St.	NY
4	Beaver	BV	19	Fayette	FA	34	Ohio	OH
5	Bedford	BD	20	Forest	FO	35	Perry	PP
6	Blair	BL	21	Franklin	FR	36	Potter	PT
7	Butler	BU	22	Fulton	FU	37	Snyder	SN
8	Cambria	CB	23	Greene	GR	38	Somerset	SC
9	Cameron	CM	24	Huntington	HU	39	Union	UN
10	Centre	CE	25	Indiana	IN	40	Venango	VE
11	Clarion	CL	26	Jefferson	JF	41	Warren	WR
12	Clearfield	CF	27	Juniata	JU	42	Washington	WS
13	Clinton	CN	28	Lawrence	LA	43	Westmoreland	WM
14	Crawford	CW	29	Maryland	MD	44	West Virginia	WV
15	Cumberland	CU	30	McKean	MK	45	York	YK

COMPANY

NO.	COMPANY	CODE	NO.	COMPANY	CODE
1	Air Products & Chem	APC	30	Mobil Pipeline	MPL
2	Airco	AIG	31	National Transit	NTC
3	Allegheny County	ALC	32	New York Tel.	NTC
4	Am Tel & Tel	ATT	33	North Penn Gas	NPG
5	Apollo Nat Gas	APG	34	No. Pittsburgh Tel Co.	NPT
6	ARCO Pipeline	ARC	35	Penn Central RR	PCR
7	Ashland Pipeline	ASH	36	Penn Fuel Gas	PFG
8	Bell Tel. Co. of Pa.	BTC	37	Penna Gas Co.	PGC
9	Brighton TWP Munc. Auth	BRT	38	Penna Gas & Water	PGW
10	Buckeye Pipeline	BPC	39	Peoples Nat Gas	PNG
11	Carnegie Nat Gas	CNG	40	Phillips Petroleum Co.	PPC
12	Chambersburgh Boro	CHB	41	T.W. Phillips Gas & Oil	PGO
13	Colonial Pipeline	CLP	42	Port Auth. of Alleg. Co.	PAT
14	Columbia Gas Trans.	CGT	43	Shenango Valley Water	SVW
15	Columbia Gas of Pa.	CGP	44	A.V. Smith Engr. Co.	SEC
16	Columbia Gas of W VA	WRV	45	Sun Pipeline	SUN
17	Commonwealth of Pa.	CPA	46	Tennessee Gas Pipeline	TNG
18	Consolidated Gas Sply	CGS	47	Texaco	TXO
19	Corrosion Serv. & Sply	CSS	48	Texas East. Transm.	TET
20	Duquesne Light Co.	DLC	49	Transcontinental Gas Pipe	TGP
21	Equitable Gas Co.	EQG	50	UGI Corp.	UGI
22	Fox Chapel Auth.	FCA	51	United Natural Gas	UNG
23	General Tele Co.	GTE	52	US Bureau of Mines	UBM
24	Gulf Oil Corp.	GOC	53	Western Pa Water Co.	WPW
25	Harco	HAR	54	Western Union	WUT
26	Henkels & McCoy, Inc.	HMI	55	West Penn Power	WPP
27	Exxon Corp.	EXX	56	West View Water	WVB
28	Kiantone Pipeline	KPC	57	Wilkinsburg-Penn Water	WPA
29	Laurel Pipeline	LPL	58	British Petroleum	BP
			59	Boron Oil Corp.	BOC

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APPENDIX F (cont.)

TYPE OF PROTECTION SYSTEM

CODE

1. Normal Groundbed
2. Distributed Anodes
3. Duct Anodes
4. Deep Anodes
5. Rails or Abandoned Pipe
6. Drainage Bond w/Reverse Current Switch
7. Drainage Bond without Switch
8. Interference Mitigation Bond
9. Voltage Dropping Resistor Rectifier
0. Unknown

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APPENDIX G — Form for Reporting Installations and Modifications

THE SOCIETY IN ONTARIO FOR CONTROLLING ELECTROLYSIS
SOUTHERN TECHNICAL COMMITTEE

IMPRESSED CURRENT CATHODIC PROTECTION REPORT

OWNER-COMPANY:____
REPRESENTATIVE:____
ADDRESS:____
____________________________PHONE:__________________________

CONSULTANT:____

STATUS: PLANNED ___ DATE _________ TURNED-ON ___ DATE ______

INSTALLED___ DATE _________ CHANGED ___ DATE ______

LOCATION: COUNTY __________ TOWNSHIP __________ CONC._____ LOT ______
CITY __________ STREET (S)___________________________

COMPANY DESIGNATION:______________

OUTPUT: RATED _____ VOLTS SET____ VOLTS
_____ AMPS _____ AMPS

GROUNDBED: CLOSE __ RECTIFIER: STANDARD __
REMOTE __ AUTO-VOLT__
DEEPWELL__ CURRENT __

PROTECTED STRUCTURE:____
____

COATING: BARE __
COATED __

INTERESTED COMPANIES & REPRESENTATIVES

1.____
2.____
3.____
4.____
5.____
6.____

PROPOSED TEST: DATE_______________
TIME_______________

ADDITIONAL INFORMATION (BONDS ETC.)

____
____
____
____
____

- -

S.O.C.E. USE

REPORTED AT S.O.C.E. MEETING_____________________
CASE NO. ________________
ASSIGNED DATE:___________
TEST DATE: _____________
CLOSE DATE: ____________
DISTRIBUTION: 1) SECRETARY - S.O.C.E.
2) REPRESENTATIVES OF INTERESTED COMPANIES

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APPENDIX H – Printout of Computerized Rectifier Record

TOWNSHIP OR CITY	CONC.	LOT OR ST. NO.	CONCESSION OR STREET NAME	COMPANY NAME	RECT NO.	B E D	A / I	AMPS	VOLTS	STRUCTURE PROTECTED	YR	CONS	
BURLINGTON			GULF LN N/O QEW	GULF OIL CANADA LTD,MARKETING	006	C	A	12	26	TANKS & PIPING	76	DS	
			LAKESHORE & LOCUST	IMPERIAL OIL LTD MARKETING		017					FUEL TANKS; PACE		81 DS
			GUELPH LN & MNTNSDE	IMPERIAL OIL LTD MARKETING		019					FUEL TANKS; PACE		81 DS
			WALKERS LANE	PETRO CANADA	150	C	A	5	4	GAS STN TANKS; PACE	83		
			NEW ST & WALKERS RD	SUNOCO INC.	113					FUEL TANKS; PACE	81	DS	
			GUELPH LN & FAIRVW	SUNOCO INC.	114					FUEL TANKS; PACE	81	DS	
	2	5	S.D.S. BURLINGTON	INTERPROVINCIAL PIPE LINE LTD	713	R	A	3	7	MAIN LINE	58	CS	
	4	4	WALKERS LINE RD	SUN CANADIAN PIPELINE CO LTD	014	R	A	2	15	8"-12" COATED	53		
	4	71	SDS	TRANS-NORTHERN PIPELINES INC	376	R		6	10	10 IN COATED	55		
ESQUESING	3	26	CHURCHILL RD S	UNION GAS LTD	225	C	A	1	2	REGULATOR STN PPG	80		
	4	12		UNION GAS LTD	111	R	A	2	7	6" GAS MAIN	76		
	8	15	MAIN ST S	UNION GAS LTD	227	C	A	1	4	REG STN #21X-401R	80		
HALTON HILLS		259	GUELPH ST	PETRO CANADA	149	C	A	5	3	GAS STN TANKS; PACE	84		
	4	10	HUTTONVILLE	BELL CANADA	048	C	A	1	5	E.C.M.	82		
	7	27	LIMEHOUSE	BELL CANADA	047	C	A	1	5	E.C.M.	82		
HAMILTON			BARTON & GRAY	SUNOCO INC.	115					FUEL TANKS; PACE	81	DS	
MILON	3	9	MILTON GATE	UNION GAS LTD	247	C	A	1	5	REG STN 19X-301	81		
MILTON			STEELES AVE	PETRO CANADA	141	C	A	10	4	GAS STN TANKS; PACE	84		
MISSISSAUGA	11	9	TENTH LN	UNION GAS LTD	172	C	A	4	28	TRAFALGAR COMP STN	73		
NELSON	1	4	3KM SW OF PALERMO	TRANSCANADA PIPELINES	028	R	A	7	11	20" R206 + 10.07KM	60		
OAKVILLE			HEAD OFFICE	FORD MOTOR CO OF CANADA LTD	100	C	A	8	12	STEAM LINE	68	CC	
			HEAD OFFICE	FORD MOTOR CO OF CANADA LTD	101	C	A	4	8	GASOLINE TANKS	68	CC	
			S.D.S. GULF REFINRY	INTERPROVINCIAL PIPELINE LTD	715	C	A	2	16	BRONTE TERMINAL	70	CS	
			TRALGAR ST	OAKVILLE HOSPITAL	001	C	A	7	10	HOSPITAL STORG TANK	78	CS	
				SHELL CANADA, MARKETING	012					MARKETING PLNT; PACE	76	DS	
			KERR & PRINCE CHUCK	SUNOCO INC.	112					FUEL TANKS; PACE	81	DS	
		175	COUNTRYSQUIRE	PETRO CANADA	186	C	A	2	21	GAS STN TANKS; PACE	82		
		350	SPEERS RD	PETRO CANADA	185	C	A	8	24	GAS STN TANKS; PACE	82		
		455	TRAFALGAR RD	IMPERIAL OIL LTD MARKETING	034					FUEL TANKS; PACE	81	DS	
		459	KERR ST	PETRO CANADA	176	C	A	8	6	GAS STN TANKS; PACE	83		
		497	MAPLEGROVE AVE	GULF OIL CANADA LTD, MARKETING	019					FUEL TANKS; PACE	82	DS	
	3	34	S.D.S. S/O Q.E.W.	INTERPROVINCIAL PIPE LINE LTD	714	R	A	10	21	16" BRONTE LATERAL	79	CS	
OAKVILLE CTY			HWY 5 & 9TH	UNION GAS LTD	178	R	A	3	2	RECT DIST HAMILTON	53		
			REGENT REFINERY	REGENT REFINERY	001		A	23		MARKETING AREA PLNT	76	IP	
			REGENT REFINERY	REGENT REFINERY	002		A	13		MARKETING AREA PLNT	76	IP	
			REGENT REFINERY	REGENT REFINERY	003		A	22		MARKETING AREA PLNT	76	IP	
			REGENT REFINERY	REGENT REFINERY	004		A	15		S TANK FARM PLANT	76	IP	
			REGENT REFINERY	REGENT REFINERY	005		A	28		S TANK FARM PLANT	76	IP	
			REGENT REFINERY	REGENT REFINERY	006		A	32		S TANK FARM PLANT	76	IP	
			REGENT REFINERY	REGENT REFINERY	008		A	*		S TANK FARM PLANT	76	IP	
			REGENT REFINERY	REGENT REFINERY	009		A	*		S TANK FARM PLANT	76	IP	
			REGENT REFINERY	REGENT REFINERY	011		A	16		S TANK FARM PLANT	76	IP	
			REGENT REFINERY	REGENT REFINERY	012		A	13		N TANK FARM PLANT	76	IP	
			REGENT REFINERY	REGENT REFINERY	013		A	14		N TANK FARM PLANT	76	IP	
TRAFALGAR	3	9	STEELES AVE	UNION GAS LTD	224	C	A	1	2	REGULATOR STN PPG	80		
	3	25	3RD LN RD	UNION GAS LTD	223	C	A	1	7	REG STN # 18Y-202R	80		
TRAFALGAR TWP	1	15	S.D.S. OAKVILLE	INTERPROVINCIAL PIPE LINE LTD	716	R	A	3	9	MAIN LINE	74	CS	
	2	30	HIGHWAY 25	SARNIA PRODUCTS PIPELINE DIV	011	C	A	6	11	10 & 12 IN COATED	56		

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APPENDIX I — Directory of Known Electrolysis Coordinating Committees in the United States and Canada As of October 1997

Name of Area	Status
Alberta	Forming
Alabama - Birmingham	Active
Arizona	Active
Australia - New South Wales	Active
- Melbourne	Active
British Columbia	Active
California - Central	Active
- East Bay (Oakland)	Unknown
- San Francisco Bay Area	Active
- Southern	Active
Connecticut	Active
Connecticut- New Haven	Unknown
Colorado - Denver	Unknown
Idaho (Southern)/Oregon (Eastern)	Active
Illinois - Chicago	Active
- O'Hare Airport	Active
- Joliett	Active
Illinois/St. Louis	Active
Indiana	Active
Iowa - Des Moines	Unknown
Kansas - Kansas City Area	Active
Kentucky	Active
Kentucky - Louisville	Unknown
Louisiana - South	Active
Maryland - Central	Active
- Baltimore	Unknown
Massachusetts (All New England States except Conn.)	Active
Michigan	Active

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Milwaukee		Active
Missouri		Unknown
Montreal		Active
Nebraska	- Omaha/Council Bluffs	Active
Nevada - Southern		Active
New Jersey		Active
New York	- Greater NY City	Active
	- Western	Active
	- Eastern	Active
Ohio	- Cleveland	Unknown
	- Columbus	Inactive
	- Central	Active
	- East	Active
	- Northwest	Active
OK, AK, LA, TX		Active
Ontario	-Central	Active
	- Northern	Active
	- Sarnia	Active
Pennsylvania - East		Active
	- Western	Active
	- Pittsburgh	Unknown
	- Suburban Philadelphia	Active
Quebec		Active
Texas - Alamo (Houston)		Forming
	- El Paso	Active
Utah (Intermountain)		Active
Vancouver		Inactive
Washington D.C.		Active
Washington State		Unknown
West Virginia		Active
Wyoming		Active
Youngstown		Unknown

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APPENDIX J — Most Recent Contacts for Known Active Committees
As of Oct. 15, 1997

Society in Alberta for Controlling Electrolysis (1992-93 Officers)
Chairman: Brian Schellenberger
Vice Chairman: Daryl Foley
Secretary-Treasurer: Ken Procyszyn

Brian Schellenberger
Northwestern Utilities Ltd.
4221 - 74 Avenue
Edmonton, AB
T6B 2H5
Canada
403/468-8238
fax: 403/468-8241

Daryl Foley
Norcen Energy Resources Ltd.
715 - 5th Avenue S.W.
Calgary, AB
T0A 1A0
Canada
403/231-0698
fax: 403/231-0877

Ken Procyszyn
Imperial Oil Resources Ltd.
Esso Plaza West
237 - Fourth Avenue S.W.
Calgary, AB
T2P 0H6
Canada
403/237-4383
fax: 403/237-4195

Arizona Corrosion Correlating Committee (3/93)
Virgil L. Johnston, 602/542-3316.

New South Wales Electrolysis Committee (NSWEC) (3/23/92)
Secretary: Bruce Dover
c/o Office of Energy NSW
P.O. Box 536
St. Leonards, NSW 2065
Australia

Victorian Electrolysis Committee, Melbourne, Australia (8/1/91)
Secretary: Bill Attard
Manager Electrolysis
Electrolysis Section
Box 2765 Y GPO
Melbourne, Victoria 3001
Australia

Central California Cathodic Protection Committee (3/93)
Chairman: Ronald C. Robinson, Santa Fe Pacific Pipeline, 714/877-2327, 714/873-5150, 909/873-5120
Vice Chairman: Jerry Core
Secretary: Susan Muggleston, Pipeline Product Inc., 805/833-4343

Jerry Core
Mobil Exploration & Producing
P.O. Box 9989
Bakersfield, CA 93389-9989
805/665-3704
fax: 805/665-3852

Southern California Cathodic Protection Committee (3/93)
Chairman: Chinh Pham, Pacific Bell, 818/578-8707
Vice Chairman: Dave Aldridge, Southern California Gas Co., 714/634-3124
Secretary: Judy Belk, Four Corners Pipeline, 310/428-9368

Connecticut Committee on Corrosion (3/93)
Contact: Tom Steffens
PTS Corrosion Engineering

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38 Barton Hill Rd.
E. Hampton, CT 06424
203/267-8782

Colorado Interference Committee - Rocky Mountain Section (3/93)
Steve Wilkins
1123 W. 3rd Ave.
Denver, CO 80223
303/571-3894

Chicago Committee on Underground Corrosion (1/18/94)

Pat Davis, Chairman
CHICAP/UNOCAL Pipeline
P.O. Box 690
Mokena, IL 60448
708/479-9247

Ray Vervlied, Vice Chairman
Commonwealth Edison Co.
1910 S. Briggs St.
Joliet, IL 60433
815/727-5696

Richard Meszaros, Secretary
Northern Illinois Gas
1844 Ferry Rd. 3-West
Naperville, IL 60563
708/983-8676, ext. 2956

Chicago Region Committee on Underground Corrosion (1993-94 Officers)
Chairman: Ron Kunst
Vice Chairman: Ray Vervlied
Secretary: Rick Meszaros

Ron Kunst
Peoples Gas Light & Coke Co.
122 S. Michigan Avenue,
Rm. 1035
Joliet, IL 60433
Chicago, IL 60603
312/431-47252956

Ray Vervlied
Commonwealth Edison Co.
1910 S. Briggs St.
P.O. Box 190
815/727-5696

Rick Meszaros
Northern Illinois Gas Co.
R&D Building
Aurora, IL 60507
708/983-8676 ext. 2956

Illinois Basin Corrosion Organization (1991-92 Officers)
Chairman: Bill Young
Vice Chairman: Mac Reynolds
Secretary: Jim Shain

Bill Young
SIGECO
20-24 NW 4th St.
Evansville, IN 47741
812/464-4618

Mac Reynolds
Farm Bureau Oil Co.
1200 Refinery Rd.
Mt. Vernon, IN 47620
812/838-8139

Jim Shain
Ashland Pipeline Co.
P.O. Box 713
Mt. Carmel, IL 62863
618/262-4106

Indiana Corrosion Society (1/24/91)
President: Jim Stahlhut
Vice President, Program Committee: Warren Bible, Jr.
Secretary: Mick Thornton

Jim Stahlhut
Indiana Gas. Co.
P.O. Box 519
Franklin, IN 46131
317/736-2978

Warren Bible, Jr.
Buckeye Pipe Line Co.
Lima, OH 45802
419/225-1876

Mick Thornton
Marathon Pipe Line
P.O. Box 34366
Indianapolis, IN 46112
317/290-0481

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Kansas City Area Underground Corrosion Control Coordinating Committee (12/95)

Tom Herd
Western Resources
501 SW Gage
Topeka, KS 66606
913/271-3905

Kentucky Corrosion Coordinating Committee (1991-92 Officers)
Chairman: Jeffery D. Harris
Vice Chairman: Kenneth Graham
Secretary: Samuel L. Vessel
Treasurer: John Skagg

Jeffery D. Harris
P.O. Box 1160
Owensboro, KY 42302
502/926-8686, ext. 2263

Kenneth Graham
City of Elizabethtown
P.O. Box 550
Elizabethtown, KY 42701
502/765-6121, ext. 229

Samuel L. Vessel
Cincinnati Gas & Electric Co.
P.O. Box 960
Cincinnati, OH 45201
513/632-2587

John Skagg
Louisville Gas & Electric Co.
P.O. Box 32020
Louisville, KY 40232
502/627-3014

South Louisiana Corrosion Committee (7/11/95)

Lloyd McQuire
Conoco Pipeline
Lake Charles, LA 318/475-4026

Central Maryland Underground Corrosion Committee (1991-92 Officers)
Chairman: Dave Price
Vice Chairman: Joe Potterfield
Secretary: Tim Rich

Dave Price
Washington Gas
11801 Nebel St.
Rockville, MD 20852
202/624-6325

Joe Potterfield
Baltimore Gas & Electric Co.
Spring Gardens Plant
P.O. Box 1475
Baltimore, MD 21203
301/291-4787

Tim Rich
Transco Gas Pipeline Corp.
11910 Carroll Mill Rd.
Ellicott City, MD 21043
301/465-0960

Massachusetts Committee on Corrosion (4/4/91)

Scott Larson
995 Belmont Street
Brockton, MA 02401

Michigan Electrolysis Committee (3/93)
Chairman: Bryan Arntson
Vice Chairman: Richard Colgan
Secretary: Jim Cotant

Jim Cotant

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Consumers Power Co.
530 W. Willow St.
P.O. Box 30162
Lansing, MI 48909-7662
phone: 517/374-2137
fax: 517/374-2220

St. Louis Corrosion Control Committee (3/93)
Mark Lauber
Laclede Gas Co.
3950 Forest Park Ave.
St. Louis, MO 63108

Southern Nevada Cathodic Protection Coordinating Committee (7/19/95)
Chairman: Doug Kluender
Kern River Gas Transmission Co.
phone: 702/399-1612
fax: 702/399-4277

New Jersey Committee on Corrosion (3/93)
Ken Sliker, 201/289-5000

Western New York State Corrosion Committee (11/23/94)
Chairman: Andrew G. Soloman, New York State Electricity & Gas, Binghamton, NY
Vice Chairman: Diane Clarkson
Secretary: Gary Van Etten

Andrew G. Soloman
NYSEG
4500 Vestal Pkwy. E.
Binghamton, NY 13902
607/762-4711

Diane Clarkson
Columbia Gas Trans.
540 Philo Rd.
Elmira, NY 14903
607/739-4831

Gary Van Etten
Sun Pipe Line Co.
P.O. Box 425
Big Flats, NY 14814
607/562-8431

Eastern New York State Committee on Corrosion (10/12/95)
Chairman: Laurie Bailey-Palmer, Columbia Gas Transmission, 607/724-4531
Vice Chairman: Dick Rivanera, New York State Electric & Gas, 607/724-2433, ext. 253
Secretary: Ken Rotella, Orange & Rockland, 914/577-3011

Joint Ohio Corrosion Committee (Central, Northeast, Western) (2/4/93)

Barth J. Smith
Columbia Gas Transmission Corp.
P.O. Box 6164
Westerville, OH 43081

Central Ohio Committee on Corrosion (4/7/94)
Chairman: Warren Bible Jr.
Vice Chairman: Susan Leonardi
Secretary: Amy L. Thomas

Warren Bible Jr.
Buckeye Pipe Line Co.
1020 Buckeye Rd.
Lima, OH 45804
419/225-1876

Susan Leonardi
Columbus Southern and Power
215 N. Front St.
Columbus, OH 43215
614/464-7406

Amy L. Thomas
Columbia Gas of Ohio
126 Leader St.
Marion, OH 43302
614/382-9277, ext. 234

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SOCE Committees in Ontario (Southern, Sarnia, and Northern) (3/93)
Chairman: Stan Croall, CCMF Engineering, 416/607-0824, fax: 416/607-5343
Southern Technical Committee Secretary: Allan S. Jones

Neil Donaldson
Sun-Canadian Pipeline Co. Ltd.
P.O. Box 470
Waterdown, Ontario L0R 2H0
Canada

Allan S. Jones
Ontario Hydro (N17-A5)
5775 Yonge Street
North York, Ontario M2M 4J7
Canada

Western Pennsylvania Corrosion Control Committee (2/27/96)
Chairman: Alan R. Barker
Vice Chairman: Wayne J. May
Secretary: Timothy C. Dugan

Alan R. Barker
Three Rivers Pipeline
3247-C Old Frankstown Rd.
Pittsburgh, PA 15239
412/327-5420
fax: 412/327-3114

Wayne J. May
Equitable Gas Co.
4 S 9th St.
Pittsburgh, PA 15203
412/553-6061
fax: 412/553-6065

Timothy C. Dugan
Cabot Oil & Gas Corp.
400 Fairway Dr.
Coraopolis, PA 15108
412/299-7037
fax: 412/299-7031

Eastern Pennsylvania Corrosion Committee (3/93)
Dave Steinmetz
UGI Utilities
P.O. Box 13009
Reading, PA 19612
215/371-5487

West Virginia's Corrosion Control Coordinating Committee (9/18/92)
Chairman: Mark Linville, 304/623-8425
Vice Chairman: Don Sisson, 304/347-0562
Secretary-Treasurer: Jim Herron, 304/623-8648

Wyoming Underground Corrosion Committee (3/93)
Chairman: Jerry Wismer, Questar
Past Chairman: Dennis Howard

Dennis Howard
P.O. Box 1087
Colorado Springs, CO 80944
719/520-4232

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