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CENTER FOR CREATIVE LEADERSHIP GREENSBORO NC

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LOOKING GLASS, INC. VOLUME V. OUTSIDE INFORMATION NOTEBOOK. OPE--ETC(U)

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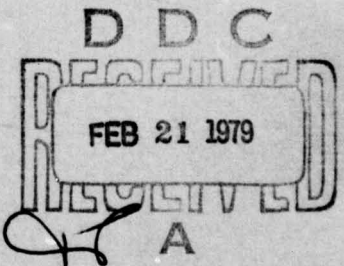
Operational Manual
Volume V

Looking Glass, Inc. Outside Information Notebook

Michael M. Lombardo
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6) LOOKING GLASS, INC. Volume V.
OUTSIDE INFORMATION NOTEBOOK
Operational Manual,

10) MICHAEL M./LOMBARDO,
MORGAN W./MCCALL, JR.
DAVID L./DEVRIES

11) 1978

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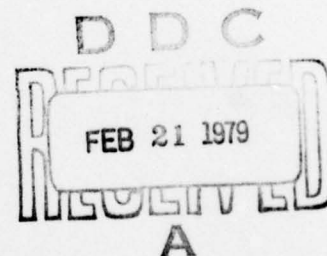
OPERATIONAL MANUAL VOLUME V

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Greensboro, NC.

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Creative Leadership.

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The Center for Creative Leadership is a nonprofit, educational institution founded by the Smith Richardson Foundation. The Center's primary goal is to translate the knowledge of the behavioral sciences into useful applications for leaders. Toward this goal, the Center conducts and reviews relevant research and uses these findings in a variety of programs.

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DESCRIPTION OF VOLUMES

△ Looking Glass is a simulation of a glass manufacturing corporation. There are twenty positions, ranging across three divisions and four levels (Plant Manager, Director, Vice-President, and President). The divisions face different environments, ranging from volatile to stable. Looking Glass is, in a word, typical--the organizational type, structure and environments are common. All problems contained in the simulation are based on actual events.

Volume I of the simulation materials is divided into four sections. Section I describes the development of Looking Glass. Included are the chronology of what occurred from original idea to final pretest run and a summary of assumptions and biases related to constructing a realistic management simulation. The next section discusses research issues such as the experimental modes built into the design, possible manipulations, limitations of the simulation, measurement strategies, and preliminary hypotheses. The third section outlines training uses of the simulation, including one detailed example of a training program. The final section explains the nuts and bolts of running the simulation. This section and the appendices that follow enable users to refer to staffing and administrative necessities.

Volumes II through IV contain the simulation materials. Volume II contains all memos relating to the Advanced Products Division, and also includes organization-wide corporate memos, and all memos to the President. Volume III contains all memos relating to the Commercial Glass Division, and Volume IV, all memos concerning the Industrial Glass Division.

▷ Volume V contains standardized responses to the most commonly asked questions during runs of Looking Glass. The responses are organized by division, and include responses for corporate level problems. Guidelines and procedures for the simulation controller explain how to respond to requests and how to record the responses. ✕

A subsequent volume (VI) will contain a complete listing and analysis of all problems the participants faced.

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NOTICE

The material contained herein relates to a simulation of managerial performance developed by the Center for Creative Leadership pursuant to a contract with the Office of Naval Research. The context of the simulation is a fictitious corporation in the American glass industry. Any points of similarity between the simulation and an existing glass company are purely coincidental.

The simulation is an intensive exercise, and users are cautioned that a risk to participants exists. The Center for Creative Leadership assumes no responsibility whatsoever for any injury that may result from the use of the simulation by any other organization or individual.

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I. THE SIMULATION CONTROLLER'S ROLE: DO'S AND DON'TS

The following materials contain responses to the most commonly asked substantive questions during runs of Looking Glass. There are several general guidelines for responding to these requests. First, the information given should be accurate, or at least plausible. If, after checking this manual and relevant materials, you haven't the foggiest idea of how to answer, avoid answering. Remember, Looking Glass is only a day in the life of the corporation. Your eventual response might be that the information will take several days to put together, that the person who knows is on vacation this week, that the computer fouled up or the data disc has been misplaced. Again, try to make any excuses realistic and consistent. Don't tell a participant that the Controller is on vacation, then turn around and answer another request in the role of Controller.

Second, all responses should be in-role. Participants will address mail to or call a specific person, be that person a ghost subordinate, a Looking Glass staff member, or an outsider. Usually the request will be in response to a memo (or memos) from which the question originated. You should then assume the role of the appropriate ghost. How would this person reply? By phone or by memo? Fast or slow? Precisely or evasively? Consider, for example, the relationship between the ghost and the participant requesting information. A ghost subordinate is likely to respond differently from a ghost peer.

Third, responses should not create a crisis. There is always a temptation to tell a Plant Manager that the plant has just burned to the ground, or that the hourly employees have gone on strike. Don't do it unless the appearance of a crisis is designed specifically as a research or training intervention. Participants were promised there would be no tricks. In addition, the crisis will change their behavior in ways that will affect any research or training data to be collected. So, resist temptations to jazz up the simulation.

Fourth, don't deliberately mislead participants. Try to answer their questions as clearly and directly as possible. If a question is unclear, feel free to respond with a request for clarification rather than by introducing information that may be incorrect. For instance, the Director of Manufacturing, CGD, might ask how much soda ash is used each day. It will make a big difference if the answer you give is a division total or a plant total. Rather than risk misleading, you might ask the Director which he wants, or give both clearly identified.

Fifth, give priority to information requests (1) pertinent to important problems in the simulation and (2) that ask for information that is not already in the simulation. This is obviously a judgment call, requiring intimate familiarity with the simulation contents.

Sixth, when called about a specific memo for which there is no further information, confirm the content of the memo. For example, if someone in APD asks Bond Telephone if the corporation is demanding a 10% price cut, answer yes. Give no additional information.

Seventh, sometimes participants call to use you as a sounding board. It is perfectly acceptable to play this role, discussing what is already known, as long as you provide no new information and/or solutions.

Eighth, if a participant requests information from the wrong position (e.g., wants to talk with EPA about information only a Looking Glass department has), do not direct them to the right position. On the other hand, many positions have access to basic information. For example, the Auto Glass Plant Controller, Division Controller, Corporate Controller, and Corporate Purchasing could all tell a participant how much soda ash is used by Auto Glass and what it costs. The rule of thumb is to limit your response to what a particular position would formally know--the Plant Controller of Auto Glass can only answer for Auto Glass; the Division Controller for IGD; Corporate Purchasing and the Corporate Controller know all present data.

Ninth, no position outside the simulation knows about any new developments (those contained in other sections of this volume.) For example, the Director of Corporate Purchasing doesn't know that American Material is raising soda ash from \$33.25 to \$35.50. He or she knows that American is moving to Wyoming because that is contained in current memos, but a request about the price of soda ash elicits a response of \$33.25.

This may seem deceptive, but it isn't. Ghosts do not run down information for participants about other problems; they only respond with what they know. It is the participant's job to run down relevant information and only a representative of American Materials knows about the price increase.

Tenth, don't deny new information. If a participant calls in to tell you that American has raised its price and wants to know the impact on cost, go ahead and answer, "That raises costs \$595 per day, or \$53,460 per quarter," depending on the question asked (see CGD #1).

Eleventh, until you are intimately familiar with the simulation contents, always flip to the appropriate item in this volume. Doing so will help you maintain the schizophrenia necessary to play this role. Otherwise, you might inadvertently give out information that is known by a ghost role you played two minutes ago, but is not known by the one you are now playing.

Twelfth, when questions of a substantive nature arise for which there is no standard response, tell the participant you need time to check and ask what the memo number is. Look up the memo(s) in question and decide if you have any further information. Generally speaking, you

should respond that there is no further information. Integrating the various bits of information is the participants' responsibility, not yours. Resist any urge to steer them to data already available. As a rule of thumb, respond to the questions asked and volunteer nothing.

Thirteenth, when participants ask for information already in their possession, you have two alternatives. If you provided this information as a ghost (i.e., the memo in question was written by you as the Corporate Legal Director), reply "I sent you this in memo #____," and let them look it up. Otherwise, provide whatever information you would know as part of your role.

Although it is irritating to provide information that participants should already know, it is also realistic. To discourage their calling every time they have trouble finding something, respond slowly. The tack we have used is to say "I'll have to look it up," and not respond for twenty or thirty minutes.

The administrative role of answering information requests can be a great deal of fun. Remember that the simulation represents only a day, although a very busy one. Don't get frustrated or pressured if the action is hot and heavy. In the most efficient of organizations, responding to information requests takes time. If you don't get around to all of them, that's reality.

We do suggest that records be kept of the kinds of information requested and the responses given (see Appendix A). Over time, the records will supplement this manual, and repeated requests might eventually become part of the simulation materials. In addition, the requests indicate what the participants' priorities are and if they are spending time with the important problems. They also indicate whether or not available information (that which is already in someone's in-basket) is being communicated.

II. PROCEDURES FOR RESPONDING TO REQUESTS

Standard Request Procedure (for phone calls)

1. Request received.

If a manual switchboard is used, the operator takes down the name and number of the position calling, who the participant wishes to speak with, the topic and the memo reference. This is passed on to you on a note (for example, #6 called the Plant Superintendent about aluminum cost, APD-10). The switchboard operator takes messages only. Providing information ties up the phone system and should not be done.

If an automatic telephone system is used, participants can contact one another directly. To request outside information, they are given the telephone number of the simulation controller. You answer this phone and assume whatever ghost role is necessary.

2. Check both the memo and the Outside Information Notebook to decide how to respond.

3. Call back in role.

4. Remember, provide information, not solutions.

5. Record the request immediately.

Standard Request Procedure (for memos)

1. Decide if you need to respond. Many memos confirm meetings and other requests and require no answer.

2. If you decide to respond, respond by phone if the matter is urgent or complicated; by memo, if the request is simple.

3. Record either response immediately.

Non-Standard Request Procedure

1. Once you receive the request, respond with a clarifying phone call. Ask which memos are in question and get the participant to specify the information desired.

2. If you are certain how to respond, do so. If not, break off the phone call until you can decide.

3. As a rule of thumb, you should have no further information. Integrating bits of information is the participants' responsibility. Only respond when you have information that the participant doesn't (or can't get in the system).

III. PROCEDURE FOR REQUEST RECORDS

Standard Requests

To fill in a Standard Information Request Record form, note (1) the telephone number of the position, (2) the subject, and (3) the medium used (phone or memo).

1. For the telephone number of the position, refer to the Looking Glass organizational chart. Each position has a number (the President is 1, the Vice-President of APD is 2, and so forth). Note the telephone number in the first column.

2. The subject can either be a key word description (arsenic release, strike at Cyborg, auto glass machinery replacement) or the problem code (the codes for the items listed above are APD #5, CGD #2, and IGD #3.) The easiest method is to glance at the Table of Contents page, but a key word description will suffice as long as you follow the terminology used in the Table of Contents.

3. Check whether the request came by telephone or memo.

Non-Standard Requests

Fill in the Non-Standard Information Request Record only if you think the information requested is important enough to be included in the Outside Information Notebook. This form will enable the authors to update the notebook, making it more useful.

IV. HOW TO USE THIS MANUAL

On the next page is the Table of Contents for the corporate and divisional problems included in this manual. (Each section of the Tables of Contents is repeated in its respective place.) When a request is made, consult the Table and flip to the appropriate page.

The sections of the manual have been color coded as follows:

Table of Contents - cherry

Corporate - white

APD - yellow

CGD - green

IGD - blue

Appendices - white

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1. SODA ASH

This is a complex question. Make certain that what you answer is what is requested. Questions of clarification will often be necessary. Remember, there are no substitutes for soda ash.

This section contains all divisional figures for soda ash. The divisional figures are repeated in the division sections.

1. SODA ASH - ADVANCED PRODUCTS DIVISION

Memo Reference: APD-111, IGD-57

Your Role: Corporate Purchasing or Corporate Controller

Last Quarter

	<u>Cost/Ton</u>	<u>% Cost/Ton of Glass</u>	<u>Tons Used Per Day</u>	<u>Total¹ Cost</u>
Optical Fibers	\$33.35	6%	33	\$101,000
Integrated Circuits	\$33.35	12%	20	\$ 61,000
Capacitors	\$33.35	10%	16	\$ 49,000
Division			69	\$211,000

AVERAGE DAILY COST - \$2,350

With New Supplier (Average Cost - \$36.40/Ton)

Average Daily Cost - \$2,570 (+\$220)

Quarterly Cost - \$231,300 (+\$20,300)

Current Supplier

Mountain Minerals: Brevard, North Carolina

Alternative Suppliers

Atco: Flagstaff, Arizona - \$36.50

Sand: Buffalo, New York - \$36.35

If information is requested about CGD's sources, refer to CGD-#1,2,3

Inventory

6-11 days

¹ Includes transportation costs

1. SODA ASH - COMMERCIAL GLASS DIVISION

Memo Reference: CGD-30, CGD-95

Your Role: Corporate Purchasing or Corporate Controller

Last Quarter

	<u>Cost/Ton</u>	<u>% Cost/Ton of Glass</u>	<u>Tons Used Per Day</u>	<u>Total¹ Cost</u>
Lighting Products	\$33.50	51%	250	\$ 754,290
Flat Glass	\$33.25	50%	<u>264</u>	<u>\$ 790,000</u>
Division			514	\$1,544,290

AVERAGE DAILY COST - \$17,160

With New Supplier (Average Cost - \$36.40/Ton)

Average Daily Cost - \$18,755 (+\$1,595)

Quarterly Cost - \$1,687,950 (+\$143,660)

Current Suppliers

Cyborg: Koshkonong, Missouri

American Materials: Scottsville, Kentucky

Alternative Suppliers

Atco: Flagstaff, Arizona - \$36.50

Sand: Buffalo, New York - \$36.35

Inventory

Lighting Products (Joplin, Missouri) - 5 weeks

Flat Glass (Cairo, Illinois) - 4 weeks

¹ Includes transportation costs

1. SODA ASH - INDUSTRIAL GLASS DIVISION

Memo Reference: IGD-22, IGD-57

Your Role: Various plant officials, Division Controller,
Corporate Purchasing, and Corporate ControllerLast Quarter

	<u>Cost/Ton</u>	<u>% Cost/Ton of Glass</u>	<u>Tons Used Per Day</u>	<u>Total¹ Cost</u>
Auto Glass	\$33.60	35%	150	\$453,600
Glass Piping	\$36.20	6%	73	\$238,000
Specialty Glass	\$36.10	9%	<u>85</u>	<u>\$276,300</u>
Division			308	\$967,900

AVERAGE DAILY COST - \$10,755

With New Supplier (Average Cost - \$36.40/Ton)Auto Glass - Average Daily Cost - \$5,460 (+\$420)

Quarterly Cost - \$481,320 (+\$37,800)

Division - Average Daily Cost - \$11,211.20 (+\$456.20)

Quarterly Cost - \$1,009,008 (+\$41,108)

¹ Includes transportation costs

2. BOTTLE GLASS PURCHASE

Memo Reference: PRES-14
Your Role: Corporate Controller

How to finance?

If financed through debt, will raise debt-equity ratio to 86.0.
If financed through equity, will require a major stock issue.
Can't finance through cash. Don't have it.

How long to return our investment?

Pay back from profits in five years is a good rule-of-thumb.

3. BOTTLE GLASS OFFER

Memo Reference: PRES-14
Your Role: Requested Officer at Cascade

Data about Cascade

Sales: \$128 million

Operating Profit Margin: 13.2%

Net Income: \$7.2 million

Net Income as a % of Sales: 5.6%

Debt/Equity Ratio: 36.9

If the participant offers \$42 million, accept, say thank you and allude to Looking Glass sending in a task force next week to handle the transition.

If the participant says Looking Glass has decided not to purchase Cascade, try to find out why. Make no concessions.

If the participant wants to bargain, ask for his or her bargaining points, then say you'll consider them and get back in touch.

CORPORATE

4. INDUSTRY AVERAGES ON FINANCIAL RATIOS

Memo Reference: CORP-3
Your Role: Corporate Controller

RATIOS

	<u>Commercial or Industrial</u>	<u>Advanced Products</u>
Debt/Equity	51.5	42.0
Return on Equity	11.7%	11.4%
Return on Assets	6.0%	4.7%
Receivables Turnover	9.91	7.3
Cost of Goods Sold as a % of Sales	77.64%	71.2%
R & D as a % of Sales	.75%	4.17%
Operating Profit Margin %	12.11%	14.08%

ADVANCED PRODUCTS DIVISION
(YELLOW)

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ADVANCED PRODUCTS DIVISION

15

1. SODA ASH

Memo Reference: APD-111, IGD-57

Your Role: Corporate Purchasing, various plant officials,
Division Controller, Corporate Controller

Last Quarter

	<u>Cost/Ton</u>	<u>% Cost/Ton of Glass</u>	<u>Tons Used Per Day</u>	<u>Total¹ Cost</u>
Optical Fibers	\$33.35	6%	33	\$101,000
Integrated Circuits	\$33.35	12%	20	\$ 61,000
Capacitors	\$33.35	10%	16	\$ 49,000
Division			69	\$211,000

AVERAGE DAILY COST - \$2,350

With New Supplier (Average Cost - \$36.40/Ton)

Average Daily Cost - \$2,570 (+\$220)

Quarterly Cost - \$231,300 (+\$20,300)

Current Supplier

Mountain Minerals: Brevard, North Carolina

Alternative Suppliers

Atco: Flagstaff, Arizona - \$36.50

Sand: Buffalo, New York - \$36.35

If information is requested about CGD's sources, refer to CGD-#1,2,3

Inventory

6-11 days

¹ Includes transportation costs

ADVANCED PRODUCTS DIVISION

2. SALE OF INTEGRATED CIRCUITS PLANT

Memo Reference: PRES-17

Your Role: Corporate Controller or Division Controller

(a) If we keep the plant and continue present lines?

This product line has not been profitable. During its years of operation, it has made \$.6 million, lost \$1.2 million and lost \$3.0 million. Running two shifts, estimated loss for the year is \$.7 million, continuing present product lines. Running three shifts, projected loss is \$1.2 million.

Test market of new chip was quite profitable - over 40%. If production of new chip is phased in, we anticipate a profit, but we don't know how much.

(b) If we sell the plant?

The book value of the plant is \$5.5 million. Specialty Glass must absorb a cost of \$480-600 thousand for the glass blanks they now receive from the plants.

Our tax disadvantage is between \$250-500 thousand this year.

Note: Simply cite the facts. What they mean is not for you to say.

(c) Why is the cost of goods sold 97%?

Because the sales price had to be drastically discounted in order to sell them.

3. INTEGRATED CIRCUITS OFFER

Memo Reference: PRES-17

Your Role: Requested official, Silicon, Inc.

If the \$5 million offer is accepted, say thank you and allude to sending in a task force next week to handle the transition.

If rejected, try to find out why. Make no counter offers, but don't close the door.

If the participant wants to bargain, ask for his or her bargaining points, then say you'll consider them ("That sounds like something we may want to consider" is sufficiently amiable, yet noncommittal.)

ADVANCED PRODUCTS DIVISION

17

4. PROFIT PROJECTIONS - NEW INTEGRATED CIRCUITS CHIP

Memo Reference: APD-80, APD-112, APD-113
Your Role: Market Research

These profit projections shouldn't be taken too seriously. They are linear projections based on the test marketing of the new chip.

Next Year

Sales: \$14.2 million

Cost of Goods Manufactured: \$6.85 million

Operating Profit Margin: 37.6%

Net Profit: \$2.8 million

5. ARSENIC RELEASE - INTEGRATED CIRCUITS

Memo Reference: APD-16
Your Role: Quality Control or Plant Superintendent

There is no arsenic release. I sent this to you in a memo. Is Product Development complaining again?

6. RADIATION LEAK - CAPACITORS

Memo Reference: APD-67
Your Role: Plant Superintendent

Slight radiation leak. One employee received too much dosage - not a medical problem. Employee given a week off and is appreciative.

7. RAW MATERIALS - CAPACITORS

Memo Reference: OPEN
Your Role: Plant Superintendent or Administrative Assistant

Can't say exactly what is causing raw materials problem. Wastage (due to improper screen), shipping problems, breakage, and possible theft are all possibilities.

8. ALUMINUM COST - CAPACITORS

Memo Reference: APD-10
Your Role: Plant Superintendent or Administrative Assistant

Aluminum is only used in glass capacitors, and is two percent of total raw materials cost. Aluminum cost us an extra \$1,500 last quarter.

9. POLLUTION - NEW OPTICAL FIBERS PLANT

Memo Reference: APD-21

Your Role: Manufacturing and Engineering

Note: Only this role has this information. Any other role knows nothing about the problem.

The new plant didn't pass inspection because fluoride emissions were too high. The problem is the supplier's - the gas melters did not meet contract specifications. If they had, we would have passed inspection.

EPA is being reasonable. They are aware of our excellent record and that the problem was not caused by any negligence on our part. We still have two months to comply, and are not in violation until we open.

Give opinion only if asked: A long-range solution to this problem would be to use electric melters. They cost \$1.5 to 2 million more per melter, but are pollution free.

ADVANCED PRODUCTS DIVISION

10. TEMPORARY EMPLOYMENT - OPTICAL FIBERS

Memo Reference: APD-40

Your Role: Administrative Assistant or Plant Superintendent

The paymaster was going on vacation, so pay checks to hourly employees came out two days early; 13 checks were issued to temporary employees who are not at plant and no one on the floor knew them.

Looks like a ripoff. Total cost - \$6,000. A foreman who has worked for us eight years is the culprit. Do you want to prosecute?

11. RAW MATERIALS - OPTICAL FIBERS

Memo Reference: APD-32, APD-110

Your Role: Administrative Assistant or Plant Superintendent

We've been invoiced and paid for raw materials that we haven't received. Problem may be in plant, in transit, or with one supplier - Atland (supplies sand).

12. VOLTAGE FLUCTUATIONS - OPTICAL FIBERS

Memo Reference: APD-32

Your Role: Administrative Assistant or Plant Superintendent

Voltage fluctuation due to problem outside our control. Public utility we use, Nike Power, is having problems. What kind of pressure do you want to put on them?

ADVANCED PRODUCTS DIVISION

13. BREAKDOWN OF BALANCE SHEET

Memo Reference: CORP-25D
Your Role: Corporate Controller

BALANCE SHEET--APD

MOST RECENT YEAR
(In Thousands)

ASSETS

Cash	\$ 2,930	
Receivables	5,630	
Inventories	<u>3,010</u>	
Total Current Assets		\$11,570
Plant & Equipment	40,000	
Less Accumulate Depreciation	<u>13,600</u>	
Net Plant & Equipment		26,400
Other Assets		<u>10,030</u>
TOTAL ASSETS		\$48,000

LIABILITIES AND NET WORTH

Current Liabilities	\$ 3,400	
Long-Term Debt	<u>16,408</u>	
Total Debt		\$19,408
Investment from Parent	20,400	
Retained Earnings	<u>8,192</u>	
Total Stockholders Equity		\$28,592
TOTAL LIABILITIES AND NET WORTH		\$48,000

ADVANCED PRODUCTS DIVISION

14. AFFIRMATIVE ACTION

Memo Reference: PRES-7, APD-19

Your Role: Corporate Personnel or Plant Personnel

No further information is available concerning the proposed lawsuit.

Looking Glass at one time had a corporate-wide task force to formulate a specific affirmative action plan. The chairperson of the task force has since left the company and the task force was disbanded. In the meantime, federal guidelines should be adhered to--namely, that the proportion of protected class employees in Looking Glass should be roughly comparable to that of the larger population of the community in which our plant resides.

This means (1) that hourly workers should be hired more or less on a quota basis and (2) that professionals and managers should be hired according to the qualified applicant pool (e.g., if 2% of black applicants have the necessary qualifications, then 2% of hires should be black.)

No further breakdown of data is possible at this time. APD clearly has problems with both female and minority representation in management and professional jobs. Every effort should be made to improve APD's position.

15. BOND TELEPHONE

Memo Reference: APD-64

Your Role: Corporate Legal Director

Joining the board of Bond Telephone is a political matter. It is not illegal.

COMMERCIAL GLASS DIVISION

(GREEN)

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COMMERCIAL GLASS DIVISION

1. SODA ASH USAGE AND SUPPLIERS

Memo Reference: CGD-30, CGD-95

Your Role: Plant Superintendent, Flat or Lighting Corporate
Purchasing, Division Controller, Corporate Controller

LIGHTING PRODUCTS

Tons of Soda Ash Used Per Day: 250Current Supplier: Cyborg: Koshkonong, MissouriCurrent Price: \$33.50 per tonOccasional Supplier: American Materials: Scottsville, Kentucky
\$35.00 per tonStatus: Cyborg has potential strike (see CGD-2, this manual).
On hand, roughly five weeks supply at plant or in route.

FLAT GLASS

Tons of Soda Ash Used Per Day: 264Current Supplier: American Materials: Scottsville, KentuckyCurrent Price: \$33.25 per tonOccasional Supplier: Cyborg: Koshkonong, Missouri
\$35.00 per tonStatus: American Materials is moving to Wyoming (see CGD-3,
this manual). Price will increase to \$35.50 per ton.

Daily Price Increase - \$594

Quarterly Price Increase - \$53,460

ALTERNATIVE SUPPLIERS

Either plant could purchase soda ash from either of the following:

Atco: Flagstaff, Arizona	\$36.50 Per Ton
Sand: Buffalo, New York	\$36.35 Per Ton

AVERAGE DAILY COST - \$17,160

With New Supplier (Average Cost - \$36.40/Ton)
 Average Daily Cost - \$18,755 (+\$1,595)
 Quarterly Cost - \$1,687,950 (+\$143,660)

COMMERCIAL GLASS DIVISION

2. POSSIBLE STRIKE AT CYBORG

(SODA ASH SUPPLIER TO LIGHTING PRODUCTS)

Memo Reference: CGD-30

Your Role: Representative of Cyborg
(or Plant Superintendent)

Negotiations are continuing. The Cyborg Company line is: There are still some significant points of disagreement; there is hope they can be resolved. The strike deadline is three days from today. Production will continue using management personnel.

3. AMERICAN MATERIALS - MOVING OFFICES

(SODA ASH SUPPLIER TO FLAT GLASS)

Memo Reference: CGD-95

Your Role: Representative of American Materials

The price of soda ash will increase due to shipping from Wyoming. Estimate: from current \$33.25/ton to \$35.50/ton. This will be offset by \$.50 to \$1.00/ton reduction when efficient new production facilities are completed (6-8 months).

American does not anticipate a service interruption. Can service all Flat Glass soda ash needs. American can accept new clients outside of CGD if new orders do not exceed 60 tons/day. In 6-8 months, additional capacity will be available.

COMMERCIAL GLASS DIVISION

4. RAW MATERIALS USAGE AND PRICES

Memo Reference: OPEN
Your Role: Corporate Purchasing

LAST QUARTER (90 DAYS)

LIGHTING PRODUCTS

		<u>Cost/Ton</u>	<u>% Cost/Ton of Glass</u>	<u>Tons Used</u>	<u>Total¹ Price Paid</u>
Sand	74%(*)	\$ 5.00	40%	118,320	\$591,600
Soda Ash	14%	\$ 33.50	51%	22,516	\$754,390
Limestone	10%	\$ 6.00	6%	14,790	\$ 88,740
Arsenic	0.1%	\$200.00	2%	148	\$ 29,580

Balance is cullet (broken glass) generated by the production process itself.

FLAT GLASS

Sand	74%	\$ 5.20	42%	127,615	\$663,600
Soda Ash	14%	\$ 33.25	50%	23,759	\$790,000
Limestone	10%	\$ 5.50	6%	17,236	\$ 94,800
Other Mat.	0.5%	\$200.00(Av.Cost)	2%	158	\$ 31,600

Balance is cullet. For many environmental products, small amounts of expensive additives are used.

(*) % By Weight/Ton of Glass

¹Price Includes Transportation Costs

DO NOT VOLUNTEER INFORMATION BEYOND
WHAT IS SPECIFICALLY ASKED FOR

5. POTENTIAL TRUCK STRIKE - FLAT GLASS

Memo Reference: CGD-61
Your Role: Plant Superintendent

Negotiations in the trucking firm have broken down. A strike is quite likely. Past experience is that independent truckers and other trucking firms will not help us during a strike.

Rail service is viable. We have requested estimates. Again, from past experience, we know that shipping by rail increases breakage 10-15%. Rail service is also considerably less reliable than trucking has been. We can expect an increase in shipment delays and errors.

6. POLLUTION - LIGHTING PRODUCTS

Memo Reference: CORP-46
Your Role: Corporate Legal

Documentation from EPA has been forwarded to DIR-PD, CGD (should arrive today or tomorrow). This gives the technical details of the emissions and their long-term effects.

Can appeal compliance order if:

- (a) DIR-PD, CGD feels the data fail to prove alleged linkage between emissions and environmental damage;
- (b) Solid case can be made for extending the deadline, or;
- (c) Compliance is technically or financially unfeasible.

COMMERCIAL GLASS DIVISION

7. NATIONAL BUILDING SUIT

Memo Reference: CGD-28

Your Role: Representative of National
(e.g., Vice-President, Construction Supply Division)

Case will come up in ten days. National will not admit publicly to improper installation of panel. Will settle out of court for 50%--to save the hassle of court costs and because of a long standing good relationship with Looking Glass.

If Looking Glass refuses settlement, National will go to court. Publicity may "force" National to change suppliers (they now buy about 73.5 million square feet annually from CGD).

National stance is adamant: 50% or go to court. If Looking Glass representative refuses, suggest that they have their lawyers contact your lawyers. Remember, negotiations with CGD have already taken place on this matter. National feels generous in offering the 50%.

8. HEAT RESISTANT LIGHT BULB CASINGS

Memo Reference: CGD-35

Your Role: Senior Research Specialist

Increasing heat resistance involves addition of boric acid and higher melting temperatures (2640°F. heat resistant).

This will increase cost of materials and energy by about 15% over cost of normal bulb casings.

COMMERCIAL GLASS DIVISION

9. SALES/MARKETING - PERSONNEL AND BUDGET

Memo Reference: CORP-74

Your Role: Corporate Personnel (for personnel and average salary)
Corporate Controller (for budgets)PERSONNEL

Director, Sales and Marketing (\$74,000)

<u>Position</u>	<u>District</u>				<u>Average Salary</u> (includes commissions where appropriate)
	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	
District Salesmanagers	1	1	1	1	\$50,000
Area Salesmanagers	3	3	3	3	40,000
Sales Representatives	7	10	11	6	25,000
Technical, Clerical, & Administrative	<u>11</u>	<u>12</u>	<u>13</u>	<u>10</u>	11,000
Totals (by district)	22	26	28	20	

Division Total - 96

Marketing Manager	1	\$50,000
Market Analysts	2	40,000
Market Research Specialists	2	40,000
Research Assistants, Clerical & Adminis- trative	6	10,000

Total - 11

BUDGET (selling expense)

	<u>Sales</u>	<u>Marketing</u>	<u>Sales & Marketing</u>
Salaries & Commissions	\$1,944,000	\$270,000	\$2,214,000
Operating Expenses	745,000	241,000*	986,000
TOTALS	\$2,689,000	\$511,000	\$3,200,000

*Annual advertising budget is \$141,000. This is concentrated in trade journals, but includes two \$25,000 ads in a major business weekly. The entire advertising budget is allocated to Flat Glass products. \$30,000 is uncommitted for the current fiscal year.

COMMERCIAL GLASS DIVISION

10. PRODUCT DEVELOPMENT - PERSONNEL AND BUDGET

Memo Reference: CORP-75

Your Role: Corporate Personnel (for personnel and average salary)
Corporate Controller (for budgets)PERSONNEL

<u>Position</u>	<u>Number</u>	<u>Average Salary</u>
Director, Product Development	1	\$65,000
Project Managers	3	35,000
Senior Research Specialists	4	35,000
Research Specialists	4	25,000
Documentation Specialist	1	20,000
Technical Specialists	10	17,500
Clerical & Administrative	<u>9</u>	10,000
TOTAL	32	

BUDGET

Salaries	\$ 675,000
Operating Expenses	<u>645,000</u>
TOTAL	\$1,320,000

COMMERCIAL GLASS DIVISION

11. BREAKDOWN OF BALANCE SHEET

Memo Reference: CORP-42D
Your Role: Corporate Controller

LATEST YEAR
(In Thousands)

ASSETS

Cash	\$ 5,273	
Receivables	10,141	
Inventories	<u>5,027</u>	
Total Current Assets		\$20,441
Plant & Equipment	\$55,000	
Less Accumulate Depreciation	<u>22,385</u>	
Net Plant & Equipment		32,615
Other Assets		<u>6,244</u>
TOTAL ASSETS		\$59,300

LIABILITIES AND NET WORTH

Current Liabilities	\$ 6,937	
Long-Term Debt	<u>14,308</u>	
Total Debt		\$21,245
Investment from Parent	35,000	
Retained Earnings	<u>3,055</u>	
Total Stockholders Equity		\$38,055
TOTAL LIABILITIES AND NET WORTH		\$59,300

COMMERCIAL GLASS DIVISION

12. ORGANIZATION OF PERSONNEL

Memo Reference: OPEN
Your Role: Corporate Personnel

Historically, CGD is the oldest division of Looking Glass. Personnel for the division and its plants has always been handled at Corporate. The newer divisions, APD and IGD, have personnel officers assigned to the plants. Corporate has been considering assigning a personnel officer to the CGD plants or to the division.

13. AFFIRMATIVE ACTION DISTRIBUTIONS

Memo Reference: CORP-40
Your Role: Corporate Personnel

No further breakdown is possible at this time. Neither location has yet returned the data.

A corporate-wide task force was formed at one time to set affirmative action guidelines for the divisions. The chairperson of the task force has since left the company and the task force was disbanded. In the meantime, federal guidelines should be adhered to--namely, that the proportion of protected class employees in Looking Glass should be roughly comparable to that of the larger population of the community in which our plant resides.

This means (1) that hourly workers should be hired more or less on a quota basis and (2) that professionals and managers should be hired according to the qualified applicant pool (e.g., if 2% of black applicants have the necessary qualifications, then 2% of hires should be black.)

No further breakdown of data is possible at this time. CGD clearly has problems with both female and minority representation in management and professional jobs. Every effort should be made to improve CGD's position.

INDUSTRIAL GLASS DIVISION
(BLUE)

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INDUSTRIAL GLASS DIVISION

34

1. SODA ASH

Memo Reference: IGD-22, IGD-57

Your Role: Various plant officials, Division Controller,
Corporate Purchasing, and Corporate Controller

Last Quarter

	<u>Cost/Ton</u>	<u>% Cost/Ton of Glass</u>	<u>Tons Used Per Day</u>	<u>Total Cost¹</u>
Auto Glass	\$33.60	35%	150	\$453,600
Glass Piping	\$36.20	6%	73	\$238,000
Specialty Glass	\$36.10	9%	85	\$276,300
Division			308	\$967,900

AVERAGE DAILY COST - \$10,755

With New Supplier (Average Cost - \$36.40/Ton)

Auto Glass - Average Daily Cost - \$5,460 (+\$420)

Quarterly Cost - \$481,320 (+\$37,800)

Division - Average Daily Cost - \$11,211.20 (+\$456.20)

Quarterly Cost - \$1,009,008 (+\$41,108)

Current Suppliers

Auto Glass - Mountain Minerals: Brevard, North Carolina
Glass Piping - Sand: Buffalo, New York
Specialty Glass - Sand: Buffalo, New York

Alternative Suppliers

<u>Supplier</u>	<u>Price/Ton</u>	<u>Earliest Arrival</u>	<u>Transportation</u>
Sand	\$36.35	3-4 days	train
Atco	\$36.50	3-4 days	truck

Inventory

Auto Glass - 6 days
Glass Piping - 3 weeks
Specialty Glass - 4 weeks

¹ Includes transportation costs

INDUSTRIAL GLASS DIVISION

2. SODA ASH - AUTO GLASS

Memo Reference: IGD-57

Your Role: Plant Controller, Auto Glass

Your knowledge of soda ash is limited to what is supplied to the Auto Glass plant (see IGD #1). You do know that Corporate Purchasing (see #1 under Corporate) has other information.

You checked back with Mountain Minerals very recently. It will be at least a month before they can start mining again.

Do not offer to call other divisions--that's what Corporate departments are paid for. The last time you tried that you got your hands slapped.

3. MACHINERY LIFE EXPECTANCY - AUTO GLASS

Memo Reference: IGD-58

Your Role: Product Development Staff

The ten-year projection for Auto Glass machinery:

<u>Room</u>	<u>Life Expectancy</u>	<u>Replacement Cost</u>
Mixing	2-3 years	\$10-14 million
Melting/Forming	10-12 years	Impossible to predict this far in advance
Finishing	Less than 1 year	\$3-4 million

4. SAFETY PRECAUTIONS - AUTO GLASS

Memo Reference: IGD-59, IGD-23

Your Role: Plant Superintendent, Personnel Manager

Frank Seames is a troublemaker. He claims that he was injured by a large piece of plate glass because it was defective (IGD-23). You are planning to fire him because you believe he was careless. Though there have been no other injuries in that room in the past two years, recent visits by OSHA inspectors have revealed some safety violations. Safety guidelines are not being adhered to properly. Employees at Auto Glass are generally careless about not wearing hard hats in designated areas.

5. YOSHUBA GLASS

Memo Reference: IGD-84

Your Role: Auto Glass Research Specialist

The Yoshuba planned expansion into auto glass appears to be set for 12-16 months from now (before full production will exist). It may be tied to the planned Japanese auto plant here in the U.S. What Yoshuba will have to contend with are the upgraded safety standards recently enforced by the federal government. They did not have to meet such standards in their auto glass line in Japan. Meeting these standards could easily increase production costs by 12-15% at least for the first year of production.

INDUSTRIAL GLASS DIVISION

6. GLASS BREAKAGE

Memo Reference: IGD-65, IGD-80
Your Role: Product Development Staff

American Plastic was unwilling to share much information on their plastic bubble packaging process, as they hold a patent on it and it is still in the developmental stage. We were able to get a former Looking Glass employee who is now at American Plastic to share the following:

- (a) When used to package glassware, breakage went down to 2%.
- (b) Within the next year, a refined process for enveloping the product with the bubble should bring down costs below our current level.
- (c) They know they have a good idea--they are still working out the bugs and are not interested in contracting with an organization our size for the next year.

7. FURNACE LININGS MARKET

Memo Reference: PRES-4
Your Role: Sales and Marketing Research

A check into the possibility of adding glass furnace linings to the IGD product line reveals:

- (a) The manufacturing process and the line-up of raw materials required would be best integrated into either Glass Piping or Specialty Glass. It would still require purchases of about \$750,000 of new machinery.
- (b) Nationally the furnace market is projected to grow from 1-2% annually over the next decade.
- (c) Supplying glass blanks for furnace linings is a dumping ground for one of our major competitors--they are keeping down the price initially.

INDUSTRIAL GLASS DIVISION

8. PERSONNEL POLICIES - SPECIALTY GLASS (HARRY BATES)

Memo Reference: IGD-51

Your Role: Personnel Manager, Specialty Glass

Yes, we do have a policy--it involves one warning to the employee and a three month probationary period during which the employee is to improve. Only for incidents of real detriment to the company (e.g., stealing) can the employee be fired on the spot. What we are still working out is what kind of documentation to require from the supervisor to support the firing.

What is frustrating is that neither the Plant Superintendent nor Harry Bates showed up for a recent Personnel Policies Workshop in which we explained this and other policies.

In short, there was no justification for firing the employee.

9. NATURAL GAS - SPECIALTY GLASS

Memo Reference: IGD-47, IGD-48, IGD-49

Your Role: Plant Controller

The natural gas contract with Tetro Industries was entered into two years ago (before you were hired at Looking Glass) and allows for IGD to share from their private gas supply and thus avoid winter month curtailments. The escalator clause is responsible for a 38% increase in natural gas prices over the past year. The contract is the primary factor responsible for the increase in variable overhead costs.

INDUSTRIAL GLASS DIVISION

10. REORGANIZATION (GLASS PIPING AND SPECIALTY GLASS)

Memo Reference: IGD-87

Your Role: Divisional Controller

The questions addressed in IGD-87 would require major feasibility studies, studies which would make the VP's intention quite public quite quickly.

One response to the issue of capital investment: a move to either site would require an investment of several million. Indirect costs (such as lost production, disrupted delivery schedules, etc.) would add another million at a minimum.

The reduction in transportation costs attained by the collapsing would be between 3-4% of cost of goods manufactured.

Economies of scale estimates and more effective utilization of capacity projections are unknown at this time.

11. NUMBER OF EMPLOYEES

Memo Reference: OPEN

Your Role: Corporate Personnel

The current staffing for the three plants:

	<u>Managers & Professionals</u>	<u>Hourly</u>
Auto Glass	180	750
Glass Piping	52	265
Specialty Glass	<u>163</u>	<u>230</u>
Division	395	1,245

INDUSTRIAL GLASS DIVISION

12. BREAKDOWN OF BALANCE SHEET

Memo Reference: CORP-25D
 Your Role: Corporate Controller

BALANCE SHEET--IGD

MOST RECENT YEAR
 (In Thousands)

ASSETS

Cash	\$ 8,926	
Receivables	10,220	
Inventories	<u>8,950</u>	
Total Current Assets		\$28,096
Plant & Equipment	57,410	
Less Accumulate Depreciation	<u>19,308</u>	
Net Plant & Equipment		38,102
Other Assets		<u>19,470</u>
TOTAL ASSETS		\$85,668

LIABILITIES AND NET WORTH

Current Liabilities	\$ 7,260	
Long-Term Debt	<u>27,174</u>	
Total Debt		\$34,434
Investment from Parent	45,504	
Retained Earnings	<u>5,730</u>	
Total Stockholders Equity		\$51,234
TOTAL LIABILITIES AND NET WORTH		\$85,668

INDUSTRIAL GLASS DIVISION

13. AFFIRMATIVE ACTION

Memo Reference: CORP-60, CORP-66, IGD-55

Your Role: Corporate Personnel or Plant Personnel

Looking Glass at one time had a corporate-wide task force to formulate a specific affirmative action plan. The chairperson of the task force has since left the company and the task force was disbanded. In the meantime, federal guidelines should be adhered to--namely, that the proportion of protected class employees in Looking Glass should be roughly comparable to that of the larger population of the community in which our plant resides.

This means (1) that hourly workers should be hired more or less on a quota basis and (2) that professionals and managers should be hired according to the qualified applicant pool (e.g., if 2% of black applicants have the necessary qualifications, then 2% of hires should be black.)

No further breakdown of data is possible at this time. IGD clearly has problems with both female and minority representation in management and professional jobs. Every effort should be made to improve IGD's position.

Appendix A

STANDARD INFORMATION REQUEST FORM

NON-STANDARD INFORMATION REQUEST FORM

LOOKING GLASS, INC.

STANDARD INFORMATION REQUEST RECORD

Use when participants request information contained in the Outside Information Notebook.

Telephone Number of Position Requesting Information	Subject (or problem code)	Request came by Phone/Memo (check one)
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____
7. _____	_____	_____
8. _____	_____	_____
9. _____	_____	_____
10. _____	_____	_____
11. _____	_____	_____
12. _____	_____	_____
13. _____	_____	_____
14. _____	_____	_____
15. _____	_____	_____
16. _____	_____	_____
17. _____	_____	_____
19. _____	_____	_____
20. _____	_____	_____

LOOKING GLASS, INC.

NON-STANDARD INFORMATION REQUEST RECORD

Information requested by: _____

Telephone number of position: _____

Request came by Phone ☐ Memo ☐

Nature of information requested (Please summarize, but be specific.
If request was by memo, please attach memo):

Were any memos referenced? List:

Disposition

☐ no answer given ☐ answered by phone ☐ answered by memo

Nature of information given (Please summarize, but be specific. If
answered by memo, please attach copy):

In what role did information provider answer (e.g., Corporate Controller,
Plant Superintendent, Flat)? _____

Appendix B
LIST OF GHOST DEPARTMENTS
(CORPORATE)

LIST OF GHOST DEPARTMENTS

(CORPORATE)

Chairman of the Board

Controller

Legal

Manufacturing & Engineering

Personnel

Public Relations

Purchasing

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