JOURNAL OF APPLIED CASE RESEARCH

The Journal of the Southwestern Case Research Association

Special Edition

USP

UNIVERSAL SPECIALTY POLYMERS

JACR, Volume 7, Number 3 Special Issue,
March 2008

Journal of Applied Case Research

Special Edition

Universal Special Polymers (USP) Corporation

Joseph Kavanaugh, Ph. D., Special Editor

JACR Volume 7, Number 3, Special Issue, March 2008

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Editor's Introduction to Special Edition

Dear Readers:

This Special Issue of the Journal of Applied Case Research (JACR) is, to the best of my knowledge, a unique offering in the annals of case research. The issue presents eight cases written from numerous disciplinary perspectives, all focused on the same company with a common set of data, timeframe, and organizational characters.

This special issue is the result of a case writing competition held in conjunction with the 2005 annual meeting of the Southwest Case Research Association in Dallas, Texas. The owner and CEO of USP Corporation, Bob Edison, agreed to present extensive data on his company to teams of case writers. The presentation was followed by extensive questions and answers, and brief conversations with several teams. Mr. Edison and his staff continued to be available to the teams for follow-up questions as needs arose for additional data and other information. The teams had full discretion in the selection of their disciplinary focus and vantage point.

All of the cases seek to highlight performance issues within the firm and explore decisions facing management as they look to the future. The power of this method is that the student is presented with a well-integrated set of cases that truly represent the complexity and multi-dimensionality of managerial decision-making. Through study of all of the cases the student will be able to approximate the decision environment of the firm's owner and chief executive officer as he seeks to solve today's managerial issues and set future direction.

In order to avoid redundancy in presentation, exhibits that are common to more than one case are presented in the Appendices at the end of the issue. They contain a wealth of information and provide valuable background and context for all of the cases. They should be used as introductory material for any case assigned for study.

USP Corporation, Dallas, Texas, is a $14+ million manufacturer of polymer-based industrial flooring, coatings and linings, and associated products. The cases explore its development over four years, 2000-2004, a period of significant growth for the firm in an industry where nominal growth is the norm. All of the cases are based on field data; at the request of Mr. Edison, the firm and all persons named in the case have been disguised.

The preface case, *Problems at USP?*, raises the question about how well is USP managed and highlights issues that the firm must address. The next cases, *Setting a Strategy* and *The Future Strategy Decision*, present two vantage points on the strategic issues facing the firm. *Information for Decision Making* explores the quality of USP's financials and their usefulness to management as guides for decision making. In *The Search for Market Performance*, the authors explore in greater depth the marketing issues highlighted in *Problems at USP*, among which are high account turnover and the management of distribution channels. These issues continue to be developed as the firm's marketing and information management infrastructure is examined in *Employment of Information Systems at USP* and *The Knowledge Management Challenge*. Finally,

Assessing the Organizational Culture examines issues that illustrate the power of USP's evolving culture as a source of performance advantage. Combined, the cases present a rather comprehensive picture of the firm and the issues it seeks to address.

The Southwestern Case Research Association and the *Journal of Applied Case Research* wish to express their special gratitude to Bob Edison for his willingness to participate in this project, to share fully and without reservation all information requested regarding his company, and to do so in a manner fully supportive of the objectives of the project. Without his commitment and belief in the value of this effort, this special publication would not have been possible.

As editor of this special edition, I wish to add my personal thanks to Bob Edison for his confidence and trust, and willingness to take the risk of allowing a group of unknown case writers to delve deeply into the workings of his firm. The advancement of knowledge often requires courage, and Bob's participation in this project has been courageous indeed!

I also wish to thank the teams of case writers who have labored on this project and their forbearance when the project extended far beyond the time intended for completion. I hope that each of them is pleased with the final outcome. Together, we have worked to produce a new approach to case writing. Each has performed superbly; any faults which exist in the process and the final product are my own.

Sincerely,

Joseph Kavanaugh, Ph.D.
Sam Houston State University

PROBLEMS AT USP? A TOM, DICK & HARRY SAGA

Wilke English
King College

Steven Maranville
University of Houston-Downtown

Seated around an oval table in a group study room, three business students at State University—Tom, Dick, and Harry—met to develop a plan for proceeding with a field project. Their professor had assigned the USP Corporation—an industrial products concern specializing in various epoxy and resin chemicals used for floorings and coatings—and charged the lads with the task of finding areas of improvement for the company. Tom, Dick, and Harry were sifting through a packet of materials on USP given to them by their professor (see Appendices A-I).

"Gee, I just don't see much to work on," moaned Tom.

"Me, either," agreed Dick. "Sales have been going up every year. Profits, although more volatile than sales, have also been going up. Also, USP has been working with a strategic consulting firm for several years now, so it should not have any major strategic areas of concern."

"Yeah, take a look at their 'Prospectus'. They look pretty strong," concluded Tom (see Appendix A).

"Pretty impressive, if you ask me," agreed Dick.

"Whoa, wait a minute," protested Harry. "I don't think that USP is nearly the industry player that you think they are. Check out some Industry Sales vs. USP sales (see Exhibits 1 and 2)."

"Oh, I see what you mean," said Tom sheepishly.

"Yeah," said Dick. "If I am reading the numbers right, 'Flooring' is a $500 million industry, and USP's sales are $3 million and some change…hardly a major player."

"More like a sparrow on an elephant's fanny," chuckled Tom.

"No, more like a crow on an elephant's fanny," corrected Harry. "You know, not as tiny as a sparrow but certainly not as big as a hawk."

"Yes, they are highly competitive among the mid-tier firms in polymer construction products and lead on R&D, breadth of product line, and patents," added Dick. "They are among the top firms in sales, but not THE leader in this group. Behind the mid-tier are a whole host of mom & pops in a much disaggregated industry."

"You really have to admire their chutzpah, though," said Harry. "I mean seriously, they are listing ten major competitors for flooring…as in 'these are <u>our</u> competitors'. Do you think that Stoncor lists USP as one of their major competitors? I doubt it."

"Wouldn't it be interesting if we had the phone number for the manager of sales at Stoncor to ask him if he had ever even heard of USP?" wondered Dick.

"Probably, not, would be my guess," said Harry.

Harry continued his discussion of USP: "There is a big difference in how you need to handle accounts when you are one of the big dogs vs. a niche player. When you are small you need to do a lot more hand-holding with your accounts. Every account can be crucial, and losing a couple of your 'biggies' can be absolutely fatal. You, know, I'm talking about accounts that a big player would not even notice…but for a small firm they are critical. Of course, the big guys usually have some really big accounts that are crucial for them as well, but when you are small, everything gets magnified."

"I know a defector from the sales force was replaced with a new Sales Manager; so, given the importance of account retention, how is USP doing?" wondered Tom.

"That was what I wanted to show you," answered Harry. "Here are the sales records, by major customers; over the last few years (see Appendix F)."

"You can see a lot of turnover in those major accounts," said Harry, pointing to places where top 25 accounts had disappeared.

"Look at Maritime," continued Harry. "In 2002, they purchased $208,000. But by the very next year," said Harry pointing to the 2003 column, "their sales were less than $59,000 and out of the top 25. And Polymer CL: $158,000 in 2002, but less than $59,000 the next year."

"I wonder if some of these companies were bought by other companies, or changed their names," wondered Dick.

"Could be...but I don't have any information along those lines," answered Harry. "But they seem to have attracted a bunch of new accounts...so it seems to be almost a wash," ventured Tom.

"Yes, they have," conceded Harry. "But just barely. Sales are up substantially if you include PCP, but if you look at the totals without the #1 spot, sales are up by less than 5%. And to constantly have to find new accounts to replace accounts that are disappearing...that's a hard way to make a living. And usually not a very profitable way to make a living, either. As a rule, new accounts are not as profitable as old accounts. New accounts take more selling effort to acquire, they tend to buy in smaller quantities, and they tend to buy at lower margins. It is much better to retain your current accounts than to always be trying to find new accounts."

"Wow," exclaimed Tom, "I guess there really is more here than meets the eye."

"Yeah," Dick agreed, "on the surface, USP looks like its doing just fine. But, digging a little deeper has exposed some areas of concern. If not addressed, these could become an Achilles' heel for USP."

With an intense gaze, Harry began methodically rolling up his sleeves: "Well gentlemen, it seems that we have a project to work on."

Exhibit 1
Competitors By USP Product Group

Product Group	Market Size	Number	Top Competitors
Flooring	$500 million	183	Stoncor, General Polymers Tennant, Sherwin Williams, Selby-Ucrete, Federal Valspar, Garland, Silikal, Duraflex, Crossfield ($175 million)
Coatings/Linings	$ 90 million	25	Stoncor, Dudick, Ceilcote, Advanced Polymer Sciences, Atochem ($65 million)
Marine Decking	$ 40 million	7	Crossfield, ITW American Safety Products, PRC ($35 million)
Sealants[1]	$ 200 million	40	Sika (urethane), Sonneborn (urethane and polysulfide), Tremco (urethane), Dow (silicone), GE (silicone), Pecora (sil., ureth, polysul) ($75 million)
Polyurea	$ 50 million	20	Specialty Products, Versa-Flex, Willamette Valley, ITW Foamseal, Visuron, Stoncor, ASTC Polymers, Chemtron, Hehr, Crown Polymers ($35 million)

[1]Sealants used for commercial construction only. Category does not include sealants used in residential or highway construction, insulated glass, roofing and building materials.

Exhibit 2 **USP Sales by Product Group**		
Product Group	2003	2004
Flooring, Coatings & Linings		
TuffRez	1,601,118	1,946,728
Ultra-Fresh	631,446	606,067
FlakeRez	309,092	402,436
NovoRez	311,297	344,962
PermaRez	104,585	68,167
USP	325,121	264,114
Subtotal	3,282,659	3,632,474
Marine Decking	2,212,458	1,138,719
Thiokol	1,443,607	846,749
Polymer Technologies		
Subsea Insulation	1,445,651	3,240,557
Custom Products	223,223	181,310
Subtotal	1,668,874	3,421,867
Other Products		
RezRok	124,303	115,857
Accessories	86,370	114,888
Polyurea	0	0
Subtotal	210,673	230,745
LPNA	1,764,669	2,352,490
TOTAL: SALES	10,582,940	11,623,044

SETTING A STRATEGY

Sue Cullers
Tarleton State University

S. Stephen Vitucci
Tarleton Center – Central Texas

As dusk fell on an early January evening in 2005, Bob Edison slipped off his shoes and got more comfortable at his desk, preparing for several hours of study and review. The next day, he and Dr. William Simpson, a management consultant whom he had engaged, would conduct a strategic planning retreat with the key employees of USP. Edison (Exhibit 1) had founded USP thirteen years previously and was the owner and president of the company. He found himself reflecting on what his business had accomplished in the past and wondering what 2005 and following years might hold for him and his company.

USP – The Beginning

Edison had founded USP (Exhibit 2) in 1992. At first, USP was a local manufacturer of polymer-based floorings, coatings, and linings, supplying these products primarily to construction contractors in and around Dallas. The products included decorative flooring and materials that sealed concrete and restored or chemically protected concrete and steel. By 2001, USP had expanded into other products and markets and achieved a sales volume of $7.3 million. Growth had been achieved internally, through development of new products and expanded marketing, and also through two acquisitions and several strategic alliances.

In May 1997, USP made the first of two important acquisitions, expanding into a new market by purchasing the Selby line of marine flooring products from Harris Specialty Chemicals. USP began manufacturing and distributing the full Selby line of exterior and interior marine decking products. Selby products (which included underlayment systems, primers, bonding agents, decorative finishes, waterproof membranes, nonskid coatings, and deck top insulation) had been installed on thousands of ship decks and offshore platforms dating back to 1925. Edison asserted that:

> "the acquisition of this highly reputable product line enables us to diversify into new markets while keeping within a high performance coatings niche. We expect to grow this business through enhanced marketing, product development and improved distribution, particularly overseas. The increase in the number of offshore oil platforms offers the most promising upside market potential for these products."

USP made the second important acquisition in 1998, purchasing Morton International's Thiokol line of polysulfide industrial coatings, sealants, caulks, and primers. USP merged Morton's line into its existing polysulfide product line and

Exhibit 1
Bob Edison, Resume

30 years diversified management experience in sales, marketing, operations, product development, and construction; 30 years experience producing, using, and selling polymer-based construction products

Founder and president of three related companies:

USP, LP (a manufacturer of polymeric construction materials)
LP North America Distribution, Inc. (a distributor of liquid polysulfide); and
USP Construction Services (a construction contractor)

Proven track record in managing small and medium size multi-faceted organizations

Previously ran a consulting business related to construction and managed sales and contracting organizations for a construction chemicals company

Started out in a family business, I.W. Industries, which manufactured grouts and coatings. Managed revenue growth from $1.8 million to $6.9 million, increasing net worth from less than $400,000 to $1.7 million. Arranged sale of this business in 1986

Completed a BBA in Marketing at Baylor University in 1975

Enthusiastic bridge player who often played in pairs tournaments with his wife

Teacher of an adults' Sunday School class at Champions Forest Baptist Church

began providing service to customers who used Thiokol products. Edison believed that the acquisition enabled USP "to expand our product offering within the high performance coatings and sealants niche." In 2000, USP won Frost & Sullivan's Market Engineering Merger & Acquisition Strategy Award, in recognition of the successful acquisition, and integration into its existing product lines, of the Thiokol line of coatings, sealants, caulks, and primers. (Frost & Sullivan is a marketing and consulting firm.)

Edison had founded and grown USP on a philosophy of "extreme" customer service. He valued each customer as a potential long-term business relationship, and USP had retained many customers from the beginning of the company. The primary goal for USP was to be the best in its business, maintaining a fine reputation and providing innovative solutions to its customers.

Exhibit 2
USP Statement of Vision

Universal Specialty Polymers is a manufacturer of polymer coatings, linings, floorings and sealants, which are applied to concrete or steel.

We will become the nation's premier supplier of polymer products for construction, and corrosion protections in the industrial, institutional, commercial, and marine markets, as measured in terms of customer satisfaction, product performance, and the financial well-being of our employees and other stakeholders.

We will differentiate ourselves in the marketplace by delivering superior value to our customer. Our reputation will be built upon …

Rigorous, consistent product quality
Unparalleled customer service and technical support; and
Product breadth and availability that enables us to provide innovative solutions to customer needs

USP in 2001

USP hired Bill Simpson as a management consultant in 2001. The company hired Simpson because, due to the pressures of employees' work loads, strategic planning had not been taken seriously in the organization. In the 2001 strategic planning session near the end of the year, Edison and other USP personnel noted significant changes that had occurred during the year, including opportunities for acquisitions. There was also a major emerging threat: the US company that produced liquid polysulfide, a critical raw material for USP, was considering ceasing production. Edison viewed this possibility as both a threat and a potential opportunity for further expansion of USP. (Note: Beginning in 2002, Edison and two USP employees, Arthur and Cross, established LP North America Distribution, Inc., to serve as the sole North American distributor for a Japanese company that manufactured liquid polysulfide. See Appendix H to review the financial performance and standing of this company. Edison had since bought out Arthur and Cross.) One of the major accomplishments of 2001 was development and marketing of subsea insulation materials, which could be used by customers drilling oil wells in the ocean, even in deep water with low temperatures.

Edison's notes from the 2001 strategy meeting showed that much of the conversation had been about customer relations. USP sought to implement fully a customer relationship management and contact management system. Because a high percentage of its sales were made to construction contractors, USP had established a Top 50 Contractors Program, which identified top players based on sales volume, USP volume (real and potential) and geographic coverage. The company's goals were to be

rated #1 in response by its customers, to increase the percentage of sales successfully closed, and to increase the percentage of sales from established customers.

Simpson had suggested to Edison that USP's organizational culture might be damaging its operations, growth, and profitability. Since establishment of USP, Edison had focused on growing the business, and he had largely ignored the culture or "people" aspects of the business. Simpson administered a test that examined the organization's culture, and the results showed that USP's culture was ranked low or unfavorably on almost all dimensions. Edison evaluated the results and began implementing organizational changes, including replacing some employees who seemed to be part of the problem in organizational culture. (Note: Simpson administered the same organizational culture test 18 months later, and it showed a complete turnaround. Employees enjoyed working together, and Edison's own morale had improved. (For in-depth information on the culture, see the case "Assessing the Organizational Culture" in this special edition.)

USP in 2002

USP sold its products primarily to construction contractors. Because the construction industry was highly cyclical, so was USP's main business. In 2002, there were signs that the construction industry was beginning to emerge from an economic downturn, and there were significant sales opportunities for USP. However, its ability to capitalize on these opportunities was limited by the organizational structure and staffing levels. Edison wanted USP to be able to:

- Capitalize fully on proprietary technologies – Small Business Innovation Research (SBIR) technologies, marine decking, Thiokol, Flowcrete, and Liquid Polysulfide;
- Create an organizational design that would enable USP to exploit emerging opportunities through sharper market focus and clear market identities; and
- Maintain excellent levels of customer service – a primary differentiator of this firm in the marketplace.

The Department of Defense had a program called Small Business Innovation Research, through which it contracted with small high-tech companies (less than 500 employees) for research and development. USP had received several SBIR contracts for initial R&D and for development of applications of products and materials. Edison hoped to receive additional SBIR contracts and to find commercial applications for the products it had developed under previous SBIR contracts.

Flowcrete Plc was the leading supplier of specialist industrial and commercial flooring in the United Kingdom. One of Flowcrete's products was Ultra-Fresh, a flooring product used by food, beverage, and pharmaceutical manufacturers. Ultra-Fresh floors were durable, easy to clean and inhibited growth of fungi, mildew, and bacteria. In 2002, Flowcrete Plc and USP formed a joint venture, Flowcrete North America LP, to market Flowcrete products in the United States. The joint venture proved unsuccessful and was

terminated in 2003 and replaced with a technology agreement in 2004. During 2004, USP employee Tony Cross left USP and formed a competing company that was affiliated with Flowcrete. Following that event, USP cancelled the technology agreement with Flowcrete and replaced it with a supply agreement in 2005.

The purpose of the 2002 strategic planning session was to examine alternative organizational structures and make decisions about the preferred organizational model for the future. A proposal emerged to reorganize USP's Marketing Group (MG) to allow the company to take better advantage of available opportunities. The MG was to be comprised of 3 strategic marketing units (SMU's) – Product Technologies, Marine Decking, and Flooring and Coatings – each under the leadership of a Senior Manager. The Floorings & Coatings Group included all USP products except marine decking. The primary markets were contractors and distributors. USP planned to set up an Authorized Distributor Network and Preferred Contractor Program. Once they were in place, USP would sell direct only to Preferred Contractors and Authorized Distributors; all others would be directed to Authorized Distributors.

The Marine Products Group was a new SMU, responsible for development of markets for these products. Responsibilities included serving existing Navy contracts; securing additional Armed Services contracts and International Maritime Organization (IMO) certifications; and making international sales of marine products. (Note: The International Maritime Organization was an agency of the United Nations charged with improving maritime safety and preventing pollution of the ocean by ships. The IMO set standards for materials used on ships and certifies products that passed its screening.) By the end of 2004, USP had four products that had received IMO certification, a competitive advantage for the company. No competitor had achieved similar success. IMO certification had opened up cruise ships as a potential market for USP.

Edison expected the Marine Products Group to achieve substantial growth in coming years because there were relatively few competitors (Exhibit 3).

The Products Technologies Group was also a new SMU. Responsibilities included private label market development (developing products for contractors or distributors that would bear the customer's own brand name), applications development of existing technologies; developing new technologies related to SBIR; and licensing of current technologies.

Edison had considered setting up a contracting company that would use USP materials in various building and marine construction projects. In the construction projects where USP products were used, materials represented about 25 percent of the costs, with labor and other costs of application making up the balance. Thus, becoming a contractor would be a way to grow the business by getting more of the revenue from a project. There were other advantages as well: contractors tended to be slow at paying their materials bills, so USP would achieve faster cash inflows by being the contractor. Also, customers would have better warranty protection if the contractor and materials provider were one; and USP could be certain that materials were applied correctly if it was in charge of the application. Based on these advantages, in 2002 Edison established

USP Construction Services, a separate company that served as contractor for a small number of construction projects each year.

Exhibit 3
USP Competitors By Product Group

Product Group	Market Size	Number of Competitors	Top Competitors and Combined Market Share
Flooring	$500 million	183	Stoncor, General Polymers, Tennant, Sherwin Williams, Selby-Ucrete, Federal Valspar, Garland, Crossfield, Silikal, Duraflex - $175 million
Coatings/Linings	$90 million	25	Stoncor, Dudick, Ceilcote, Advanced Polymer Sciences, Atochem - $65 million
Marine Decking	$40 million	7	Crossfield, ITW American Safety Products, PRC (urethane) - $35 million
Sealants	$200 million	40	Sika (urethane), Sonneborn (urethane and polysulfide), Tremco (urethane), Dow (silicone), GE (silicone), Pecora (silicone, urethane, polysulfide) - $75 million
Polyurea	$50 million	20	Specialty Products, Versa-Flex, Willamette Valley, ITW Foamseal, Visuron, Stoncor, ASTC Polymers, Chemtron, Hehr, Crown Polymers - $35 million

USP in 2003

The strategic planning for 2003 focused on the Flooring/Coatings/Linings (FCL) segment of the business. (See Exhibit 4.) As much as 80 percent of the energy and effort of USP employees went into generating and servicing 40 percent of its revenues, those associated with the FCL business. Until this 'gorilla' was caged, internal resources would not be available to develop other lines of business. So the group spent a day talking about how to cage the gorilla. USP had many customers that were high touch, relatively small contractors who demanded frequent and extensive technical advice. Because of the service demands of these customers, USP personnel did not have time to develop relationships with new customers.

USP's FCL segment was comprised of three lines of business:

1. USP Construction Services;
2. USP Express (an effort to develop private label products for contractors); and

3. the core business of formulating, manufacturing, selling, shipping, and supporting the installation of FCL polymers.

Exhibit 4
Floorings, Coatings, and Linings (FCL)

- Essentially a commodity business with many competitors in a disaggregated industry with little product differentiation.
- The market, comprised almost exclusively of floor installation contractors, demanded that suppliers compete on price. Quality, features, and after-sale service were appreciated, but contractor's focus was cost per square foot.
- The line of business generated a gross margin of approximately 50 percent.
- Very broad range of products: USP offered 138 products and more than 2500 sku's, most of which were in the FCL line.
- USP's message was "We sell solutions, not products." Message did not resonate well in the market, which assumed that solving their problems was a part of doing business.

USP personnel decided to develop two contractor lists, "A" list and "B" list customers. "A" list accounts were defined by the existing relationship quality; current and potential sales volume; the financial stability of customer; a nuisance factor – service demands versus revenue generated; and the technical service support level demanded. The 30 "A" list accounts were to receive a higher level of service than other customers. The"B" list was to be a new service level. Their calls would be routed to customer service people, not to the sales director or regional sales manager; the backup was to voice mail, not to people; and limited technical support would be provided. USP's incentives system needed work if the "A" and "B" lists were to be implemented. Compensation could be based on sales volume sold to "A" List customers, with rewards for developing a new "A" list customer or penalties for losing one.

USP in 2004

In his review of files and notes, Edison came to 2004, which had been a year of unforeseen challenges for USP. It also was a year of accomplishments, especially in the technical side of the business; some of the accomplishments are summarized in Exhibit 5.

Since its founding in 2002, USP Construction Services had completed approximately 12 construction contracts. Two of the largest and most promising occurred in 2004: a marine decking project on two off-shore drilling rigs, and renovation of flooring at Reliant Stadium in Houston. Decking and other projects on drilling platforms and rigs were considered to be an important continuing opportunity for USP, as long as oil prices remained high. USP's IMO approvals positioned this line of business for growth in coming years.

Exhibit 5
USP's Accomplishments in 2004

- Completed first marine decking project under USP Construction Services (two drilling rigs for ENSCO)
- Completed a flooring project at Reliant Stadium
- Continued a large subsea insulation contract for FMC
- Began private label programs for Destin Coatings, Techplastics and a Thiokol sales program with Sherwin-Williams
- Received three SBIR contracts from the US Navy
- Reduced inventory by reducing some safety stock levels
- Passed the IMO testing protocol for USP IMO CLAD
- For past five years including 2004, USP had averaged 13% annual growth, in an industry where the average growth rate was 3%
- Increased production rate to 120 pounds per direct man-hour from 110 pounds in previous year
- No product claims due to production errors
- Maintained safety record, achieving 1,000 days without lost-time accident (previous company record, 240 days)
- Increased cross training level of workforce

Repairs of concrete floors were needed at Reliant Stadium because, soon after the stadium opened, cracks appeared in the floors. The cracks caused water to leak into some of the lower-level offices at the stadium. The stadium needed to be repaired and "looking good" in time for the 2004 Super Bowl. More than 350,000 square feet of stadium flooring were affected. USP Construction Services got the contract to do the repair, serving as a construction management company and ensuring coordination between the stadium and all the trades who worked on the project. It installed a Thiokol decorative quartz epoxy flooring, which included a crack control system. This large renovation project was accomplished in 18 days, and the stadium was ready on time for the Super Bowl.

In July 2004, USP received an SBIR contract to develop an advanced deck covering material for use on ships' interior decks. Ships' interior decking material traditionally had included resin and other systems that produce brittle projectiles in the event of an explosion. The SBIR contract was to explore the feasibility of a coating material that would be flexible and less likely to form potentially deadly projectiles.

Both LP North America Distribution, Inc. and USP Construction Services, Inc. were profitable in 2004, as was USP, LP. (See financial statements in Appendices G - I.)

Problems and Challenges in 2004

In April 2004, USP was sued by a Midwest distributor for about $ 1.5 million. The lawsuit resulted from technical advice that had been given over the telephone. The case was in mediation at the beginning of 2005 and was expected to be covered by insurance. Edison considered litigation to be the largest ongoing threat facing USP. This particular case had caused the company to question how it should provide technical advice to customers. (For further insight into the legal environment of USP, see the case "The Knowledge Management Challenge" in this special issue.)

During 2004, especially in the second half of the year, USP incurred a steady increase in raw material costs, most of which were supplied by various large chemical companies. For example, epoxy resin costs increased 65 percent in that period. Because construction contractors were extremely price-sensitive, USP could not increase its selling prices to make up for the increase in costs. As a result, profits in 2004 suffered, with USP's income lagging behind the growth in sales.

In May 2004, Tony Cross resigned as USP's Vice President of Sales. He later hired Bill Ray, a USP employee, as a sales representative. Cross and Ray formed a new company, Flowcrete North America, Inc., a division of Flowcrete Group Plc, to compete directly with USP in polyurethane and epoxy flooring. Cross's departure and formation of the new company damaged USP's relationship with Flowcrete Group Plc, and Cross sought (with only limited success) to take USP customers with him. By the end of 2004, USP had filled both of its sales positions, through the hiring of Steve Dillard, Director of Sales and Tim Stone, Regional Sales Manager.

Edison believed that Cross's actions violated company policy and an existing confidentiality agreement. (USP did not require employees to sign a formal non-compete agreement.) After Cross's departure, USP developed a more comprehensive confidentiality agreement for its employees. It also began to adopt a team-selling approach, with as many as three USP employees involved with a major customer. These employees usually would work with two or more employees at the customer's company, so the relationship would be truly a team relationship, rather than one on one. Edison realized that, when a one-on-one relationship existed, departure of an employee on either side could jeopardize the relationship with the customer.

Due to the problems associated with sales management changes and the lack of commitment to the 2004 strategic plan, USP had failed to complete its 2004 strategic initiatives. A Thiokol private-label branding program never was started, except for one initiative with Sherwin-Williams, and an Ultra-Fresh floor branding program appeared to have been undercut by Cross.

Edison had found 2004 to be stressful and tiring. Due to health and family reasons, he wished to reduce his role in the day-to-day operations of USP and assume a more strategic role in the business. Edison believed that, with the new Sales & Marketing Director on board, USP had a team in place that could drive the growth of the business.

Edison leaned back in his chair. He considered the strategic issues facing the company and thought about how he and the consultant could facilitate its strategic

planning. Then he pulled out a note pad and began writing a list of questions and issues that he might pose to the USP team the next day.

Questions and Issues for 2005 and Beyond

Edison identified the following as potential questions for USP's 2005 strategic planning:

1. How might USP improve the distribution of its products? The company did not have a comprehensive sales/distribution network. The plan from 2002 to develop an Authorized Distributor Network and Preferred Contractor list had never been fully implemented. Relying more on distributors would reduce the amount of time spent by USP personnel in providing technical assistance to contractors. At the same time, the events of 2004 indicated the need to maintain the quality of relationships with customers.
2. Did construction/management of projects by PCS represent an unattractive risk/return tradeoff? Serving as construction contractor meant that the company incurred all the liability associated with a construction project, not just the liability associated with the materials. Also, the company had been very careful in selecting projects to bid on, because it did not want to alienate its contractor customers by competing directly against them. Should USP Construction Services grow more rapidly? Edison believed that USP's initial entry into this market had proven to be quite profitable, with superb margin performance: gross profit margin in 2004 was 21.5 percent. The company did not have a formal promotion program for PCS; rather, it was opportunistic. A potential opportunity now was to move to the next level in development of PCS by hiring a project manager to drive this line of business and undertake perhaps four or five projects a year, or more.
3. In light of rising raw materials prices, potentially limited availability of raw materials, and difficulty in raising the selling prices for its products, how could USP maintain its profitability?
4. What should USP do to develop and maintain a capable workforce? In previous assessments, Edison had identified 50 percent of the hourly workforce as quality employees. The company experienced high turnover in its production employees: just 25 percent had been on board for two years or more, and the turnover ratio had been high for the last several years. During the busy part of the year, the company used temporary employees in production, and the number of temporary employees was higher than Edison would have liked. Historically, USP had incurred high worker compensation costs, and it had no formal safety program.
5. How could USP rebuild customer relationships following the departure of the previous marketing director? Was turnover of USP's top 25 customers a concern? (see Appendix F.) The company needed to analyze customer turnover for 2003 and 2004. Edison believed that USP should set a formal customer relationship management program as an organizational priority. USP had talked about such a program since 2001, but it had not been able fully to implement the program.

6. How could USP move away from its dependence on its founder? The company had no succession plan in place, and there was no family member who wanted to take over the operation of the business in the future.
7. How could USP manage its inventory and customer returns? USP had a lot of product lines in a lot of markets for a company of its size (Exhibit 6 and Appendices B & E). Also, it prided itself on shipping 73 percent of customer orders within one day. As a result, there was a huge variety of raw materials and finished goods and a large dollar amount invested in inventory. Customer returns had been a problem for the last several years, even though USP did charge a restocking fee when customers returned goods.

Edison closed his notes and stood up. He was satisfied that the list of questions would provide sufficient stimulus for the next day's strategic planning retreat. He was ready to meet with USP's key employees and to consider the company's strategic direction for coming years.

Exhibit 6
USP Products

USP products were used for construction and corrosion protection in industrial, institutional, commercial, and marine markets. USP differentiated itself through rigorous, consistent product quality; unparalleled customer service; innovative product technology and availability.

Marine Decking
Product line was well positioned – just two major competitors. USP's primary competitor was Crossfield. Access to market was restricted by tight certification requirements – the Navy's Qualified Product List (QPL) or the International Maritime Organization, IMO. Price: QPL work was price sensitive; IMO work was less price sensitive, more responsive to features and quality. Not likely that USP would penetrate Navy's QPL market, but the global market for all other floating vessels and drilling platforms was wide open and covered by IMO standards. A prime opportunity for USP Construction Services.

Thiokol Coatings and Sealants, Polysulfides
Thiokol products competed against polyurethanes and silicones. GW Meadows was a major competitor. Thiokol products were used as sealants and caulking, where elasticity was a valued product characteristic. Price: good margins in this market. Promotion: of all of USP's brands, Thiokol had greatest brand recognition, which had been eroding due to lack of promotion. Place: distribution through distributors to industries such as water treatment and fuels storage; USP also private labeled it under the Tuff-Rez label.

Polymer Techologies – Subsea and Specialty
Major competitors, Tymar, Emerson, Cummings, Balmoral. Major potential constraint: without notice, FMC acquired a patent on its subsea insulation formulation, which might limit USP's market growth. Price: USP products were at the high end of the market, but this pricing was supported with superior product performance characteristics. Significant customers were available beyond FMC.
USP had a complete line of subsea thermal insulation products based on Thiokol aerospace polymer technology; provided a long-term solution to demanding subsea environments. Gas and oil companies were drilling wells off shore in deeper and colder water, to access new fields; created additional demands on subsea equipment; increased requirements for thermal insulation.

Floor and Wall Coverings
Included mortars and overlays (Tuffrez 200 for floors subject to mechanical exposure and abuse; Ultra-Fresh polyurethane concrete flooring systems with excellent thermal shock resistance and a built-in anti-microbial agent, ideal for food and pharmaceutical industries); decorative, functional resinous coatings (Tuffrez specialty flooring systems – chemical resistance, abrasion resistance, non-slip, cold temperature cure, chip resistance)

Chemical Resistant Coatings, Linings, & Sealants
Epoxy Novolac Coatings – NovoRez coatings provided chemical resistance in intermittent and continuous splash/spillage conditions. Flake-Filled Coatings – FlakeRez chemical resistant barrier coatings, used in severe immersion or splash/spillage conditions such as tank linings, structural steel and secondary containment

THE FUTURE STRATEGY DECISION

Alex Sharland
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INTRODUCTION

Driving toward the Hyatt hotel in Dallas, Bob Edison grinned slightly, shook his head and thought to himself, "I agreed to let a group of case-writers analyze my company. What have I gotten myself into?" He was on his way to a unique meeting where a group of researchers would employ case methodology techniques to analyze his company and prepare cases on a range of different managerial issues facing his company, Universal Specialty Polymers (USP). Edison had agreed to the meeting because he believed that the insight coming from these "outsiders" would benefit his company and help him resolve some of the challenges facing the organization.

USP and its sister companies, USP Construction and LPNA had grown significantly during the past five years to the point that the combined companies had revenues over $12 million and employed 33 people. This was no longer a small business. Although Edison played a central role in the operational management of the companies, he found that as the company grew, it was more difficult for him to spend time with clients, even just to talk with them on the telephone. He was forced to devote more time and effort to executive management issues.

He was proud of the rapid growth of the USP group, and took satisfaction in the quality of product lines and services. However, the fluctuations in the business cycle were dizzying at times. There had to be some way to bring stability to the various divisions within his companies. Was the answer to "circle the wagons" by centralizing and focusing on a few specific products? Or, should the group continue to diversify? Perhaps it should adopt a new business model altogether. As so often happens with rapidly growing young companies, there comes a time when the central question becomes, "Where do we go from here?" As Edison gazed ahead on I-35, he asked himself, "Is growth of USP rooted in the past or is it dependent on breaking out in a new direction?"

COMPANY BACKGROUND

The USP group of companies operated in a number of business areas, but was primarily focused on producing chemicals that coat various surfaces. USP made sealants and other chemical 'coverings', but the majority of its business, especially in the early days, was in providing polymer-based compounds for flooring surfaces. The firm was

founded in 1991 by four capital partners. The leader of the group was Edison. Prior to starting USP, he had worked for his previous employer along with Mckinsey consultants (go to http://www.mckinsey.com/ for a brief description of McKinsey's operations) to develop a new organizational design for Master Builders in Cleveland, Ohio. Once that job was completed, he searched for a new venture and the idea of USP was born.

That company's first year in business was 1992. It began in a small leased building outside Dallas, Texas. Initially, sales grew through the partners' previously developed relationships. Market conditions were good for a company of its type, and it was able to deliver quality products and timely service to its customers. Products were formulated through in-house development, knowledge of old formulations, supplier assistance, and customer-provided formulas.

The business model worked in a straightforward way, with USP serving as a supplier of polymer compounds to companies or contractors that had successfully bid on construction jobs. For instance, the new football stadium in Dallas bid out several jobs that required contractors to 'finish' the concrete surfaces. The winning contractor contacted a supplier of flooring compounds and ordered the specific compound it needed. USP was the supplier to that contractor.

In 1994, the company moved to its present location in northwest Dallas. The site consisted of approximately 50,000 square feet of office and manufacturing space and almost four acres of land. The company's success continued and in 1995, the company was named to the Dallas 100, the fastest growing privately held companies in the seven-county metropolitan area. This accomplishment was repeated in both 1996 and 1997.

In May of 1997, USP purchased the marine division of Selby, Battersby, owned by Thoro Systems Division of Harris Specialty Chemicals. The acquired assets included marine certifications, government contracts, customer lists, other intellectual property and finished goods inventory. A new company, USP Marine Products Corporation, was created to serve the marine shipbuilding and repair markets for interior deck coatings, underlayments and fireproofing materials.

In May of 1998, the company purchased the stock of two minority shareholders (who left the company to pursue other interests) and merged the marine corporation into USP. In September of 1998, USP purchased the Thiokol Formulated Products (TFP) line from Morton International for $50,000, a five-year royalty on sales and the cost of inventory. Financing was provided through internal cash. The newly acquired product line included coatings, liners and sealants, all based on Thiokol's proprietary liquid polysulfide technology.

In 2002, USP made several major changes to the businesses in which it operated.

1) USP entered into a joint venture with Flowcrete Plc, a large British company. The arrangement provided for Flowcrete North America LP (the name of the joint venture company) to manufacture and market polyurethane concrete in North America.

2) A new subsidiary, LP North America Distribution, Inc. (LPNA) was created to distribute liquid polysulfide (LP), supplied from Toray Fine Chemicals (Japan), into North America.
3) USP Construction Services, Inc. was formed to manage construction projects that utilized USP's products. The idea here was that instead of USP waiting for contractors to win the bid and seek materials, USP would bid the job and then sub-contract to a contractor, thus ensuring that a) its compounds were used on the job, b) the compounds were properly installed, and c) quality control was high.

So, by the end of 2002, USP was a group of three companies: a) USP, b) LPNA, and c) USP Construction Services. In 2003, there was a reversal of the relationship between Flowcrete Plc and the USP group. Flowcrete N.A. LP was closed down and a technology agreement between the two companies was developed to replace the former partnership. See Key Personnel below for more details on this change.

COMPANY ORGANIZATION

Edison was the remaining partner from the original four. Consequently, he purchased the outstanding shares of USP and USP Construction Services, Inc. from the other minority shareholders, and thereby consolidated his ownership of the overall group.

USP is the operating subsidiary of a Nevada-based holding company. USP Construction Services is a separate operating company based in Texas. Both are, in effect, 100% owned and controlled by Edison. LP North America Distribution Inc (LPNA) is a Texas-based company 90% owned by Edison and 10% by Peter Arthur (the two employees of LPNA). These companies share no common root other than the majority shareholder. This means that each is a stand-alone unit in terms of profits. For instance, no profits from LPNA pass upstream to USP.

BUSINESS PROFILE

During the course of its operating life, USP had developed a number of compounds with specific chemical properties. Each was used for a different purpose, mostly in the flooring, coating, and linings (FC&L) business. However, several new compounds were used in unusual situations, at least to the USP group. Most notable of these was the compound that successfully insulated equipment for sub-sea usage. Several of the compounds developed by the company had been patented and sold under specific product names. In response to demand, USP began to produce some of these products under private label arrangements for other companies that had their own distribution systems. This was a successful move, and in 2004 USP sold more product under private label arrangements (58%) than it did under its own name (42%).

The revenue for each product line is shown in Appendix E. From 1999 to 2004, overall revenue growth increased year-on-year. However, in terms of revenue by product line, growth was not smooth, and in many cases, there were decreases as well as increases. It was this lack of stability in the revenue growth of any product line that bothered Bob Edison the most.

Flooring Coating & Lining (FCL)

The roots of the company were in the Flooring, Coating, & Lining area. These products generated over 37% of revenue in 1999, but the contribution had fallen to 31% in 2004. The products were used by contractors to finish floor surfaces such as those found in auto dealerships, food preparation companies, and hospital operating suites. One property of the chemicals offered by USP was the non-slip/non-skid feature. Many surfaces must be "non-slip/skid" in order to be functional. Unfortunately, USP was not the only company able to produce these types of surfaces.

Marine Decking

Marine Decking had advanced and subsided as a proportion of USP's business. In 2003, it represented over 20% of revenue; by 2004 it had fallen to less than 10%. The main applications were for surfaces on marine decks (military and commercial vessels), and for offshore gas and oil drilling rigs. Competitors included Crossfield Products and ITW American Safety Technology, companies larger than USP. (Refer to Appendix A for competitor analysis). This business was heavily dependent on the health of the off-shore drilling business. Whenever a rig needed upgrading there was the possibility of marine decking contracts up for bid. However, if the price of oil or gas fell, then those rigs might be mothballed or closed down instead. Unlike many other companies of its size or in its industry, USP was an approved vendor for the US military, making the Coast Guard and Navy good opportunities.

Thiokol

The Thiokol acquisition gave USP group one of the few well-known brand names in the industrial chemicals business. That brand had consistently delivered around $1.5 million in revenue until 2004 when it dropped to almost half of that figure. The management believed that competitive pressures had forced some customers to seek other suppliers but that these customers could well return in the future. Thiokol products were used as sealants and flexible epoxies. These products were used on the edges of surfaces such as chemical storage containers, and to seal a surface with a coating of liquid rubber than ensured that no leakage occurred. There were military as well as industrial uses for this product line.

Polymer Technologies

The sub-sea insulation business was relatively new, and the margins were potentially better than those available in FC&L. Primary competitors were companies

such as Emerson Cummins, Cuming Corp., International Paint, and Balmoral (all of them substantially larger than USP). Refer to Appendix A for competitor analysis. The idea for this business was to encase machinery and equipment that had to work under water. The casing was a flexible (rubberized) sealant, basically a step further from the liquid rubber product sold under the Thiokol name. The chemical compound had to be much more robust to weathering and water erosion to withstand the pressure of underwater usage.

Other Products

Rezrok products were used as bonding agents and crack sealants for cement repairs. These compounds were sold in smaller quantities and often used as repair or retro-fitting sealants, rather than installation products.

Management time and effort was still heavily invested in the FC&L side of the business. Almost 70% of senior management time was spent with FC&L clients. This stood in contrast to the revenue break down shown in Appendix E.

CUSTOMERS

In the Flooring, Coatings, and Linings (FCL) business, the traditional customer was a contractor, either General Contractor (GC) or sub-contractor (SC). The contractor was one of many who bid on a job that was part of a construction project run by a developer. For instance, in the development of a new shopping mall, there were likely to be several cement surfaces that needed more than "just" a cement finish. These surfaces had to be compliant with ADA (Americans With Disabilities Act) requirements among other regulations. Consequently, the client (developer) sought out a GC or SC who could make the surface smooth and (often) aesthetically pleasing.

If the job was bid out late in the development, almost as an after-thought, then the bids for these jobs were often fierce. The margins were cut to the bone as contractors with spare capacity tried to ensure their cash flow. If the job was bid out early in the development, with installation to occur some months later, then the competition was less fierce.

The relationship with Flowcrete NA was viewed at its inception as an excellent opportunity to tap into a major installer of cement floors for industrial purposes. By establishing the joint venture, USP secured contracts for which it could supply product. Flowcrete NA benefited by accessing a secure price for chemicals needed to finish floors. All around it was viewed as a win-win arrangement by both companies. The marine decking customers tended to be large companies that had major contracts for renovating oil and gas rigs. USP had developed a good reputation for delivering quality work, partly based on its products and partly on the skills of the senior managers. The sub-sea insulation market had a similar customer profile to the marine decking market. That is, customers were more likely to be large companies with installation contracts than small contractors with one piece of a development project.

KEY PERSONNEL

As with many small but growing companies, USP experienced some "pain" during its 12 year life. Of the original partners, only Edison was left. The others had been bought out when they decided to move on to other opportunities. The loss of these partners was less problematic than the recent loss of the Sales VP. Because the rapid growth of the company pulled Edison away from the day-day-to management concerns, and because the FC&L business had been such a significant component in the group, Edison had "groomed" a Sales VP to take a larger responsibility in this area. This man had been the primary developer of the Flowcrete-USP relationship.

However, in early 2004, the Sales VP left the company and threatened to take several key customers with him. The senior management at USP had not realized that, a) he was unhappy at USP, and b) that his frustration would cause him to be so vindictive. Ironically, he joined Flowcrete USA and took with him a senior salesperson from USP. This was a double blow for Edison. Not only did he lose someone he trusted, but also he lost one of the primary drivers in the sales area. It took many meetings with existing and potential customers to make sure that they understood the situation and did not drop USP as a supplier. In the end, no suppliers left because of the sales VP's defection.

RESEARCH & DEVELOPMENT

Edison maintained a strategy of growth in terms of revenues and products. Consistent with that strategy, the USP group of companies developed several new products to keep ahead of its competitors. The commitment to Research and Development included a four person team of researchers led by a full time director. This constituted a significant commitment in terms of time and money, but the group of companies needed to develop new products as it searched for new markets.

COMPANY PERFORMANCE

At the root of Edison's concern was the lagging performance of the USP group of product lines. Sales had grown consistently, but the growth was uneven among the product lines. Some lines would fall back only to rebound the next year. Others shrank to almost nothing.

Illustration 1 depicts the company's gross margins by product line. All lines earned over 25% on sales, and some exceeded 50% on sales. This was a firm basis on which to expand, provided that revenue targets could be met.

Illustration 1: Gross Margin By Product Line

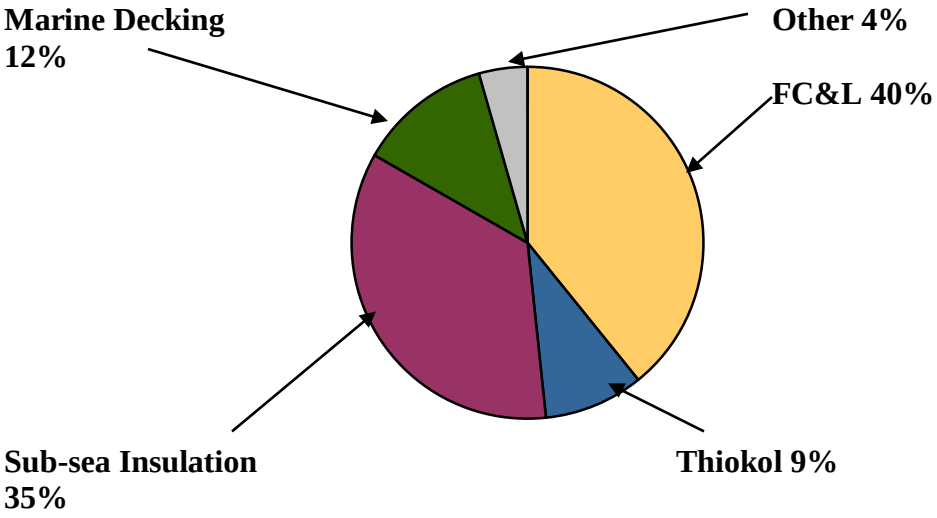

Exhibit 1: USP Income Statement 2002-2004						
	YEAR					
	2002		2003		2004	
Item	$	%	$	%	$	%
Total Sales	7.910,871	*100%*	9,155,107	*100%*	9,525,348	*100%*
COGS	4,755,095	*60%*	5,593,715	*61%*	6,499,930	*68%*
Gross Margin	3,155,776	*40%*	3,561,392	*39%*	3,025,418	*32%*
Operating Expenses	2,683,323	*34%*	3,106,852	*34%*	2,992,654	*31%*
Income from Operations	472,453	*6%*	454,540	*5%*	32,764	*<1%*
Other Expenses/(Income)	4,510	*<1%*	(29,264)	*<1%*	(120,564)	*1%*
Net Income (EBITDA)	467,942	*6%*	483,304	*5%*	153,328	*1.6%*

As depicted in Exhibit 1, USP had grown in revenue, but its costs were increasing faster than its revenues. Net Income had fallen from 6% of sales to less than 2% of sales since 2002. This gave Edison cause for concern. Closer analysis shows that Cost of Goods Sold (COGS) grew faster than revenue or Operating Expenses, thus squeezing gross margins.

Exhibit 2: LPNA Distribution Inc Income Statement 2002-2004						
	YEAR					
	2002		2003		2004	
Item	$	%	$	%	$	%
Total Sales	371,695	*100%*	1,768,432	*100%*	2,351,661	*100%*
COGS	275,723	*74%*	1,390,462	*78.6%*	1,750,930	*74.4%*
Gross Margin	95,972	*26%*	377,970	*21.4%*	600,731	*25.6%*
Operating Expenses	50,020	*13.5%*	311,286	*17.6%*	411,942	*17.5%*
Income from Operations	45,952	*12.5%*	66,684	*3.8%*	188,789	*8.1%*
Other Expenses/(Income)	0	*0*	(361)	*0%*	(303)	*0%*
Net Income (EBITDA)	45,952	*12.5%*	67,048	*3.8%*	189,092	*8.1%*

LPNA Distribution focused on the Liquid Polysulfide market and acted as a licensed distributor. In this case COGS held approximately constant as a percentage of revenue. However, the Operating Expenses of the division increased from 13.5% in 2002 to 17.5% in 2004 (see Exhibit 2).

Exhibit 3: USP Construction Services Income Statement 2003-2004						
	YEAR					
	2002		2003		2004	
Item	$	%	$	%	$	%
Total Sales			880,032	*100%*	886,123	*100%*
COGS			866,277	*98.4%*	695,352	*78.5%*
Gross Margin			13,754	*1.6%*	190,663	*21.5%*
Operating Expenses			4,836	*<1%*	104,464	*11.8%*
Income from Operations			8,918	*1%*	86,199	*9.7%*
Other Expenses/(Income)			(123)	*0%*	(696)	*<1%*
Net Income (EBITDA)			9,041	*1%*	86,894	*9.8%*

USP Construction Services was the group's attempt to climb the value-added 'tree'. That is, instead of waiting for a contractor to win a bid and seek product, USP bid on the project (as early as possible to get a better negotiating position) and then sub-contracted out the work to approved contractors. The returns to the business were growing as shown in Exhibit 3. However, this business model was substantially different from the traditional model developed until this point in time.

THE FUTURE OF USP

As Edison thought about the session with the academic case researchers, he realized that the future of the USP group very much rested on decisions he had to make in the next months. Although the revenue of the group was growing, there were product line fluctuations that made managing each individual business harder. Moreover, the construction services part of the business was significantly different from the other elements.

Edison knew that he had some good people working for him and that there was still great potential in the business overall. The question was how could he harness the energy of the people and focus them on the best way forward?

INFORMATION FOR DECISION MAKING

Sue Cullers
Tarleton State University

Bob Edison, a Dallas-based entrepreneur, built three businesses from the ground up: Universal Specialty Polymers (USP), a manufacturer of polymer-based construction products; LP North America Distribution, Inc, which distributed liquid polysulfide, a raw material used by USP and other companies that made similar products; and USP Construction Services, a construction contractor that used USP products in various industrial and commercial construction projects.

Edison owned the three businesses and served as their president. He was proud of the financial success of the three companies (See financial statements in Appendices G, H, and I and the related notes in Exhibit 1) and of the quality of service that the three businesses provided to their customers. All three businesses built their reputations on a philosophy of providing extreme service to customers.

Edison was very involved in both the day-to-day operations and long-term planning for the businesses. He thought, somewhat wryly, that one or another of the businesses was always at a critical turning point. As a result, keeping up with his responsibilities required an ongoing balancing act. As the businesses grew, Edison focused on recruiting a competent managerial team for the companies. By early 2005, he had in place a managerial team that could handle most of the routine operating decisions, leaving him free to concentrate on setting the long-term direction for his businesses.

At the beginning of each year, Edison conducted a review of the results of operations for the previous year and developed detailed plans for the new year. He gathered the financial statements for 2004 and other information for the three businesses, and he began his assessment of 2004, wondering what unforeseeable challenges 2005 would bring. Once again, he believed that both he and the businesses were at a critical turning point.

The Beginnings of USP

In 1991, Edison and three partners formed USP, a manufacturer of polymer-based construction products. USP produced various coatings, linings, sealants, and floorings for industrial, commercial, and institutional uses. Initially, the company's primary customers were construction contractors in the Dallas area.

Over time, Edison bought out his three partners. He grew the business by aggressive marketing, internal development of new products, joint ventures, and acquisition of related products. In 1996, USP acquired the Selby Marine Decking product line from Harris Specialty Chemicals. This product line included a full line of exterior and interior marine flooring products. The acquisition allowed USP entrance into new markets, ships and maritime oil rig platforms that had product technologies similar to existing USP products.

USP's second major acquisition occurred in 1997, when it purchased the Thiokol line of coatings and industrial sealants from Morton International. The product lines

included flexible coatings for tank linings and containment, airport runway sealants, and concrete repair materials, among others. The Thiokol brand name was well known in the construction industry, and the products were compatible with existing USP lines. USP's annual net sales grew to $9.5 million by 2004 as a result of internal growth and these successful acquisitions.

Formation of LPNA

Some USP products (including the Thiokol product line) used liquid polysulfide as a raw material. In 2001, the only U.S. manufacturer of this material decided to cease production. Edison turned this threat into an opportunity by becoming the sole North American distributor for a Japanese manufacturer of liquid polysulfide. For this purpose, Edison established a new business entity, LP North America Distribution, Inc. (LPNA), which was profitable from its inception. (See the financial statements in Appendix H.) The establishment of LPNA assured a reliable source of liquid polysulfide for USP. The new company also generated revenues through sales to other North American businesses that needed liquid polysulfide as a raw material. Net sales revenue for LPNA grew from $372,000 in 2002 to $2.35 million in 2004.

Establishment of USP Construction Services (USPCS)

From its beginning, USP provided flooring, coatings, and other polymeric materials to construction contractors. On a typical project (for example, installation of a new floor in a factory), these materials constituted about 25 percent of costs, with the remainder being made up of labor and other costs of installation. Bob Edison began to think about establishing a construction contracting business, which would use USP materials to do jobs involving flooring, sealants, or coatings.

Edison saw several potential advantages from serving as contractor on construction jobs:

1. His business would receive 100 percent of the revenues from a job, instead of just the 25 percent associated with materials.
2. Some of USP's contractor customers tended to be slow at paying their materials bills. By being the contractor, Edison expected to achieve faster cash inflows.
3. If USP took the responsibility for applying its products, it could ensure that the materials were applied correctly. Customers would have better warranty protection because both materials and workmanship would be guaranteed by Edison's businesses.

Based on his assessment of these advantages, in 2002, Edison established another business, USP Construction Services (USPCS), which began bidding selectively on a small number of construction projects.

Edison chose to bid on contracts where USP products and expertise would be appropriate and there was minimal risk of alienating other contractors who were customers of USP. By the end of 2004, USPCS had completed approximately twelve contracts, two of which were particularly noteworthy. USPCS received a high-profile contract for the repair of some of the floors at Reliant Stadium in Houston. The job was newsworthy because the repairs and renovation had to be completed in time for the 2004

Super Bowl held at Reliant. USP Construction Services assumed leadership on the project as a construction management company, ensuring coordination between the stadium and the trades that worked on the project. The project was completed in 18 days and ready for the Super Bowl. Another major USPCS project in 2004 was a decking project on two maritime oil well platforms. This project was the first that USPCS completed on maritime platforms and represented a potentially important market that was expected to grow as long as oil prices remained high. Net sales for USPCS were $886,000 in 2004.

Assessment and Concerns

Edison sat back and reflected about the performance and financial standing of his businesses. In 2004, the three companies together (USP; LPNA; and USPCS) generated revenues of $12.8 million and net income of $429,000. USP, LP, maintained a growth rate that was about four times the growth rate for the industry as a whole. Both LPNA and USPCS were relatively recent ventures that had been profitable from the beginning. The total assets reported on the financial statements of the three businesses amounted to $3,883,000, and the Edison's total net worth (equity) in the businesses was $2,830,000.

Edison had an entrepreneurial flair, and he enjoyed growing USP. He valued the long-term relationships that he had developed with many customers. However, by 2005, he was in his mid-fifties, and he wanted to reduce his involvement with the companies. None of his family members indicated any interest in succeeding him in running the businesses. Edison concluded that, over the next several years, he needed to grow the businesses so that, when he was ready to retire, a capable CEO could be hired to continue building the companies. Alternatively, if an opportunity arose to sell off one or more of the businesses, Edison would need a sound basis for establishing a fair and reasonable selling price. He looked at the financial statements for the three companies and wondered whether the information could help him evaluate the businesses and decide where he should devote his energy.

Edison reviewed the 2004 financial statements for all three companies (see Appendices G, H, & I). He found the level of detail on the income statements, especially for USP, LP, to be somewhat overwhelming, and he thought that the income statements might be more useful to him if they were organized differently.

While the income statements reported the performance of the separate businesses, the businesses were operated from the same headquarters, and some costs were common costs benefiting all three companies. In recognition of the shared nature of costs, some were allocated among the companies. In 2004, $30,000 was charged to LPNA ($2,500 per month) as miscellaneous expense. In addition, $88,000 in administration fees was assigned to USPCS. The total of these amounts, $118,000, was shown as miscellaneous income for USP. Edison questioned whether the amounts of income for the businesses were meaningful or useful for decision making, given the common costs and somewhat arbitrary allocations among the businesses.

Edison looked at the financial information for LP North America Distribution, Inc. In a sense, he did not think of LPNA as a separate line of business. Rather, it was a distribution agreement that he had formed with a manufacturer. It required no further

financial investment on his part; any additional investment would be made by the manufacturer. Edison believed that LPNA would continue to grow in both revenues and profitability with relatively little attention from him.

Edison directed his thoughts toward USP. The company's sales had grown fairly consistently for several years, but in 2004, its income dropped sharply. USP experienced a major increase in raw materials costs in 2004, especially as petroleum prices increased in the second half of the year. For example, the cost of one important raw material had increased by more than 60 percent in six months. Because construction contractors were very price-sensitive, USP was not able to pass the cost increases on to its customers.

Edison looked at USP's income statements for 2002, 2003, and 2004 (see Appendices G, H, & I). He noted the decrease in net income from 2003 to 2004 and the increase in cost of goods sold. Edison jotted down the following questions:

- Why did USP's net income decrease in 2004, and how much of the decrease was due to increasing raw materials costs?
- The amounts shown for cost of goods sold included materials only. What other costs should be included in this expense? Edison estimated that the labor cost for making most products was about 8 percent of the selling price.
- What could the company do in the future to maintain and increase profitability, especially if raw materials costs remained high?

Then Edison thought about USP Construction Services. To this point, PCS had operated opportunistically, with little systematic plan for growth. Edison had bid on a limited number of contracts, and he was pleased with the profit margins reported by USPCS: in 2004, USPCS's gross profit margin was 21.5 percent, and its net profit margin was 9.8 percent. Edison wondered if PCS was positioned for substantial growth, and he asked himself whether its performance justified hiring a full-time manager to drive the growth of the business. He knew that growing the business would require additional resources, including an increase in the line of credit that helped finance operation of the three companies.

Edison gathered up the financial statements for the companies, with the issues he had raised still in his mind. He decided to take his questions related to accounting information and the performance and potential for the three companies to his managerial team for their evaluation and suggestions.

Exhibit 1
Notes Related to Information in the Financial Statements

(See Appendices G, H, and I for the financial statements of USP, LPNA, and PCS).
1. The amount shown for Cash – Checking for USP included the balance in the company's checking account, offset by the outstanding balance in the line of credit that USP had at the bank.
2. USP had notes receivable from Tom Cross and Flowcrete NA LP. Cross was the USP VP of marketing; he left the company in 2004. Flowcrete NA L.P. was a joint venture formed with a United Kingdom company that manufactured various flooring products. The joint venture was formed in 2002 and dissolved in 2003.
3. USP had a liability for SEP Payable, which was an employee/owner retirement plan. There also was a Flex Spending liability. Flex Spending was a plan that allowed employees to have an amount deducted from their paychecks to be used to pay for health care costs.

THE SEARCH FOR MARKET PERFORMANCE

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INTRODUCTION

At the start of Universal Specialty Polymer's annual strategic planning meeting in January 2005, key executives of the company felt an urge to congratulate themselves as they discussed the final performance figures for the previous year. The company was profitable, had excellent credit, and had accomplished several key goals in the past year. However, several challenges loomed on the horizon, including rising raw material prices, ongoing litigation, and the completion of several initiatives that had been initiated but had not been brought to closure. While there had been a healthy growth in sales, profitability had declined the past year (see Exhibit 1). Bob Edison, CEO of USP, was keen on developing a set of strategic initiatives and operational action plans that would sustain long term growth in profitability.

A major question lingered in his mind. Was the recent decline in profitability due solely to rising material costs or was it symptomatic of undetected problems that required immediate attention and action? At the meeting, several areas were identified as deserving attention. One was the state of the company's marketing organization. The marketing organization had developed in a somewhat ad-hoc fashion over the years, and possibly needed a redesign to be more efficient. Another key area was the future of the company's relationship with its contractors, and its continued participation in downstream integration.

HISTORY

USP was founded in 1991 by Edison and two other former employees of I.W. Industries when the latter was acquired by another company. Edison had spent his entire career marketing industrial coatings, and USP was launched as a manufacturer of polymer-based construction products such as coatings, linings, and flooring materials. Later, the company had added joint sealants and sub-sea insulation to its product mix.

USP's beginnings were humble. The company began operations in a small leased building outside Dallas, Texas. USP's product mix included products developed in-house based on industry formulas and with assistance from suppliers, as well as formulations specified by customers. USP was privately owned, and since its inception had achieved sustained growth in sales as well as steady profitability. The company's product offerings

had grown in breadth, through acquisition of product lines from other businesses, and through internal product development.

Growth through Acquisition and Integration

In 1996, through an acquisition financed by shareholders, USP acquired the marine division of Selby, Battersby, an enterprise owned by Harris Specialty Chemicals. The acquisition brought several assets to USP, including marine certifications, government contracts, a customer list, intellectual property, and finished goods inventory.

Through a self-financed deal in 1997, USP purchased the Thiokol Formulated Products (TFP) line from Morton International. This acquisition brought to USP a product line comprised of coatings, liners and sealants based on proprietary liquid polysulfide technology, as well as the brand name Thiokol, which was well-established in the coatings industry.

In 2002 USP entered into a joint venture with Flowcrete PLC., forming a new company named Flowcrete North America, L.P to manufacture and market polyurethane coatings in the United States. The same year, USP also formed another company, LP North America Distribution, Inc. (LPNA) to be the North American distributor for liquid polysulfide (LP) manufactured by Toray Fine Chemicals of Japan. Liquid polysulfide is a basic raw material for USP's Thiokol line of coatings, and LPNA became USP's primary source for this important raw material.

Another company, created by USP in 2004, was USP Construction Services, Inc. This entity was designed to act as a value-added service to USP customers who wanted not just USP's flooring products, but also desired USP to perform installation of these products. USP Construction Services, Inc. was in effect a contractor that installed USP products to the customer's specifications.

Technological Leadership and Intellectual Property

Edison's background in marketing of industrial products and USP's commitment to the development and acquisition of technological assets had, over the years, led to an enviable accrual of technological assets for the company. USP's technology organization was headed by Peter Arthur, Director of Technology, assisted by a Director of Product Development, a Product Development Chemist and a Quality Control Lab Technician.

USP's intellectual property assets were numerous. Important among these were:

- Over 150 base formulas for polymer-based construction products such as coatings, flooring, sealants, marine decking, linings, sub sea insulation, grouts and adhesives.
- Certifications for marine coating and decking material. These certifications had been awarded by the U. S. Navy, American Bureau of Shipbuilding, Bureau Veritas and other international agencies. USP's inclusion in the Navy's Qualified Product List (QPL) was a significant strength when selling to the marine market. These certifications had been obtained through a difficult and time-consuming process of proving product capabilities to the respective agencies.
- Certification from the International Maritime Organization (IMO) for two decking products. USP's FLEX-IMO polymer decking system was the first product in the

world to pass new stringent IMO fire rating standards. Two other products subsequently received IMO certification.

- A proprietary insulating material for sub-sea oil and gas piping and production equipment, developed in-house, that opened up a market with substantial opportunity for growth. Sales of this material were expected to be near $ 3 million during 2005.
- Proprietary technology for polyurethane floor coating with low volatile organic compounds (voc) emissions, and fire safety marine decking with high floor scratch and mar resistance.
- USP's expertise and technological ability had led to the award of product development contracts valued at over $800,000 from the U.S. Navy, under its Small Business Innovation Research (SBIR) program. These grants were for developing a hybrid coating for encapsulation purposes, a fast-setting splash zone compound, a non-silicone aircraft runway sealant, and an advanced deck covering material.

Recognizing the value of Internet domains, USP had secured several domain names, including

- USP.com
- Thiokol.net
- Lpnorthamericadistribution.com
- jointsealants.com
- jointsealant.com
- coatingspecs.com
- foodfloors.com
- marinedecking.com
- nonskidcoating.com

Market-based Resources

USP currently owned several market-based and contractual assets that had been developed or acquired over time. These included:

- An exclusive license in 85 countries worldwide for the well-known trade name Thiokol®, used for USP's line of industrial sealants and coatings.
- Proprietary trademark rights to brand names including such industry-recognized brands as USP®, TuffRez®, FlakeRez®, NovoRez®, PermaRez® and RezRok®
- A technology supply agreement with Flowcrete Plc., the United Kingdom's largest manufacturer of polymer industrial floorings, for manufacturing and marketing *Ultra-Fresh*™ polyurethane concrete products.
- An agreement to be the sole U.S. distributor for liquid polysulfide (LP) manufactured by Toray Fine Chemicals, Japan. This agreement was executed through USP's subsidiary, LPNA.

Showcase Projects

USP had, over the years, supplied materials to many projects with high visibility and public use. Some of the recent projects that utilized USP's products are listed in Exhibit 4.

PRODUCT RANGE

On the surface, USP's product range appeared narrow and homogeneous. However, a closer look revealed a wide range of products, with varying applications, buyer groups and competitors. USP's business was divided into seven groups: Flooring, Coatings, and Linings (FCL); Marine Decking; Thiokol coatings and sealants; Polymer Technologies (sub sea and specialty); Construction Services; LP America, and SBIR – Government Contracts. Each of these lines of business had distinct target markets and contributed to varying degrees to sales income and gross profit (see Exhibit 2 for 2004 sales and contribution data for each product area and Appendix E for a six year comparison of sales growth in each area. Also see Appendix D for a description of uses of these products. Appendix F shows sales for the years 2002 through 2004 for the top 25 customers).

A large increase in input prices, primarily petroleum inputs, occurred in mid-2004. As a result, the overall gross profit margin dropped to under 33%. However, the overall gross profit margin rose and was expected to rebound to over 35% in 2005.

Flooring, Coatings, and Linings (FCL)

The flooring, coatings, and linings product line was the bread-and-butter business for USP. The products were almost entirely sold to 'applicators,' contractors who bought from USP for installation on their jobs at end-use sites. FCL products were seen as commodities, with the contractors being quite price sensitive and interested in minimizing their cost of material so as to maximize job profitability. There was little differentiation between competing products, and end-users were generally unaware of and indifferent to the products used by contractors. Despite the nature of competition in this product area, contribution margins had remained high in 2004 at 54% although there was significant variation among individual products (see Exhibit 2).

USP Construction Services was an attempt by USP to capture the value-added services that application contractors provided for customers in the FCL product area. USP Construction Services had recently completed a contract for flooring work at Reliant Stadium, Houston, a prestigious project with the potential to showcase the company's products.

Marine Decking

USP's marine decking line was comprised of products that found application in both the defense and civilian sectors. IMO-Lux, a product with application in the civilian maritime sector and with certification from the International Maritime Organization (IMO), was well received in the market. A product developed recently, described as a 'one step terrazzo,' was undergoing a certification from the U.S. Navy, and

awaiting selection to the Navy's Qualified Product List (QPL). USP's executives had also identified the need for a non-skid yet flexible product to complement its present line-up of products.

USP maintained a strong presence in the marine decking market, and faced only two major competitors: American Safety and Crossfield. Certification standards in the marine decking industry were stringent, and a product had to be on the United States Navy's Qualified Product List (QPL) or be listed by the International Maritime Organization (IMO) to be accepted by buyers. USP's gross profit margins in this product category were high. While sales in this product area had experienced a significant dip in 2004, sales were expected to rebound in 2005 to levels near those in 2003 while maintaining close to a 50% contribution margin.

Sales to the U.S. Navy were made through the Navy's procurement process, and were price sensitive. Sales to the maritime sector were to contractors/applicators or directly to owners of fleets and vessels such as ships, tankers, ferries, barges, and cruise ships. Drilling platforms remained an untapped potential market for decking products.

Thiokol Coatings and Sealants

USP's flexible polysulfide coatings, marketed under the well-known licensed brand Thiokol, were the best-known of USP's products. The coatings products were sold for applications in industrial facilities, and sealants were sold for both industrial and construction applications. This line contained products that had received certification for quality and the product line commanded a contribution margin of 56% in 2004, highest among the various product groups.

While the Thiokol brand name was widely known, USP also ran a program of private labeling for other suppliers, manufacturing products that would be sold under the suppliers' brands.

Sub-sea Insulation Polymer Technologies

USP had developed several sub-sea insulation products based on its polysulfide technology. These products were utilized in off-shore drilling operations for insulating sub sea pipelines, wellheads and valving systems in order to control temperature and prevent blockage due to the solidification of hydrates and paraffins within the wells. USP's sub-sea insulation products were known for superior quality and performance within the industry. Sales for this product group had grown substantially in 2004 over the previous year and comprised over 29% of gross company sales for that year. However, the contribution margins for the group were consistently lower than the other product groups (see "Polymer Technologies" in Exhibit 2).

Specialty Products

USP's remaining product line included several custom products that had been developed to meet unique customer requirements. These products found applications in electrical and semi-conductor components, sealants for anodes used in cathodic protection, an adhesive for bonding/coating decorative panels and an adhesive for sealing oil and gas distribution pipe in sub-Arctic conditions. A sector of this line, RezRock

Concrete Repair Products, was used to resurface and restore concrete and in other reinforced concrete construction applications. This sector had commanded a premium price position in the market with gross sales margins of over 45% in 2004.

Sales in the entire product group had grown almost 50% over 2004 levels with the majority of the growth stemming from RezRock sales growth.

MARKETING ORGANIZATION AND ACTIVITIES

Edison, President of USP, was in charge of the firm's strategic vision. He possessed an extensive background in business development and a deep contextual knowledge of the coatings industry. Reporting to Edison was Steve Dillard, Director of Sales/Marketing who had joined the company in late 2004. The job description for Director of Sales/Marketing required the incumbent to "direct the sales activities of USP L.P. by managing, coaching and motivating the sales and marketing staff to obtain and maintain profitable sales growth for Company product lines, to plan and implement sales and marketing activities, and to monitor the successful execution of sales plans and targets." A graduate of Eastern Michigan University, Dillard had joined USP in November of 2004. Dillard's prior experience included being National Sales Manager for Tennant Company, one of the nation's largest providers of floor coatings, and Market Development Manager, North America for Belzona, Inc., another flooring competitor. There was an expectation that Dillard would use his experience and contacts to make further inroads into the industrial market.

The following positions reported to the Director of Sales/Marketing:

1. Customer Service Manager: Responsible for inside sales and order entry Carol Graves held this position and was assisted by Customer Service Specialist Aneika Hart.
2. Marketing Communications Manager: Responsible for all advertising and public relations. Linda Yule filled this position.
3. Marine Decking Product Manager: Responsible for outside sales in all territories. This position was held by Matt Turner.
4. Regional Sales Manager for Floors, Coatings, and Linings: Outside sales in all territories. Position filled by Tim Stone.
5. Sales Administrator: Charged with managing and generating the lead data base and the customer contact data base along with general administrative duties within the department.

The marketing and sales department had six full time employees, out of a total of 33 in the company. In addition, between 11 and 13% of sales were typically generated by outside sales representatives, commonly known as manufacturing reps.

There was a sense that the current departmental strength was inadequate, and that the department would be stretched by the growth predicted. The staff was rather loosely organized, with customer, geographic and functional specializations. There was also concern in the company that some of the staff were spending too much time on routine customer information and contact jobs, and not enough attention was being paid to

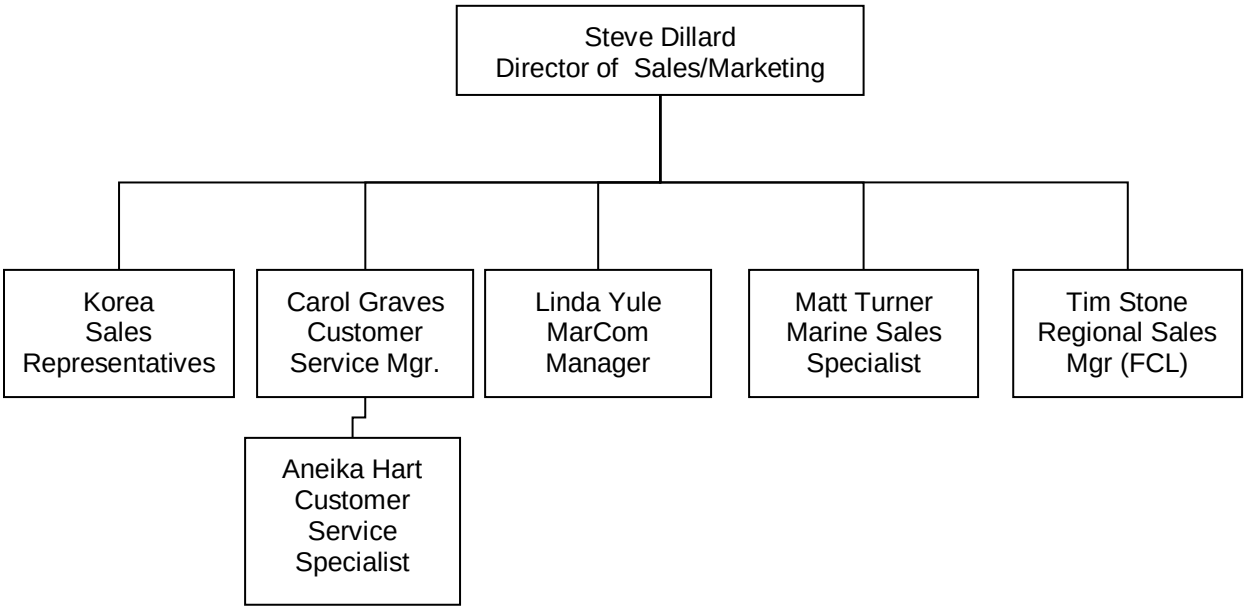
relationship-building with customers. See Illustration 1 for an organizational chart of the marketing organization.

Another concern within the marketing function was that there were no established performance evaluation measures, except that outside sales personnel were evaluated by sales volume.

Promotion

USP used a variety of promotional methods. These included direct mail to select industries, telemarketing, e-mailing, advertising in trade journals, and annual participation in The World of Concrete, the major industry trade show. Advertising and promotion expenditures were $133,709 in 2003 and $170,271 in 2004. Of this later amount, trade show expenses were $52,771 in 2004. Another $45,731 was spent on sports tickets and suites in 2004 while the investment in trade journal advertising amounted to $26,181. USP had paid $16,000 to and advertising agency that year and $11,000 to a lead generation service.

Figure 1: USP Marketing Organizational Chart

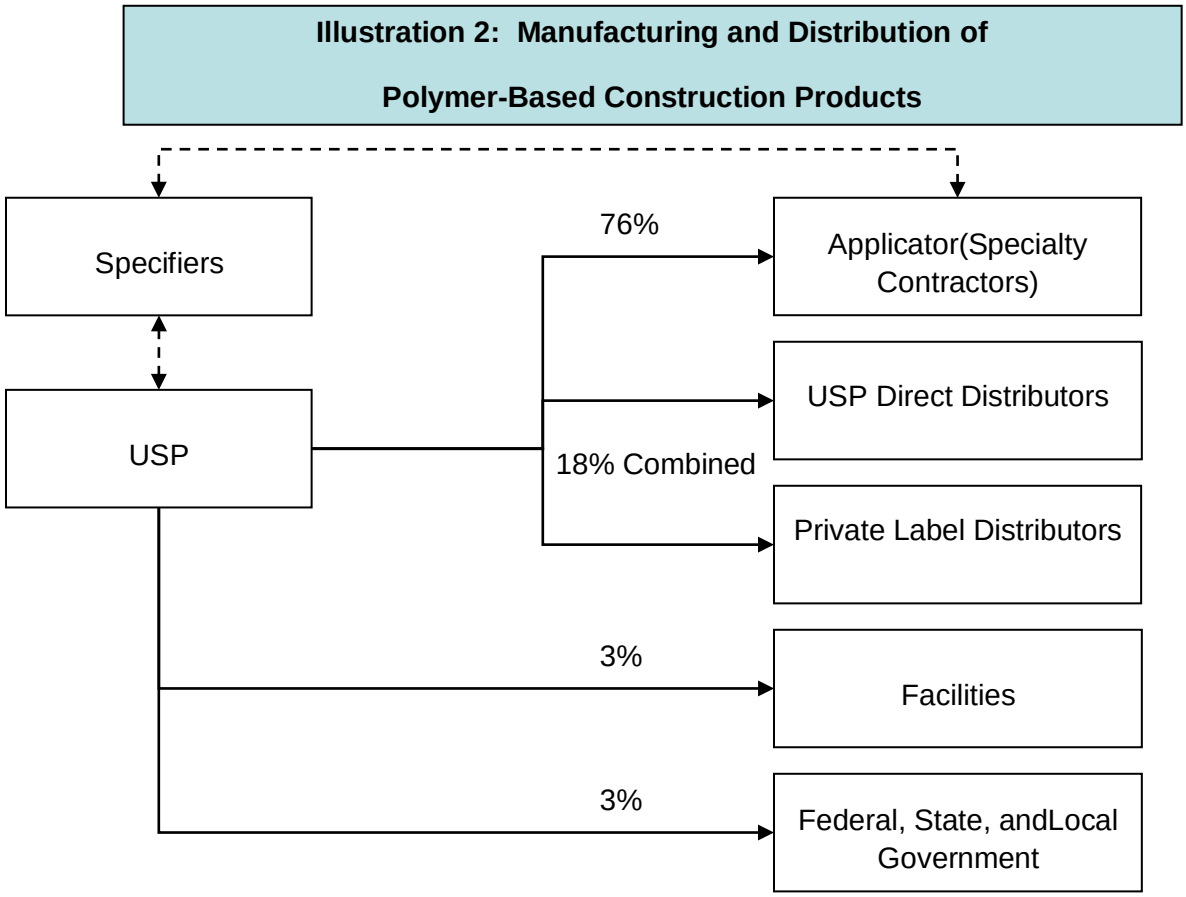


Distribution Channels

USP had three separate distribution channel designs. These channels characterized various unique supply chains and offered distinct opportunities and challenges for growth. These chains are shown in Figure 2.

For polymer-based (flooring) products, USP primarily used a direct channel to applicators. For a majority of sales, applicators were the buyers as far as USP was concerned. Sales to applicators accounted for 76% of sales. These applicators procured installation project contracts from project owners or general construction contractors.

The latter arrangement resulted in the applicators serving as subcontractors. Competitive bidding was often part of the process of being chosen by an applicator, although USP often became the supplier of choice for many applicators as a result of previous successful projects and service history.



Another way USP could be chosen as the supplier was to work through specifiers. These individuals could be members of a project design team, the client's procurement division, or general contractor staff. When USP was chosen for a project by a specifier the nature of the applicator relationship was altered, with USP being "locked-in" as the product provider.

The second most important channel (accounting for 18% of sales), was that of distributors. These distributors handled both USP branded products and private label products. Finally, sales to facility owners and government entities at all levels accounted for 3% each of product sales volume.

While sales to applicators formed the bulk of company sales, the channel presented an assortment of challenging issues to USP. Since applicators were contractors, they exercised a strong decision-making influence on the products chosen for a job. This influence had increased with an increase in competition. On a typical project, installation costs accounted for 70-75% of the total project cost incurred by the applicator. The remaining 25-30% was cost of material. The project contract itself may have resulted from an applicator bidding independently on that project and then later making a selection of material supplier. Often, however, USP would learn of an upcoming project through its sales force, and would pass the lead on to a valued customer/applicator who would then bid on the job. While this practice would help the applicator, it would not guarantee that USP would be the material supplier if the applicator did win the bid.

In response to the growing power of applicators, USP created a new entity in 2002 to explore the benefits of providing turnkey service to project owners. USP Construction Services (USPCS) entered the market to bid directly on installation projects. The benefit to project owners was that they could deal directly with one organization from initiation of the project to completion. It was felt that owners would prefer this arrangement since USP would be the sole warrantor of installation performance. It was found that owners would be willing to pay a 10-15% premium on the project price in order to procure this arrangement. USPCS would have to provide project management and procurement infrastructure.

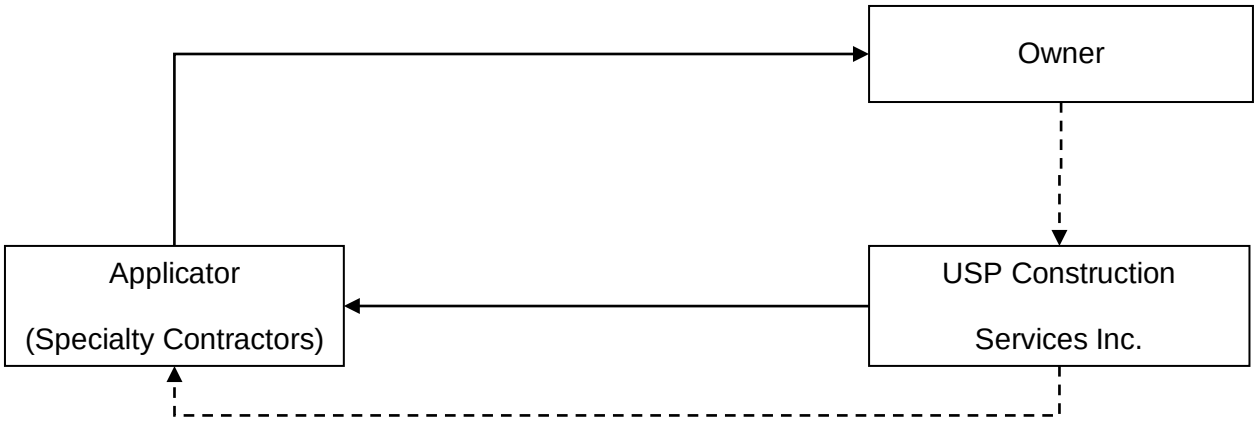
Once the project was awarded, USPCS would then subcontract the application component to a specialty applicator. Thus, a contractor who served as the downstream customer in the standard channel relationship would become a service provider to USPCS. This inverted the existing power relationship. To date, USPCS had managed twelve such projects. Management was evaluating the possibility of building this channel. The disadvantage of this arrangement was that liability would increase from solely materials-related, to the entire project installation. USP would always be exposed to liability for specifying the wrong product or having a product fail in the field, but as an applicator, the company would have additional liability for the installation process. Under the project management arrangement, oversight of installation was the responsibility of USPCS. However, the new channel design did allow for USP to exercise complete control over that risk and to maintain project sales margin control, material specification control, and preferred provider control. A channel representation can be seen in Illustration 3.

The third major channel of distribution available to USP was also established in 2002. This channel resulted from a terminated relationship that USP had with Morton International. The relationship specified USP as the sole distributor of liquid polysulfide (synthetic rubber) in North America. Morton enticed USP into this relationship by guaranteeing a low supply price. Morton was then purchased by Roman Haas, which decided after two years to exit the business and close the Morton plant located in Mississippi. This action left only two operational liquid polysulfide manufacturers in the world. One of these producers was in Japan. Morton had had a long term agreement with the Japanese firm which specified that the latter could not market their product in

North America in direct competition with Morton. This agreement stemmed from the fact that Morton owned the production technology.

After the Mississippi plant closure, the agreement between Morton and the Japanese firm became void and the foreign firm in effect could begin operations on the American continent. USP became aware of this development and contacted the Japanese firm. Subsequent negotiations resulted in a long-term appointment of USP as the sole North American distributor of liquid polysulfide for the Japanese manufacturer. LP North America Distribution Incorporated (LPNA) was thus formed as a distinct entity within USP.

Illustration 3: Construction Management Channel



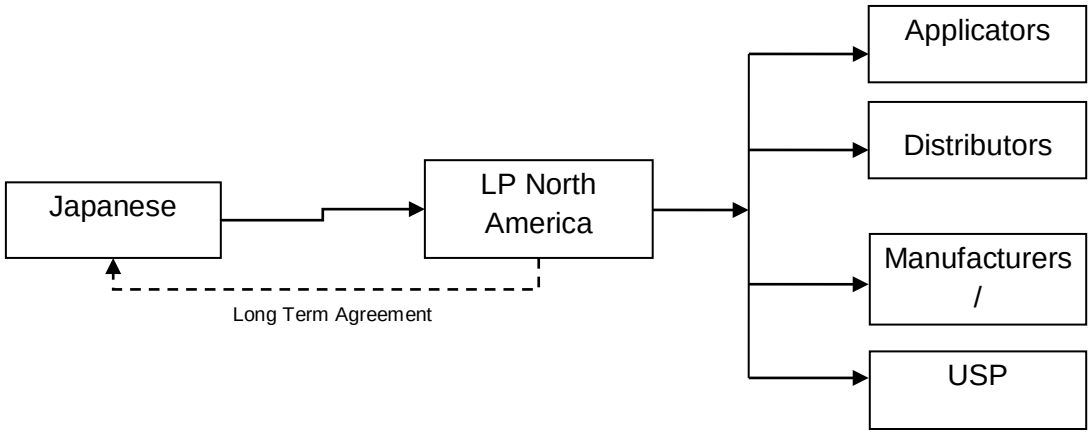
The formation of LPNA allowed USP to become the base material supplier to the industry, including USP and competitors. In 2004 12.3 per cent of LPNA sales were to USP with the remainder to other manufacturers. The supply chain for LPNA is depicted in Illustration 4.

Assessing the Competition

In the markets where USP operated, it faced over 200 U.S. competitors, most of whom were manufacturers of flooring and concrete sealants and repair formulations. The top ten manufacturers accounted for about 39% of the volume, with the remaining market share spread among many smaller competitors.

In the floorings market, which was worth about $ 500 million, there were over 180 competitors. The ten largest players in the industry accounted for $ 175 million in sales.

Illustration 4: Liquid Polysulfide Distribution Channels



The coatings and linings market was worth about $ 90 million, and had 90 competitors. The top five of these companies had $ 65 million of the market.

The marine decking market was worth about $ 40 million. Of the 7 competitors in the market, the top three had $ 35 million of the business.

The commercial sealants market was worth $ 200 million. There were 40 competitors, with the biggest six accounting for $ 75 million of industry sales.

LOOKING TO THE FUTURE

As the executive team appraised the company's situation at the annual strategic meeting, it appeared that strategic decisions would need to be made about several aspects of the business. The role of USP Construction Services in the future growth of the company would need to be clarified. Possible conflicts with existing channels of distribution were a potential problem area, and the company would need to establish the contracting services without seriously disrupting existing relationships with associates.

There was also a sense among the executives that the company's marketing organization needed to be reorganized in order to efficiently and effectively pursue market opportunities. The present marketing organization had developed in a somewhat ad-hoc fashion, with little consideration for its match with the company's needs and the marketing environment.

These major issues needed to be tackled within the next few months, and implications for the vision and shape of the company would become apparent. It seemed that these decisions and implementation plans would keep the team occupied over the next year.

Exhibit 1: USP Revenue and Income*		
Year	**Sales ($)**	**EBITDA ($)**
1992	575,773	(71,000)
1993	1,119,599	136,500
1994	1,573,141	310,000
1995	2,513,998	460,000
1996	3,631,431	375,000
1997	4,188,503	300,000
1998	5,163,546	350,000
1999	6,688,609	550,000
2000	7,384,710	608,000
2001	7,247,949	647,000
2002	8,517,943	633,250
2003	10,870,021	901,175
2004	11,652,981	886,350
* Results are based on consolidated un-audited financial data and are net of inter-company transactions.		

Exhibit 2: Product Group Sales and Gross Margins For Calendar Year 2004			
Product Group	**YTD Sales**	**Contribution Margin***	**Contribution**
Flooring, Coatings & Linings			
TuffRez Floors	$1,421,288	51.94%	$738,217
Ultra-Fresh Floors	$606,067	51.68%	$313,215
FlakeRez Coatings	$206,984	56.94%	$117,857
PermaRez Linings	$68,167	59.50%	$40,559
NovoRez Coatings	$333,727	61.25%	$204,408
USP Primers	$211,855	63.29%	$134,083
Subtotal	$2,848,088	54.36%	$1,548,339
Marine Decking	$1,107,205	53.64%	$593,905
Thiokol Coatings & Sealants	$616,119	56.31%	$346,937

Polymer Technologies	$3,327,465	26.87%	$894,090
Private Label	$1,084,849	46.50%	$504,455
Private Label-PPG	$86,020	45.77%	$39,371
Subtotal	$4,498,334	31.97%	$1,437,916
Other Products			
Accessories	$85,002	35.67%	$30,320
Chemicals	$29,886	8.28%	$2,475
RezRok Grouts & Adhesives	$115,857	61.78%	$71,576
Subtotal	$230,745	45.23%	$104,371
LPNA	$2,352,490	26.61%	$625,998
TOTAL	$11,652,981	39.97%	$4,657,466

* Gross Profit Margin is calculated as Sales Revenue minus the sum of Material Costs, Manufacturing Costs, and Other Operating Costs. General, Administrative, and Selling Costs are deducted as company expenses

Exhibit 3: Operating Results for 2001 to 2005(Weighted by Sales)

	2001	2002	2003	2004*
Material Cost	46.6	49.3	49.5	55.7
Manufacturing Costs	11.1	8.8	8.8	7.7
Other Operating Costs	2.9	1.9	2.6	4.0
Gross Profit Margin	39.4	40.0	39.1	32.6

* Material input prices, particularly petroleum materials, surged in 2004

Exhibit 4: Recent Major Projects Utilizing USP Materials	
Client/Project	**Product/Job**
U. S. Department of the Interior - Carlsbad National Caverns	All of the special coatings for over three miles of trails in the caverns.
Texas Instruments - Dallas, Texas	All flooring for the DMOS 6 Expansion (over 350,000 square feet)
Daelim Industries - Rayong, Thailand	Chemical resistant linings for chemical process areas.
Hunt Oil Company – Yemen	1,000 cu. ft. of specially formulated hot weather grout for pumps.
East Bay Municipal Utility District - Orinda, California	Tank linings and secondary containment for major expansion.
Waste Control Specialists - Andrews, Texas	Floor coatings for hazardous waste storage buildings.
SEH America - Vancouver, Washington	Chemical resistant flooring for wafer fabrication plant.
Allen Field House - University of Kansas - Lawrence, Kansas	Decorative floors for entire perimeter of basketball arena.
U.S. Navy - Point Loma Base - San Diego, California	Thiokol coatings for lining underground fuel storage tanks
HEB Foods – Dallas, Texas	Polyurethane flooring for milk processing plant.
U.S.S. Enterprise – Norfolk, Virginia	Marine deck coatings for interior living quarters.
Reliant Stadium – Houston, Texas	Over 350,000 square feet of waterproofing and decorative coatings
Kraft Foods – Springfield, Missouri	Polyurethane concrete for production areas floors
KV Pharmaceutical – St. Louis, Missouri	Architectural flooring for new manufacturing facility.
ENSCO Drilling – Dallas, Texas	Flooring for two new drilling rig platforms.

EMPLOYMENT OF INFORMATION SYSTEMS AT USP

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University of Arkansas at Little Rock

Gerald L. Plumlee
Southern Arkansas University

Universal Specialty Polymers (USP), a leader in the polymer-based construction industry, was founded in 1991 by Bob Edison and three of his associates. By 1995 USP was on its way to success and was named to the Dallas 100 with a vision to be recognized as a national leader in polymer systems production.

Success came and continued throughout the decade as the company rose to be a leader in polymer construction products technology in industrial, institutional, commercial, and marine markets particularly in terms of customer satisfaction, product performance, and the financial well-being of its employees and other stakeholders. Sales and earnings began to grow, and USP continued its flight as an industry leader. To support their growing operations, USP began to employ new information systems and update their legacy systems and soon added various modules of the MAS 200 enterprise system.

Yet despite, or perhaps, because of their success, USP soon found itself facing expansion decisions and slowing profits. While they had made steps to improve their information system capabilities, they were not up-to-date with some of the MAS modules and had done little to take advantage of the Internet as a sales and distribution channel. USP recognized that improving their use of information systems could help them control costs and increase revenue if appropriately and strategically developed. They also recognized that in order to continue growing and reverse the declining profits, USP needed to enhance their sales and distribution infrastructure.

To successfully accomplish this, Rachel Clark, chief information officer of USP, was faced with a quandary of how to best support the company's needs. How could they employ Internet technologies to improve sales and distribution? Could their MAS 200 modules and Goldmine customer relationship management (CRM) support such an effort? Will MAS 200 seamlessly integrate into an Internet-based system? Should they consider upgrading to MAS 500 for their enterprise system and Saleslogix for CRM? To determine the answers to these questions, USP needed to fully evaluate their current information systems to determine its capabilities in the context of current operations and its capacity for growth, while determining the best course of action to support the sales and distribution network.

COMPANY INFORMATION

Product Description

USP manufactured industrial polymer systems used for corrosion resistance and surface protection of steel tanks, concrete floors and walls. USP manufactured three basic types of products:

1. High performance sealant systems – coatings used to seal chemical process and storage tanks, underground and aboveground fuel storage tanks and concrete sumps. These chemical resistant sealant systems offer long-term protection from intermittent and continued exposures to organic and inorganic acids, caustics, solvent, and fuels.
2. Marine decking systems – the most comprehensive product line of interior and exterior deck covering materials available in the world, used on ships, barges, oil drilling platforms and other marine vessels which are subject to strict government regulations for performance and safety.
3. High performance flooring systems – self-leveling flooring systems designed for a wide range of applications, including aircraft hangars, warehouse floors, automobile dealer showrooms, stadiums, food processing areas, retail stores, and many other commercial and industrial facilities.

These products chemically protect, seal, insulate, and/or decorate their respective applications. USP owned over 150 proprietary product formulas, held numerous registered trademarks for their products, and was continuously improving current products and developing new products. Research and development was the company's greatest core competency, and its greatest asset was the advanced product technology it possessed to develop these high-performing products.

Facilities

The company's manufacturing operation consisted of a fully permitted 50,000 square-foot plant and warehouse with blending, dispersing, vacuum, and packaging equipment. USP produced over two million pounds of product each year and had reached capacity in its manufacturing facility over the past few years. The company's customers included distributors, facility owners, private label accounts, and governmental agencies, especially the United States Navy. For the most part, USP manufactured the product, which was installed by other companies, contractors, and sub-contractors. About 75% of its customers were applicators, who install the product.

The Organization & Its People

Edison, president and CEO, founded USP in 1991 and quickly led the company to success while building a strong people-centered organizational culture. Edison, a co-inventor of four patents, held a bachelor's degree in marketing from Baylor University and had authored a number of technical papers. Before beginning his first entrepreneurial venture – Edison & Associates marketing consulting firm – Edison was president of I.W. Industries from 1981 to 1988 and Director of Construction Products Technologies for Master Builders in 1989.

Edison valued people, and considered them the heart of the company. At USP, employees were involved in decision-making, profit-sharing and shared goals. The

management culture at USP encouraged decentralizing operations, used management by objectives, and shared financial information which made employment at USP attractive. As a result, USP had recruited some of the industry's best talent in key positions.

The staff at USP consisted of 33 full-time employees to include five executive /administrative level employees, four technical employees (including three polymer chemists), eight sales and marketing staff members, four plant managers, and 11 hourly manufacturing employees.

Among the organizational leadership was IT Manager Rachel Clark. Clark managed the company's IT and was the only dedicated IT personnel. Considered one of the administrative personnel for USP, Clark reported directly to the CEO. Although she was a direct report to the CEO, the position was just below the director level of the organizational structure. "Directors [positions] are reserved for department heads who have numerous subordinates and significant budget responsibilities," Edison explained.

Clark, a self-trained IT guru, had completed formal technical training in networking and MAS 200. After a career as a field service tech for the machine tool industry, Clark joined USP, bringing with her a background in accounting and electronics. She had been with USP for 10 years.

Key to the sales and distribution structure at USP were the Director of Sales and Marketing, Steve Dillard, and the Director of Operations, Larry Long. Dillard, a graduate of Eastern Michigan University, had been with USP since November 2004. Prior to joining USP, Dillard served as a national sales manager for Tennant Company, one of the largest floor coating providers in the United States, and as a market development manager for Belzona. Dillard "is a real IT champion," Edison explained.

As Director of Operations, Long was responsible for manufacturing operations, packaging, shipping and receiving, facility maintenance, safety, and environmental compliance. A graduate of Texas A&M University, Long had been with USP since 2001. His prior experience included serving as a manufacturing manager for Isolatek International and a production manager for Mandoval Vemiculite Products.

SALES & DISTRIBUTION STRUCTURE

USP sold its products to virtually every marine, commercial, institutional and industrial market sector, using a professional sales staff, independent commissioned sales representatives and distributors. While the majority of their clients were in the United States, 10 to 12 percent of their customer base was international, and that number had continued to grow. While sales had steadily increased over the years, recent dips in sales and high client turnover were key concerns for USP (see Exhibit 1). Increased sales in 2003 and 2004 were contributed to an aggressive joint venture and product technology acquisitions. USP needed to capitalize on their new market opportunities and look for ways to reduce client turnover rates and expand distribution channels.

Exhibit 1: USP Sales and Earnings Summary

Year	Sales	EBITDA*
1992	$ 575,773	$ (71,000)
1993	1,119,599	136,500
1994	1,573,141	310,000
1995	2,513,998	460,000
1996	3,631,431	375,000
1997	4,188,503	300,000
1998	5,163,546	350,000
1999	6,688,609	550,000
2000	7,384,710	608,000
2001	7,247,949	647,000
2002	8,517,943	633,250
2003	10,870,021	901,175
2004	12,236,641	886,350

* Earnings Before Interest, Taxes, Depreciation, and Amortization

Independent Sales Representatives & Distributors

USP's independent sales representatives and distributors received support from the corporate headquarters in terms of marketing materials and leads; however, they were responsible for building and maintaining their own client base and were compensated strictly on a commission basis. Clients placed their product orders directly with USP, and the sales representative or distributor associated in the system with that client received credit for the sale. Independent representatives and distributors typically did not keep inventory of the product. Communication with the sales representatives and distributors was done through phone, snail mail, and some e-mail.

Professional Sales Staff

The professional sales members employed at USP handled primarily direct sales and were paid a salary plus a bonus based on their individual sales. Their primary job was to acquire new sales and maintain current clients. Partly due to the nature of the business, client turnover for USP was high (See Appendix F as an example of turnover in the Top 25 accounts). USP's goal was to improve customer loyalty and retention through improved customer service.

Order Fulfillment

Current clients had to call USP themselves to place an order. Internet ordering was not available. To get information such as product availability and shipping and delivery times, clients or their representatives had to call and talk with USP staff. Once

orders were received, production was notified and orders were filled. Seventy-three percent of orders received were shipped in one business day, and the majority of the other orders placed were not shipped until the customer needed the product.

Marketing Practices

To market their products, USP used telemarketing, e-messaging, trade journal advertising, and trade show participation. Products were also marketed through direct mail campaigns to select industries. USP also held memberships in the National Association of Corrosion Engineers (NACE), Society for Protective Coatings (SSPC) and International Concrete Repair Institute (ICRI), to network and increase their visibility.

Despite their success in the sale and marketing of their product, there was room to grow and competition remained a threat. Over 200 U.S. competitors, primarily in the flooring, concrete repair and sealants industries, continued to place competitive pressure on USP. Thus, USP had to continue to improve sales and expand their distribution channels. USP had web presence through a website; however, they had not fully taken advantage of using the Internet as a sales and distribution channel.

CURRENT INFORMATION SYSTEMS

Enterprise Systems

USP adopted information systems to support their operations. For their primary operational system, USP employed the MAS 200 software system designed for accounting, distribution, manufacturing and e-business management. Among other functions, this system generated reports for sales, inventory, cost analysis, and other management support tools (see Exhibit 2). A broad range of modules were available for the MAS 200 business management software, and businesses could choose to integrate the modules that were appropriate to meet their needs. As a business grew, more modules would be added. The modules were grouped into six main categories: Core Accounting, Distribution, Manufacturing, Time and Project Management, E-Commerce, and Business Intelligence and Integration Tools. The system used a client-server architecture with capabilities to support high-speed performance across the Internet. MAS 200 was designed to be flexible and easy for end users, and it was designed to be compatible with other popular software applications, such as Microsoft Office and Crystal Reports. When fully employed, MAS 200 operated as an enterprise resource planning system.

USP had installed and was using the following MAS 200 (ERP) modules: Accounts Payable, Accounts Receivable, General Ledger, Inventory, Work Order, Purchase Order, Job Cost, Sales Order, Return Authorization, Bank Reconciliation, Bill of Materials, Report Master, Visual Integrator, Business Insights, and Custom Office. Some small firms used primarily the accounting modules of MAS 200, but USP employed a number of MAS 200 modules to build an enterprise-wide, or enterprise resource planning, system. While they were using MAS 200 as an ERP as designed, it was not yet employed to its full capacity. As shown in Exhibit 2, USP had not

Exhibit 2: MAS 200 Modules Overview by Category

CATEGORY	MODULES	DESCRIPTION
CORE ACCOUNTING	General Ledger* Accounts Receivable* Accounts Payable* Bank Reconciliation* Asset Accounting	Provides the foundation for any business's accounting system.
DISTRIBUTION	Inventory Management* Sales Order* Purchase Order* Bar Code Credit Card Processing Star Ship	Provides capability for inventory tracking at multiple locations; maintains detailed sales history for each customer, product, and product line.
BUSINESS INTELLIGENCE	Crystal Reports Custom Office* F9 FRx Financial Reporting Extender Visual Integrator* Business Insights*	Customizable report writers and integration tools work seamlessly to create an all-encompassing information management system.
MANUFACTURING	Bills of Material* Material Requirements Planning Work Order* Job/Project Management Apparel	Provides detailed and accurate tracking and reporting throughout the entire manufacturing process, from the vendor's site to the shop floor and on to completion.
E-COMMERCE	e-BusinessManager .inquiry e-Business Manager .order e-Business Manager .store	Out-of-the box solutions to bring business online.
TIME & PROJECT MANAGEMENT	Abra Human Resources Job Cost* Magnetic Media Reporting Payroll Timecard Timekeeper Time slips Link	Provides for increased efficiency and productivity, keeps track of billable hours, employees, etc.
**Indicates modules employed by USP.*		

installed any of the e-commerce modules or other modules such as bar coding, shipping modules, time tracking or credit card processing. They also had not installed the MRP

module because they were able to run reports from the system from the inventory data that met their current needs.

USP had not installed the Crystal Reports module. Instead, they used Report Master, an old MAS 200 report module that was out of date. Sage, Inc. no longer offered the module and would end support for it soon. The generator was an old "green screen" report generator that required end users to lay out each field manually on the screen for each report that was generated. They were considering adding Crystal Reports.

In addition, there was no system at the time to communicate new stock-keeping unit (SKU) generation throughout the entire organization from sales through technical (lab) to operations. This resulted in a breakdown of the interface between supporting functions such as MSDS (Material Safety Datasheet) generation, label generation, and workforce knowledge of new products. The functional areas that needed consistent SKU information included the sales force, lab technicians, IT, purchasing, production, warehouse, and shipping.

USP owned 25 licenses for MAS 200 and a license was assigned to a user when the system was accessed. When the user exited the application, the license was released for someone else to use. Although only 14 employees accessed and used the system to carry out their jobs on a regular basis, others occasionally accessed and used the system. Thus, if everyone who used MAS 200 logged in at the same time, all 25 licenses would be needed. Carol Graves, customer service manager, and Aneika Hart, a customer service specialist, used MAS 200 for customer service and order entry, while Henry Wilkerson, the production manager, used it in production. Yvette Foreman, production clerk, and Andrea Potter, warehouse operations manager, used MAS 200 to process shipping jobs, and Burt Garcia and Terri Dutch, warehouse clerks, used the system in the warehouse. Accountants Karen Carter, Bernice Crowe and Cherrie Stone used the accounting modules; Jay Zuong director of product development, and Peter Arthur, director of technology, accessed the system in the lab; Steve Dillard, the sales manager, pulled reports; and Rachel Clark, IT manager, administered the system for the company. (see Appendix C).

Clark explained, "MAS 200 is a very good accounting and manufacturing system. I feel the system is usable and friendly; but I am sure others would not feel the same way."

While MAS 200 was meeting their immediate needs, it was slow and USP could soon outgrow it. One option USP was considering was upgrading to MAS 500, the integrated, complete enterprise MAS suite. While MAS 200 could be an ERP system, MAS 500 was more fully integrated. In addition, MAS 500 was compatible with Visual Studio.NET and made the source code of each module available. MAS 500 was designed for a Microsoft environment and integrated seamlessly with Microsoft Office and Back Office. (For more information see http://www.blytheco.com/mas500/compare.asp for a full product comparison.)

Customer Relations Management

In addition to MAS 200, USP used Goldmine for their customer relations management. "Goldmine is a very small CRM program that does not have modules,"

Clark explained. “Goldmine is very easy to learn and retrieves customer information quickly.”

USP owned two different types of licenses for Goldmine: general and undocked. A general license was a per-access license. The second license typewais for undocked users. The sales staff used Goldmine as undocked users. A general license could be used as an undocked user license, but then was only available for that user. The undocked license gave sales personnel the ability to sync to the server and upload or download current contact information. USP held a total of 16 licenses: 11 general and five undocked. The primary users of Goldmine were Carol Graves, customer service manager, and Aneika Hart, customer service specialist, in sales.

To make the use of Goldmine more productive and efficient, Goldmine had a special link to MAS 200 that wrote back information into the customer’s file (e.g., order date, sales order number, sales amount). All salespeople were supposed to use Goldmine by entering information such as contact information, bids, jobs, etc.

Despite its potential, “Goldmine needs help,” Clark explained. “There are some things Goldmine does well, such as, retrieving e-mails from GroupWise and posting them to the customer accounts. [However,] the link between Goldmine and MAS 200 is very slow and does not supply enough information.”

Office Support Systems

As their office support system, USP used Microsoft Office Professional. While PowerPoint and Publisher were used extensively for sales and marketing purposes, Excel and Word were used mainly on an individual basis by employees for office productivity. Microsoft Access, however, was used by the organization as a whole for formulation information (lab), price lists (customer service and sales), new SKU notification (customer service, lab, and production), and as a backup for the shipping program (production and shipping).

IT Infrastructure

The hardware in place to run their applications consisted of two Dell servers: one server ran Windows 2000 and the other ran Netware 6.0. The Windows server had four processors each operating at 1.4 ghz and containing 2 GB of RAM. The Netware 6.0 server had 2 processors with each operating at 2.4 ghz and containing 1 GB of RAM. The Windows server was a dedicated application server while the Netware 6.0 machine served as both an application server and an e-mail and printer server.

Access to the system was controlled by individual login, and all non-plant employees had an individual system or workstation connected using T-1 lines. Laptops were available for the sales staff to use when they were in the field. The laptops were the only systems with wireless compatibility. USP has come a long way since Clark joined the team ten years ago. “When I came on board, they were still using DOS. They weren’t even running Windows 3.0 yet,” she explained. Their first upgrade was to install a file server network. Although decisions to upgrade loom, and USP hasn’t capitalized on Internet technologies, Clark explained that they were “pretty well caught up,” especially compared to the earlier days.

Vendor & Organizational Relationships

For the past several years USP had been purchasing all of their new computers and servers from Dell, and the company maintained service contracts with Dell. USP had contracts for software upgrades for MAS 200 and other software, but did not maintain any type of service agreements with any software vendors.

Clark explained that IT was really a very small part of her job. Many of the employees don't think of her as IT until they need something for their computers. However, the managers and employees always knew they could go to her for their IT needs, and she had a good relationship with them. Clark handled most of the IT maintenance and user assistance herself, and if anyone had a problem that Clark couldn't handle, they had a local company that would come in to work on the problem.

Relationships between internal departments at USP and IT were good, despite the lack of internal IT staffing support. "Rachel and IT have moderate respect among the directors," explained Edison. "Some view her as more of a mechanic than a cutting-edge IT visionary." However, the importance of IT was understood. "IT is viewed as a critical component in our corporate strategy," Edison explained.

QUESTIONS

1. Would the development of an extranet be useful for USP? Who would be the key users of the extranet, and what type of information would they need to access and share?

2. Could other information systems solutions help solve the critical issues currently facing them? What actions could be taken or processes implemented related to IT to help USP improve efficiency and enhance profits?

3. Is USP's current IT infrastructure sufficient for this type of operation? What changes or improvements would you make, if any?

4. What role do organizational issues or organizational characteristics such as organizational culture at USP play in the development and acceptance of a technological implementation such as an extranet?

THE KNOWLEDGE MANAGEMENT CHALLENGE

Anne Fiedler
Roman Wong
Alex Sharland
Barry University

Carol Cumber
University of South Dakota

INTRODUCTION

Bob Edison, the CEO of Universal Specialty Polymers (USP), was frustrated. He has just heard from Steve Dillard, the Director of Sales and Marketing, that a large storage company may be suing USP. The unsatisfactory results experienced from a product installed at the company's warehouse facility was not because of any fault in the product itself, but rather because of misapplication of the product due to incomplete product knowledge on the part of the contractor. Edison knew that the contractor did not have the funds to make the necessary repairs. Therefore, to avoid a lawsuit, USP might have to send out one of its subcontractors to clean up the problem.

The USP Group of companies (USP) was in the business of manufacturing and marketing polymer-based construction products for purposes such as sealing and coating floors, and lining industrial containment structures. USP's customers were generally contractors who install the products on various construction projects. The quality of the installation depended very much on whether or not the factory instructions have been followed properly.

To assist the contractors in applying USP's products properly, the technical personnel at USP provided a great deal of technical support to their clients. Much of USP's technical assistance to the contractors was conveyed in an informal way, such as conversations over the phone. Consequently, the documentation was inconsistent, and it was difficult for USP to produce proof of technical accuracy.

Faulty installations due to contractors' non-compliance with USP's specific product instructions had given rise to costly litigation. In almost all of this litigation, USP had been listed among the defendants. Edison believed that the company needed to implement a more formal structure for managing the technical service process so that the knowledge content of the technical advice could become more standardized, accessible, and sharable.

As the company was migrating increasingly into the service-providing segment, the need for establishing a knowledge management platform was paramount. The management team was now facing the task of identifying a knowledge management approach and implementing it.

COMPANY BACKGROUND

USP was founded in 1991 by Bob Edison and three former employees of I.W. Industries outside of Dallas, Texas. In 1995, the company was named one of the fastest growing privately held companies in the seven-county area, a feat that was repeated in both 1996 and 1997 A contributing factor to the rapid growth at that time was the purchase of the marine division of Selby Battersby. USP acquired their inventory, marine certifications, government contracts, and customer lists.

USP continued to evolve from a local supplier of coatings and linings to a company with a broad array of products in diverse markets. Growth was enhanced in 1998 by the acquisitions of the Thiokol Formulated Products. This acquisition gave the company a product line that included coatings, linings, and sealants based on a high tech liquid polysulfide technology. In 2003, at the World of Concrete show in Las Vegas, USP won the Most Innovative Product award for the Thiokol LPE Coatings.

USP made another strategic move in 2002, with the formation of a license agreement with Flowcrete Plc (UK). A new company was formed which extended the application of USP's product technology. USP Construction Services, Inc. was formed to manage construction projects and utilize the USP group's products more efficiently. In the past, the group had relied on sub-contractors who bid on jobs to come and source their product. USP Construction Services was created to bid on jobs directly and then sub-contract the work to the sub-contractors. This did not eliminate the middleman, but did have the potential to create adversarial relationships with the sub-contractors.

As of 2004, USP products were used for construction and corrosion protection in industrial, institutional, commercial and marine markets. Their competitive advantage was stated as:

We differentiate ourselves in these markets by providing rigorous, consistent product quality; unparalleled customer service; innovative product technology and availability.

CEO BOB EDISON

Bob Edison is the President and CEO of the USP group. Edison is 52 years old and has over 30 years experience in the construction products industry. He has a BBA degree in Marketing from Baylor University, holds four patents, and is the author of various technical papers.

Before founding USP, he served as President of I.W. Industries and then as Director of Construction Products Technologies for Master Builders. Just prior to founding USP, he had his own marketing consulting firm, Edison & Associates, which included some of the major companies in the industry as clients. Bob is a very "hands-on" leader and is involved in every aspect of the organization.

In 2004, Bob purchased the remaining shares of USP. He owned all of the equity of LPNA Distribution, a licensed distributor of liquid polysulfide produced in Japan. Edison also owned 90% of USP Construction Services, Inc., with another employee owning 10%. These three companies made up the USP group.

His philosophy, as stated on the USP website was:
Our company was founded on the principle of being attentive to customer needs. This is the basis for our existence and the reason for our success.

KNOWLEDGE TRANSFER STRATEGIES

USP's products fell into five major categories: 1) High performance floor & wall coatings, 2) coatings, linings & sealants, 3) chemical resistant coatings and linings, 4) marine decking systems, and 5) construction products. For a summary of the existing product categories and product lines within the product categories, see Appendix D.

Each of the major product lines within the five product categories were designed for specific uses. These products called for the installer to exercise great care which in turn demanded an extensive knowledge and a high level of skill. Since many of the products supplied by USP were proprietary, customers needed to solicit product knowledge from the company to determine which products should be used and how they should be applied. Through USP's customer service department, the company's technical personnel provided their professional opinions to customers; either in person or over the phone, to help them correctly select and apply the products. To live up to the founder's philosophy of "*being attentive to customer needs,*" USP's employees generally adopted an enthusiastic and helpful attitude in handling customers' inquiries and requests. As such, many of the customers' product-related inquiries were dealt with by various employees (such as salespeople) other than the technical personnel. As a result, the technical accuracy of the recommendations provided to the customers could not always be assured.

For a long time, USP had relied on the use of product catalogues and product labels as a method to archive and distribute much of the product related knowledge. The main disadvantage of such a traditional method was the difficulty and sluggishness of responding to the needs for information changes resulting from problems such as typographic errors or the modification of product formulas. Changes often resulted in a large amount of reprinting work. Storing large amounts of printed materials required time, cost, and effort. Moreover, when using printed materials, employees did not find it easy to retrieve the information related to a specific product and were more prone to make mistakes in giving the customers product information or when labeling the product. Indeed, there were situations where customers sued the company because the products they ordered had been mislabeled.

With advances in web technologies, the company began to provide their product knowledge through the company web site. Such product information was recorded in the form of downloadable PDF documents on the web site. (See Exhibit 2 for an example of such product information.) Compared to the non-electronic catalogues, the use of the Internet to distribute company product literature was a significant step ahead. Modifications to company product information could be easily reflected on the PDF

THIOKOL

FEC® 2233

TECHNICAL DATA SHEET

Concrete & Steel Coating, Flexible Epoxy

DESCRIPTION

FEC 2233 is a 100% solids, two-component flexible epoxy coating for concrete and steel surfaces. Its unique formulation incorporates a polysulfide polymer into the backbone of the epoxy chain that prevents the "age hardening" of conventional epoxy coatings.

TYPICAL APPLICATION

• Primer	PolySpec 300EX @ 5–7 mils (concrete) *or* PolySpec TITE M-50 @ 4–5 mils (steel)
• Base Coat	FEC 2233 @ 16–20 mils (horizontal); @ 7–8 mils (vertical)
• Top Coat	FEC 2233 @ 16–20 mils (horizontal); @ 7–8 mils (vertical)
• Options	Non Skid Grit

PERFORMANCE DATA

Compressive Strength (ASTM C-579)	18,000 psi
Tensile Strength (ASTM D-638)	2,500 psi
Flexural Strength (ASTM C-580)	4,300 psi
Hardness, Shore D (ASTM D-2240)	65–75
Bond Strength (ASTM D-4541)	425 psi
Abrasion Resistance (ASTM D-4060)	70 mg
Elongation, % at break	30–40
C-Tear, lbs/in (ASTM D-1004)	305+
Impact Strength, in/lbs (ASTM D-4226)	20+
VOC	0.00 lb/gal; 0.0 gm/L
Volume Solids	100%

STORAGE & INSTALLATION

Storage Environment	Dry area, 65–80°F
Application Temperature, ambient	50–95°F
Application Temperature, substrate	Minimum 5°F above dew point
Shelf Life	1 year
Pot Life, @ 77°F	30 minutes
Foot Traffic, @ 77°F	16 hours
Full Service, @ 77°F	48 hours

Material cures more slowly at cooler temperatures, and working time will be substantially reduced at higher temperatures. In hot weather, material should be cooled to 65°F to 80°F prior to mixing and application to improve workability and avoid shortened pot life. The data shown above reflects typical results based on laboratory testing under controlled conditions. Reasonable variations from the data shown above may result.

CONSIDERATIONS & LIMITATIONS

1. Due to viscosity, some roller lines may appear when applying to horizontal surfaces.
2. PolySpec recommends the use of a slip resistant grit with this product.
3. Floors should be sloped to drain to prevent standing water or chemicals. As with any surface, all spills should be removed as soon as possible to prevent a slipping hazard.
4. Do not thin with solvents unless advised to do so by PolySpec.
5. Confirm product performance in specific chemical environment prior to use.
6. Prepare substrate according to "Surface Preparation" portion of this document.
7. Do not apply to slabs on grade unless a heavy unruptured vapor barrier has been installed under the slab.
8. Always use protective clothing, gloves and goggles consistent with OSHA regulations during use. Avoid eye and skin contact. Do not ingest or inhale. Refer to Material Safety Data Sheet for detailed safety precautions.
9. For industrial/commercial use. Installation by trained personnel only.

BENEFITS

- *Maintains toughness over time*
- *Excellent resistance to chipping*
- *Excellent penetration and bond strength*
- *Chemical resistance to dilute acids, caustics and petroleum solvents*
- *Low odor, 100% solids epoxy*
- *Increased thermal shock resistance*
- *High abrasion resistance*

RECOMMENDED USES

- *Secondary containment*
- *Drum storage*
- *Vehicle service bays*
- *Truck unloading areas*
- *Covered parking decks*
- *Chemical processing areas*
- *Manufacturing facilities*
- *Warehouse floors*
- *Aisles*
- *Mechanical rooms*

GENERIC DESCRIPTION

Polysulfide-Modified Epoxy

STANDARD COLORS

Medium Gray

Additional colors available upon request. Non-stocking colors may be subject to additional lead time, minimum order requirements, and a slight premium.

PACKAGING

3-Gallon Unit

COVERAGE

80 ft^2 / gallon @ 20 mils

100 ft^2 / gallon @ 16 mils

200 ft^2 / gallon @ 8 mils

Exhibit 2: An example of PolySpec's product knowledge.

documents posted on the web site without time consuming and expensive reprinting. The web site also provided a very effective repository for the companies' product knowledge with easy accessibility. However, posting of the product literature did not allow USP's employees or customers to conduct a more interactive and refined search for the company's product knowledge.

In addition there were several lawsuits in 2000, 2001, and 2004. While USP's liability insurance covers bodily injury and property damage, these lawsuits have cost the company $11,000, $76,303.84, and $18,289, respectively (See Exhibit 3). Some of these costs could possibly be avoided with a better knowledge management system.

An analysis of the claims showed that they were usually related to one or more of the following causes:

1. Product failure related to wrong recommendation. For example, in case 3, the firm sued both USP and the contractor when the contractor sold a restaurant company a product that was not suitable for use in their kitchens. This resulted in unsatisfactory performance of the product within one year. It is interesting to note that even though this mistake may have been caused by incomplete product knowledge on the part of the contractor, USP had to assume the cost for the floor repair because the contractor could not afford to do so.
2. Product failure related to jobsite conditions or inappropriate application. A Midwestern distributor located in Saint Louis sued USP for allegedly poor recommendations that led to tank failures at an installation.
3. Product failure related to manufacturing issues, wrong labeling, etc.

The highest number of claims against USP was associated with USP's largest private label customer. Edison speculated that this was because this customer sold product to applicators that may not have had the requisite skills in product application.

THE CHALLENGE

USP did not have a central repository for technical information nor was there a systematic method for supporting the dissimilation of such knowledge to the customers. The organizational structure (see Appendix C) may suggest that the natural place for such a function could be the IT area, reporting to Clark. However, there was more to the revamping of the knowledge support functions than just Information Technology.

Eventually, the effective use of knowledge contents needed to provide the necessary customer supports. Other functions, such as sales, inventory, and legal aspects, were going to be involved as well. Therefore, one of Edison's decisions in this context was to decide on a direction for the company that would allow them to effectively manage knowledge and the dissimilation of it to customers. The goal would be that the customers who needed technical support could be provided with the accurate knowledge through a designated mechanism. A correct decision would not only allow USP to better manage its relationships with the customers through a strengthened technical support, but also to serve as a potential defense for the company in case future litigation involving product liability should arise.

Exhibit 3: Sample Litigation cases on product or project failure

Case 1 Filed 6-3-00

Owner sued USP and the company for which it toll produced a product for improper labeling of two drums. Component A was labeled B and vice versa. This error caused damage to their equipment and some damaged parts. Case settled 10-9-00.

Settlement:	$16,000.00
Less insurance settlement:	(5,000.00)
Net Cost	11,000.00

Case 2 Filed 10-12-00

A Louisiana contractor sued USP for product failures on several job applications. These were traced to an off-specification underlayment of used materials USP sold to the contractor over several months. The effected jobs were repaired at the expense of USP and settled for the amounts listed below. Case dismissed 6-31-01.

Payment and forgiveness of debt:	$28,035.70
Legal fees:	16,536.28
Less insurance settlement:	(8,268.14)
Plus cost of repairs (estimated)	40,000.00
Net Cost	76,303.84

Case 3 Filed 7-17-01

Plaintiffs sued every company that had supplied chemical products to this chemical plant within a multi-year period. USP claimed absolutely no responsibility for injury and/or death, but settled on 11-14-02.

Settlement amount:	$ 5,000.00
Legal fees:	9,489.00
Less insurance settlement:	(6,200.00)
Net Cost	8,289.00

Case 4 Filed 4-14-04

A restaurant firm filed suit against the contractor and material supplier USP, L.P. for poor floor performance in their kitchen. They alleged that the contractor told them the product was suitable and would last for many years. Floor failed within one year. USP, L.P. paid for the floor repair due to contractor's inability to afford the repair. Case dismissed 6-2-04 after the repairs were successfully completed.

Although Edison was very confident with the quality assurance aspect of production, he realized an effective knowledge management system would help the

company to mitigate its exposure to future losses due to the litigation risks. His decision, however, was not single-faceted. It would involve not only the choice of a technological platform, but also how to fit a knowledge management function into his current organization structure. A right direction should result in having all pertinent information available to his constituencies in a user friendly and interactive manner, allowing for traceability of information provided and diminishing future liability of the company resulting from improper application of USP products. Eventually, Edison was hoping that the new knowledge management practice would gain his company a competitive edge in the industry.

CONCLUSIONS

Edison realized that the knowledge management issue was something that could not be ignored. He questioned whether a more formal structure should be developed for managing the company's knowledge assets. While thus far the lawsuits had been settled with limited costs to the company, a lawsuit resulting in a large judgment could have a seriously detrimental effect on the corporation.

In investigating the situation, he found that there was no mechanism that would provide a trail to prove that the company had provided the necessary support and technical guidance to the users of their products. This was an essential component in a strong legal defense. Also, the information on the website, such as the product information that had been put in a PDF format, tended to be static in nature. Procedural support for application of the materials was often addressed on the telephone. The support personnel did not use informational scripts and the calls were not recorded.

The continuous growth and migrating from being a product distributor to a project management company would change the company's exposure to potential legal liability. On one hand, the role of project manager would give USP more control over the subcontractors who would be applying the materials. On the other hand, there was also the possibility that the problem would be further exacerbated as the company would be taking on more liability in a lawsuit because, as project managers, USP would be exposed to not only the risks of product liability lawsuits, but also all other kinds of responsibilities for the outcome of a project.

In addition, new relationships would emerge between the project managers and the subcontractors. This would lead to a greater interdependency due to the sequential nature of the industrial projects and, therefore, would require distributing new types of knowledge through different venues.

ASSESSING THE ORGANIZATIONAL CULTURE

Marlene Reed
Baylor University

Rochelle Brunson
Alvin Community College

Chad Carson
Jennings Marshall
Samford University

Bob Edison, the President of Universal Specialty Polymers (USP), looked at the printouts his consultant Dr. William Simpson had given him and attempted to make sense of what he was reading. Having felt a need to identify why there were constraints in his company's operations, he had asked Simpson to suggest a method for pinpointing the problems. The suggestion had been to use a tool to assess what aspect of the organizational culture was restricting further company growth. The assessment entitled "The Denison Organizational Culture Survey" had been administered in early 2000 and now, two months later, Edison was faced with the dilemma of determining how to implement any changes that might be needed.

BACKGROUND ON USP

In 1974, Bob Edison graduated from Baylor University and married the girl he had fallen in love with in college. After Baylor, Edison had gone to work for the family-owned business, and from that experience he had learned a great deal about running a company. However, the firm was sold to a Swiss company in 1976. Edison worked for them for three years and then quit and became a consultant. Then in 1992, he founded USP Corporation with three other people. The company was founded on "extreme customer service." The new owners were convinced that "customers are our long-term cash flow stream." USP began by supplying industrial sealants and floor coatings to the Dallas market.

The company experienced significant growth in the ensuing years, and by 1995 they were named to the "Dallas 100"—the fastest-growing small businesses in Dallas. In 1996, the largest company in the industry, which owned 30 percent of the market share, had expressed an interest in buying his company; but Edison declined. The next year the volume of USP was up by 15 percent. That same year—1997—the marine division of Selby, Battersby owned by Thoro Systems was purchased. This acquisition included marine certifications, government contracts, customer lists, other intellectual property, and finished goods inventory which enabled USP to serve the marine shipbuilding and repair markets for interior deck coatings, underlayments and fireproofing materials. In May of 1998, Edison purchased the stock of two minority stockholders who had already left the company.

In September of 1998, USP purchased the Thiokol Formulated Products line from Morton International. This product line included coatings, liners and sealants, all based on proprietary liquid polysulfide technology. USP had evolved from a local supplier of coatings and linings to an entity with an international presence in diverse markets.

THE USP INTERNAL ENVIRONMENT

By the year 2000, Edison became concerned about troubling evidence of dissension and lack of efficiency within the organization. To begin with, his own morale was low; and he felt he was losing control of the company. There appeared to be chaos in the operations area—not just from the employees themselves but from the procedures they were using. Edison knew he had lost his joy in coming to work, and exit interviews with employees who were leaving the company in large numbers indicated that they had similar feelings about their jobs. In addition, there had been an increasing number of customer complaints in recent months.

The organizational structure at this time consisted of four people reporting directly to Edison and a number of people, in turn, reporting to each of them. These direct reports were Melba Sargeant, the General Manager; Tom Cross, Vice President for Sales and Marking; Dennis Swain, Operations Manager; and Peter Arthur, Director of Technology. Until this time, there had been no formal method of hiring employees or managers. When there was an opening, the company normally filled the vacancy by word-of-mouth recruiting. There were no procedures for screening or testing new employees to determine if their skills and personalities would fit within the organization.

The four direct reports to Edison had very different management styles. For example, Sargeant (the General Manager) had been with Edison a long time. She was extremely intelligent, and Edison had hired her in the family business in which he worked before starting his own company. He had hired her there as an executive secretary, but it was not long before he realized she had skills that went far beyond those utilized by that position. After a while, Sargeant left the company and taught school. Then Edison hired her at USP, and she took some accounting courses to enhance her managerial skills. Edison had observed that she was a micro-manager in dealing with others, and this was causing some bottlenecks inside the organization. Because people were intimidated by her style, they were fearful of acting on their own initiative. Edison also knew that Sargeant was intensely loyal to him, and he speculated that her micro-management style was probably intended to secure the best outcome in the organization for Edison. Sargeant had fit in well in the original organization when the employee base was small, and it was important for her to take care of all details. However, now that the organization had become so much larger, Edison was afraid she was actually restraining further growth.

Tom Cross, the Vice President of Sales and Marketing, had been working in the industry at another company. He was very creative but had not been able to utilize the leadership skills he had. Whereas he was adept at selling the company's products and analyzing problems, he was less well suited to managing people within the organization.

Dennis Swain, Operations Manager, and Cross were both hired by spreading word of a vacancy in the organization on the grapevine. Many of the problems at this time seemed to stem from operational problems.

Peter Arthur, Director of Technology, joined the company in 1998 in an acquisition of another organization. Although lacking in managerial skills, Arthur was the number one asset of the company because of his knowledge of technology. He was a person of great integrity and was a good fit for the company. He had creative knowledge, but it was difficult to draw this out of him. Almost every technological advance in the company occurred because of Arthur. A typical conversation between Edison and Arthur might go something like this:

Edison: "Here's our problem, Bill."
Arthur: "Well, I guess we could do this."
Edison: "What! You mean we could really do that?"
Arthur: "Sure, we could easily do that. Why don't we just do that."

Arthur rarely got excited about his breakthrough ideas, but others did. One example of his creativity was in the area in which USP supplied flooring for the inside of ships. Some new safety requirements from the government came out, and everyone in the industry believed that Polymer products would never meet the new safety requirements. However, shortly after the standards came out, Arthur developed a series of products around this requirement. Edison had often said of Arthur, "If the boat was sinking, Arthur would be the first one I would grab."

Additional problems occurred within the operations/manufacturing workforce. It was determined that 50 percent of the workforce was inadequate regarding their performance, attendance or skill base. In addition, there were no formal written procedures for all position job functions, the ratio of temporary labor was too high compared to the core workforce, and there was inadequate cross-training of existing staff. All of this was in comparison to industry standards. Edison wondered how he could improve the recruitment, selection and training of the workforce.

THE DENNISON ORGANIZATIONAL CULTURE SURVEY

After having been in business for eight years, Edison was feeling good about the external operations of his company; however, there were internal problems that kept surfacing that troubled him. In fact, on January 15, 1999, an article written by L. M. Sixel appeared in the *Houston Chronicle* which discussed the rapid growth of USP. Edison was quoted in the paper as commenting, "Success, while wonderful, can breed its own kind of problems. When a company is growing rapidly, sometimes not everyone grows along with it." Edison in early 2000 had become aware of some constraints in the organization, and the primary cause of the constraints seemed to be an organizational culture that had grown without design and was now threatening to impede the growth of the company. It occurred to him that the culture of the organization must have been shaped by him without any conscious effort on his part.

Edison had discussed the problem with Dr. William Simpson, a consultant with the company, and Simpson had suggested using an organizational culture survey to determine if the problem was as pervasive as he believed it to be. It occurred to Edison that this might be a waste of time and money; but if Simpson thought it was a good idea, he would go along. The instrument (The Denison Organizational Culture Survey), Simpson suggested, had been validated at over 1,000 companies with more than 40,000 individuals in all major economic sectors. The dependent measures in the survey were profitability, ROI, quality, sales growth, innovation, and employee satisfaction. A research study by Fisher in 1997 indicated that indeed the four dimensions of a company that were measured (involvement, consistency, adaptability and mission) did have a high correlation with the dependent variables identified (Fisher, 1997). The instrument used 60 questions to focus on four cultural traits (dimensions) that can significantly impact the dependent variables listed above.

The survey was subsequently administered to 30 people in the organization in all areas of operation. The four cultural traits (dimensions) measured and the three characteristics of each one are listed in Exhibit 1.

Exhibit 2 below shows the levels of agreement of USP employees with certain statements related to the four cultural traits measured in the survey:

Edison noticed that the organization's results were presented in a line-item report that classified the scores as 1st, 2nd, 3rd and 4th quartile. The scores were normed, which meant that his company's organizational culture was compared to the cultures of other higher-end and lower-performing organizations that had taken the survey. The first quartile represented organizations scoring in the 1st through 25th percentile; the second quartile represented organizations in the 26th through 50th percentile; the third quartile represented organizations in the 51st through 75th percentiles; and the 4th quartile represented organizations in the 76th through the 100th quartile.

Dr. Simpson suggested to Edison that when he looked at his organization's results, it would be important to understand that the index score is not just an average of the 5 item scores that comprise the index. The indexes, as well as each survey item, were normed individually to provide an accurate comparison between his organization and the organizations included in the norm base.

As he pulled out the data again, Edison scanned the scores of his company on each of the four dimensions that were measured and noticed disturbing numbers in several areas.

Involvement. On the dimension of Involvement, he was concerned that the responses of his employees all fell in the 1st (lowest) quartile except for the statement that: The "bench strength" (capability) of people is constantly improving.

Consistency. On the dimension of consistency, Edison noticed that only three items ranked beyond the 1st quartile.

Adaptability. Ten items in this category were in the lowest quartile. However, this dimension did have five areas of agreement that fell in the 2nd and 3rd quartile.

Mission. Edison was quite concerned that only two areas of agreement placed his employees' ratings in the 2nd quartile.

Edison scanned through the data and noted that the five statements which had the highest scores by his employees were:

"Ignoring core values will get you in trouble."

"Customer comments and recommendations often lead to changes."

"There is an ethical code that guides our behavior and tells us right from wrong."

"We respond well to competitors and other changes in the business environment."

"Working with someone from another part of the organization is not like working with someone from a different organization."

In addition, he made a mental note that the following five statements received the lowest scores from his employees:

"People work like they are part of a team."

"Cooperation across different parts of the organization is actively encouraged."

"Work is organized so that each person can see the relationship between his or her job and the goals of the organization."

"Authority is delegated so that people can act on their own."

"There is good alignment of goals across levels."

In summary, it occurred to Edison that the employees felt good about the core values, the ethical climate and the receptivity to customer comments. However, he was concerned about the perception by most employees that the company exhibited a lack of teamwork, delegation of authority and alignment of goals across the organization.

GENERAL RESEARCH ON CORPORATE CULTURE

According to Edgar Schein, organizational culture (sometimes called "corporate culture") is a system of shared beliefs and values that develops within an organization and guides the behavior of its members (Schein, 1990). However, the extent to which the culture of an organization permeates all divisions and all levels is greatly variable. In some organizations, sub-cultures develop that may run counter to the goals and aspirations of the organization. The culture of an organization is often expressed in such symbols as slogans, dress, stories, heroes, rituals and rites, and even the office layout. Providing for formal and informal opportunities for employees to be told these stories and anecdotes of the organization often helps provide support and sustenance for the culture.

Management experts Terrence Deal and Alan Kennedy suggest that the culture of a company can actually shape its success. They suggest, "If employees know what their company stands for, if they know what standards they are to uphold, then they are much more likely to make decisions that will support those standards. They are also more likely to feel as if they are an important part of the organization. They are motivated because life in the company has meaning for them" (Deal and Kennedy, 1982).

Corporate culture is normally established within an organization by the founder of the company. However, it is carried along by hiring people who fit well into the culture,

socializing people into that culture, rewarding those employees who uphold the culture and punishing or firing those who don't support the organization's culture.

Changing the culture of an organization is a difficult task. Henry Mintzberg has suggested that changing the culture of an organization is part science and part art (Mintzberg, Spring 2000).

THE PENDING DECISION

Edison wondered how he might address these troubling findings and establish a stronger culture. He had never paid much attention to culture in the first place, and he wondered what a company's culture was composed of and what specific steps or policies he should establish to address these issues. He picked up a pen and began to brainstorm some possible solutions. He had heard other CEOs describe company outings, informal parties and offsite exercises to establish a greater sense of teamwork.

It also occurred to him that he needed some way of including key employees in the strategic planning process. Once strategies for the company had been developed, he needed a process for communicating information about strategic plans and the operations in general to the rest of the employees. Finally, he reviewed in his mind personnel changes that might eliminate the roadblocks and strengthen his management team.

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Exhibit 1

Four Cultural Traits Measured
And Three Characteristics of Each

1. **Involvement: Building human capability, ownership and responsibility**
   Empowerment. Individuals have the authority, initiative and ability to manage their own work. This creates a sense of ownership and responsibility toward the organization.
   Team Orientation. Value is placed on working cooperatively toward common goals to which all employees feel mutually accountable. The organization relies on team effort to get work done.
   Capability Development. The organization continually invests in the development of employees' skills in order to stay competitive and meet on-going business needs.

2. **Consistency: Defining the values and systems that are the basis of a strong culture.**
   Core Values. Members of the organization share a set of values which create a strong sense of identity and a clear set of expectations.
   Agreement. The organization is able to reach agreement on critical issues. This includes the

Exhibit 2 **Employees' Level of Agreement With the Four Cultural Traits**		
Involvement Trait		
STATEMENT	**PERCENTILE**	**QUARTILE**
Most employees are highly involved in their work.	14%	1st
Decisions are usually made at the level where the best information is.	16%	1st
Information is widely shared so that everyone can get the information he or she needs.	4%	1st
Everyone believes that he or she can have a positive impact.	15%	1st
Business planning is ongoing and involves everyone in the process in some way.	14%	1st
Cooperation across different parts of the organization is actively encouraged.	1%	1st
People work like they are part of a team.	1%	1st
Teamwork is used to get work done, rather than hierarchy.	14%	1st
Teams are our primary building blocks.	3%	1st
Work is organized so that everyone can see the relationship between his work and the goals of the organization.	1%	1st
Authority is delegated so that people can act on their own.	1%	1st
The "bench strength" (capability of people) is constantly improving.	29%	2nd
There is continuous investment in the skills of people.	3%	1st
The capabilities of people are viewed as an important part of competitive advantage.	2%	1st
Problems seldom arise because we have the skills necessary to do the job.	17%	1st

Consistency Trait		
STATEMENT	**PERCENTILE**	**QUARTILE**
The leaders and managers "practice what they preach."	15%	1st
There is a characteristic management style and a distinct set of management practices.	5%	1st
There is a clear and consistent set of values that governs the way we do business.	23%	1st
Ignoring core values will get you in trouble.	88%	4th
There is an ethical code that guides our behavior and tells us right from wrong.	64%	3rd
When disagreements occur, we work hard to achieve "win-win" solutions.	3%	1st
There is a "strong" culture.	20%	1st
It is easy to reach consensus, even on difficult issues.	14%	1st
We seldom have trouble teaching agreement on key issues.	8%	1st
There is a clear agreement about the right way and the wrong way to do things.	2%	1st
Our approach to doing business is very consistent and predictable.	15%	1st
People from different parts of the organization share a common perspective.	2%	1st
It is easy to coordinate projects across different parts of the organization.	22%	1st
Working with someone from another part of this organization is not like working with someone from a different organization.	48%	2nd
There is good alignment of goals across levels.	1%	1st

Adaptability Trait		
STATEMENT	**PERCENTAGE**	**QUARTILE**
The way things are done is very flexible and easy to change.	24%	1st
We respond well to competitors and other changes in the business environment.	56%	3rd
New and improved ways to do work are continually adopted.	4%	1st
Attempts to create change seldom meet with resistance.	25%	1st
Different parts of the organization often cooperate to create change.	9%	1st
Customer comments and recommendations often lead to changes.	75%	3rd
Customer input directly influences our decisions.	37%	2nd
All members have a deep understanding of customer wants and needs.	8%	1st
The interests of the customer seldom get ignored in our decisions.	39%	2nd
We encourage direct contact with customers by our people.	3%	1st
We view failure as an opportunity for learning and improvement.	35%	2nd
Innovation and risk taking are encouraged and rewarded.	11%	1st
Few things “fall between the cracks.”	7%	1st
Learning is an important objective in our day-to-day work.	15%	1st
We make certain that the “right hand knows what the left hand is doing.”	19%	1st

Mission Trait		
STATEMENT	**PERCENTAGE**	**QUARTILE**
There is a long-term purpose and direction.	7%	1st
Our strategy leads other organizations to change the way they compete in the industry.	31%	2nd
There is a clear mission that gives meaning and direction to our work.	11%	1st
There is a clear strategy for the future.	18%	1st
Our strategic direction is clear to me.	11%	1st
There is widespread agreement about goals.	15%	1st
Leaders set goals that are ambitious, but realistic.	7%	1st
The leadership has "gone on record" about the objectives we are trying to meet.	13%	1st
We continuously track our progress against our stated goals.	8%	1st
People understand what needs to be done for us to succeed in the long run.	1%	1st
We have a shared vision of what the organization will be like in the future.	6%	1st
Leaders have a long-term view.	35%	2nd
Short-term thinking seldom compromises our long-term vision.	12%	1st
Our vision creates excitement and motivation for our employees.	6%	1st
We are able to meet short-term demands without compromising our long-term vision.	5%	1st

APPENDICES

A Note on the Appendices

This special edition is unique in that all of the cases address the condition of a single company, Universal Specialty Polymers (USP), during a common time frame, 2000-2004, and involve the same cast of characters within the organizational story. Due to the unique structure of this special edition, many of the cases share information in common. Therefore, to avoid redundancy, a common set of appendices has been provided that are referenced by multiple cases. These appendices can also be studied as a set of information about the firm that provides a common background for all of the cases regardless of topical focus.

Appendices are identified with alphanumeric characters (A, B, C, etc.) Exhibits and illustrations that are singular to a specific case are identified as such and are numbered within each case.

Appendix A

Universal Specialty Polymers (USP)

Business Summary

Universal Specialty Polymers (USP) is a leading manufacturer of polymer-based construction products such as coatings, linings, flooring, joint sealants and subsea insulation, which are applied to concrete or steel. It is a privately held business headquartered in Dallas, Texas, with sales representation throughout the United States and several foreign countries.

The company's vision is to become the nation's premier supplier of polymer products for construction and corrosion protection in the industrial, institutional, commercial and marine markets, as measured in terms of customer satisfaction, product performance and the financial well being of its employees and other stakeholders.

Other related companies include:

- USP Construction Services, Inc. –

Construction management company that provides turnkey, unit responsibility to those customers who require a "supply and apply" contract for USP products.

- LP North America Distribution, Inc. (LPNA) –

Distribution company that purchases liquid polysulfide (LP) from Toray Fine Chemicals (Japan) and resells into the North America market. LP is the basic raw material ingredient for USP's Thiokol coatings and sealants product line. This business was established after USP's previous supplier, Morton International, exited the LP business and sold its US rights to Toray. USP is a customer of LPNA.

INTELLECTUAL PROPERTY

USP is a truly unique company with an outstanding reputation, financial stability and proprietary position in key market niches. Our technology has been developed, acquired or licensed from numerous sources, and includes the following:

- FORMULAS:
    - Have over 150 base formulas for polymer-based construction products such as coatings, flooring, sealants, marine decking, linings, subsea insulation, grouts

and adhesives.

- TRADEMARKS:
  - Owns an exclusive worldwide license for the well-known trade name "Thiokol®", for industrial sealants and coatings (85 countries).
  - Owns the proprietary trademark rights to brand names, and numerous product designations, including:
    USP®, TuffRez®, FlakeRez®, NovoRez®, PermaRez® and RezRok®.
- CERTIFICATIONS:
  - Is one of only a few U.S. companies with marine coating and decking certifications with the U. S. Navy, American Bureau of Shipbuilding, Bureau Veritas and other international agencies. Being on the Navy's Qualified Product List (QPL) is a requirement for selling to the marine market.
  - In March 2003, USP passed International Maritime Organization (IMO) certifications for two decking products. The FLEX-IMO polymer decking system is the first product in the world to pass new stringent IMO fire rating standards. Two other products have subsequently received IMO approval.
- LICENSES:
  - Has a technology supply agreement for manufacturing and marketing *Ultra-Fresh*™ polyurethane concrete products from Flowcrete Plc., the United Kingdom's largest manufacturer of polymer industrial flooring.
- TECHNOLOGY:
  - Has developed a highly proprietary insulating material for subsea oil and gas piping and production equipment opening up a huge potential market
  - USP has developed proprietary technology for: 1) polyurethane floor coating with low volatile organic compounds (voc) emissions, 2) fire safety marine decking and 3) increasing floor scratch and mar resistance through the use of nanoparticles.
- WEB SITE REGISTRATIONS:
  - Owns the world wide web domain for:
    - USP.com

- Thiokol.net
- Lpnorthamericadistribution.com
- jointsealants.com
- jointsealant.com
- coatingspecs.com
- foodfloors.com
- marinedecking.com
- nonskidcoating.com

USP offers the most comprehensive product line of any company in its industry. The company has highly proprietary technology both acquired and developed that can be divided into five distinct groups:

Thiokol® Coatings and Sealants

These unique products are marketed under exclusive license of the worldwide known Thiokol® trade name

Marine Decking

These products utilize the USP® trade name with a descriptive suffix from earlier Selby days. The products include latex underlayments for resurfacing uneven steel decks, magnesium oxychloride fireproofing and insulating material, interior decorative deck coatings and non-skid deck exterior coatings.

The two primary markets are ships (of all kinds) and offshore drilling platforms. Most of the products carry Navy QPL, American Bureau of Shipbuilding and various international approvals. Proprietary technologies include a magnesium oxychloride fireproof flooring material (one of only two U. S. manufacturers approved) and low odor, flexible epoxy decorative flooring. This flexible product, USP FLEX FR, has gained widespread worldwide acceptance in the eighteen months since its introduction. With the advent of IMO fire safety approvals, USP is now a leader in marine decking. Competition in the US is limited to three other companies.

Flooring, Chemical Resistant Coatings and Linings (FC&L)

Flooring products are based on epoxy and polyurethane technology and are marketed under the TuffRez® trade name. Typical uses include decorative flooring for institutions, warehouse floors, airplane hangars, auto dealership service bays and manufacturing floors in industrial facilities. In addition, the company now manufactures a proprietary polyurethane topping developed by Flowcrete Plc of the United Kingdom. This product is the only one of its type with an anti-microbial agent. It is sold in the food processing and pharmaceutical industries.

Subsea Insulation

As oil and gas wells are being drilled in deeper water, hydrate formation in the well has become a major concern. During a production shutdown, gas hydrates can form and plug the bore of a subsea tree and related production and flow lines. Thermal insulation is necessary to slow down the cooling process to prevent hydration formation until the well production is restored.

USP has developed several subsea thermal insulation products based on epoxy polysulfide syntactic foam technology. In addition, the company toll produces silicone insulation for its major subsea customer.

Specialty Products

The company also manufactures several custom products for specific applications using proprietary formulations. End use applications include: electrical and semi-conductor components, sealants for anodes used in cathodic protection, an adhesive for bonding/coating decorative panels and an adhesive for sealing oil and gas distribution pipe in sub-Arctic conditions.

RezRok Concrete Repair Products & USP Sealants are used to resurface concrete, structurally restore cracked concrete, pitch concrete to drain, grout anchor bolts and rebars, bond new concrete to old and support heavy machinery.

SALES AND MARKETING

Market Opportunities. USP has products that are sold to virtually every marine, commercial, institutional and industrial market sector. Most of these markets have been highly receptive to our products due to steady or expanding market conditions. For instance, while the semiconductor market was in its up cycle, USP positioned itself as a leader with such major companies as Texas Instruments, Micron Technology, Sumitomo, Komatsu and National Semiconductor.

Improvement in the marketing area is expected with the hiring of Scott Dunbar as Director of Sales and Marketing. Scottt has 9 years of industry experience and is 46 years old.

Mr. Dunbar manages the sales and marketing functions for the company. A graduate of Eastern Michigan University, he joined USP in November of 2004. He was National Sales Manager for Tennant Company, one of the nation’s largest providers of floor coatings. Prior to that he was Market Development Manager, North America for Belzona, Inc.

USP is particularly excited about the possibilities in these markets:

- Subsea insulating material for oil and gas production equipment.
- Thermal shock resistant polyurethane floor toppings in processing plants.
- High build tank-lining and exterior roof coating applications for fuel and chemical storage.
- Ship interior deck coatings utilizing flexible epoxy system.
- Ship exterior deck coatings utilizing new generation non-skid technology.
- Navy underground fuel storage tanks market for Thiokol products.
- Secondary containment coatings and linings.
- Polysulfide building sealants as opposed to silicone or polyurethanes.

Channels of Distribution. USP has numerous accounts that serve virtually every market. The products are sold through multiple distribution channels including independent commissioned sales representatives and distributors. The majority of the products, however, are sold direct to approved applicators or end users. Only one customer accounts for more than 10% of sales revenue. International sales account for 10-12% of revenues.

Marketing. USP markets its products through direct mail programs to select industries, telemarketing, e-messaging, trade journal advertising and trade shows. USP holds memberships in National Association of Corrosion Engineers (NACE), Society for Professional Coatings (SSPC) and International Concrete Repair Institute (ICRI).

Competition. USP competes with about 200 U.S. companies, most of which are flooring, concrete repair and sealants manufacturers. The top ten companies have about 39% of the volume. The remainder is highly fragmented and consists mostly of very small, privately held businesses. The largest competitors are Stonhard (Division of RPM), General Polymers (Division of Sherwin-Williams), Tennant and divisions of ITW and Degussa Chemicals. The marine market has only three primary competitors: American Safety Technology, Crossfield Products and PRC (Division of International Paint).

OUTLOOK

The management of USP anticipates 7-10% sales growth in 2005. The outlook is for improved market conditions in 2005 compared to previous years. USP is uniquely positioned to withstand the affects of recession due to our highly diversified customer base.

The most exciting element of the business is the potential opportunities that exist for our newly developed technologies.

Our strategic plan, titled *Vision 2005*, has set forth a blueprint for achieving sales and profit growth. The key strategic initiatives for 2005 include:

- Expanding our sales distribution network
- Establishing a Customer Retention program.
- Expanding our technology base by building an in-house Intranet.

Appendix B

USP At-A-Glance 2002

USP Employees

33 full-time employees: 5 administrators, 4 technical (3 of whom are polymer chemists), 8 sales and marketing, 4 managers and 12 hourly employees in manufacturing

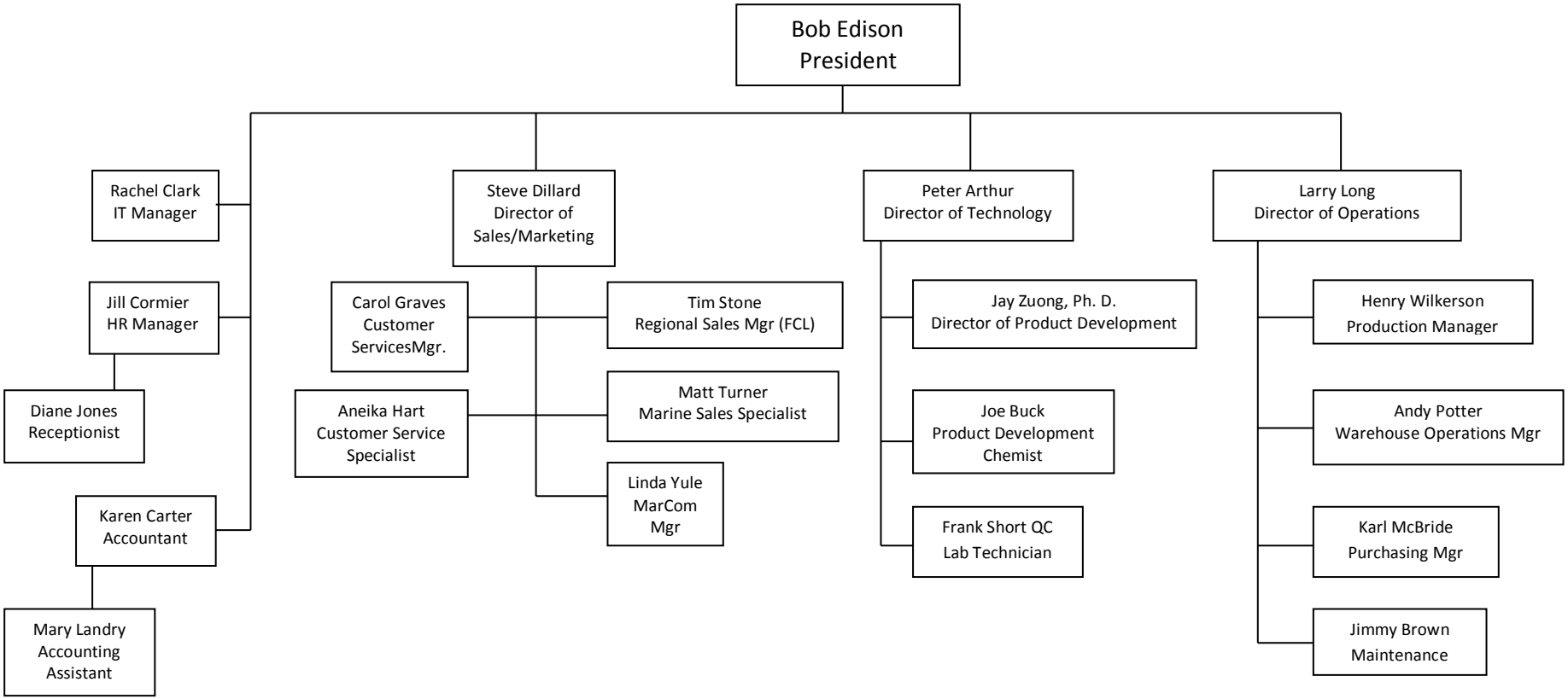
Description of Facilities and Processes (from October 2002 Air Permit Application)
USP manufactures industrial polymer systems used for corrosion resistance and surface protection of steel tanks, concrete floors and walls. Systems manufactured are of 2 types: epoxy systems and polyester/vinyl ester systems.

Facility includes:
1 product development lab, 1 quality control lab.
9 mixer tanks
5 mixers
1 vertical storage tank
2 horizontal storage tanks
several portable vats

Solvents and powder are mixed in the mixing tanks and/or portable vats. Small resin batches from 5 to 500 gallons are manufactured daily with an occasional 1000 gallon batch made every 1 to 2 weeks.

Appendix C

Organization Chart of USP



Appendix D

USP Product Range

Product Category	Product Line
High performance floor & wall coatings *This category contains coating materials that provide floors with protection from damages caused by mechanical abuse, thermal shocks, chemical exposure, and abrasion.*	• Mortars & Overlays • Decorative & Functional Resinous Coatings
Coatings, linings & sealants *The Thiokol coating products are used mainly for floor coatings, tank lining and containment coatings. The typical applications of the Thiokol sealant products include filling joints in commercial building panels, concrete slab expansion joints, airport runway joints and sealing rivets, weld seams and chimes in storage tanks.*	• Thiokol® Flexible Coatings & Reinforced Linings • Thiokol® Flexible Sealants
Chemical resistant *Products in this category typically provide chemical resistance in intermittent and continuous splash/spillage condition.*	• Epoxy Novolac Coatings • Flake-Filled Coatings • Reinforced Linings
Marine decking systems *Typical applications for this category include the provision of polymeric interior and exterior deck coverings for ships and offshore drilling platforms.*	• Interior Deck Coverings • Non-Skid Traffic Decking • Deck Top Insulation & Membranes • Underlayments
Construction products *This category contains premium products for civil engineering applications and concrete repairs*	• Adhesives • Grouts & Patching Mortars • Sealants • Cleaner

Appendix E

USP Revenues by Product Group 1999-2004

Product Group	1999	2000	2001	2002	2003	2004
Floorings Coating & Linings						
TuffRez	1,176,252	1,472,676	1,605,305	1,302,258	1,601,118	1,946,728
Ultra-Fresh	52,662	371,247	209,103	516,812	631,446	606,067
FlakeRez	358,216	412,347	395,476	402,400	309,092	402,436
NovoRez	347,442	389,646	262,966	348,009	311,297	344,962
PermaRez	229,655	134,870	92,814	115,235	104,585	68,167
USP	348,987	290,567	354,950	396,625	325,121	264,114
FLC Sub-Total:	2,513,214	3,071,353	2,920,614	3,081,339	3,282,659	3,632,474
Marine Decking	1,033,150	1,077,574	1,321,319	1,747,944	2,212,458	1,138,719
Thiokol	1,403,469	1,462,764	1,685,081	1,529,365	1,443,607	846,749
Polymer Technologies						
Sub-sea Insulation	0	0	480,025	369,844	1,445,651	3,240,557
Custom Products	288,683	410,057	292,751	193,713	223,223	181,310
Polymer Sub-Total:	288,682	410,057	772776	563,557	1,668,874	3,421,867
Other Products						
RezRok	180,686	263,482	163,159	114,729	124,303	115,857
Accessories	92,435	77,303	68,493	79,065	86,370	114,888
Polyurea	1,148,534	1,123,718	336,355	68,900	0	0
Other Sub.-Total:	1,421,655	1,464,503	568,007	262,694	210,673	230,745
LPNA	0	0	60,577	499,495	1,764,669	2,352,490
Total	6,660,171	7,486,251	7,328,374	7,684,394	10,582,940	11,623,044

Endnotes:

[1] Three other partners had owned minority interests in the partnership (a total of 25% ownership) at that time. By the beginning of 2005, Bob Edison owned 100% of the company.

[2] Beginning in 2002, Edison and two USP employees, Arthur and Cross, established LP North America Distribution, Inc., to serve as the sole North American distributor for a Japanese company that manufactured liquid polysulfide. This company reported sales of $372,000, $1,810,000 and $2,379,000 in 2002, 2003, and 2004, respectively. Its net income was $46,000, $67,000, and $189,000 in 2002, 2003, and 2004.

[3] The same organizational culture test was administered 18 months later, and it showed a complete turnaround, a dramatic improvement. Employees enjoyed working together, and Edison's own morale had improved.

[4] The joint venture proved unsuccessful and was terminated in 2003 and replaced with technology agreement in 2004. During 2004, USP employee Cross left USP and formed a

competing company that was affiliated with Flowcrete. Following that event, USP cancelled the technology agreement with Flowcrete and replaced it with a supply agreement in 2005.

[5] The International Maritime Organization is an agency of the United Nations charged with improving maritime safety and preventing pollution of the ocean by ships. The IMO sets standards for materials used on ships and certifies products that have passed its screening. By the end of 2004, USP had four products that had received IMO certification, a competitive advantage for the company. No competitor had achieved similar success. IMO certification had opened up cruise ships as a potential market for USP.

Appendix F

USP Sales Report by Customer
Top Twenty-Five Customers
2002-04
($1,000s)

2002		2003		2004	
Sherwin-Will.	536	PCP	1,461	PCP	3,063
QST Marine	518	Punjii	1,140	Destin Coatings	571
PCP	455	Techplastique	490	Sherwin-Will	362
Techplastique	284	Sherwin-Will	418	Techplastique	327
FALCO	234	AMOCO SA	342	ArtCrete	281
Maritime	208	ArtCrete	276	FALCO	226
AMOCO SA	196	QST	183	QST Marine	222
Punjii	184	Domestic Floor	175	Quadrant	202
Tech Linings	170	Destin Coatings	146	Subsea Global	178
PolymerCL	158	Quadrant	143	Rouex Corp.	173
ArtCrete	153	Tech Linings	129	Domestic Floor	158
Seadco	152	H-Borne	118	H-Borne	150
Pratt Tech.	128	FALCO	115	Martin Marine	150
Royce Paint	110	Pratt Tech.	86	PE Applications	134
Spec Polymers	102	Royce Paint	86	Al Barain	109
ABS	94	Minortex	84	Tank Bldg Prod	105
Driscolls	88	ABS	84	Beta Paints	90
Destin Coats	85	Matre	74	Baron WP	83
H-Borne	83	J&L Dist	73	Sextant Prods	81
Tank Liner	81	Duralife	71	Wu Brothers	80
Minortex	80	Practix Mat	70	Tech Linings	76
J&L Dist	74	Sabe Dist.	69	ABS	68
Zero Marine	72	Sextant Products	67	Pizo Nuclear	68
Spicer Coat	65	Thorn Painting	62	Royce Paint	65
Halvas	64	Atlantic Titan	59	Duralife	59
TOTAL:					
4,374	(57%)	6,021	(71%)	7,081	(77%)

Appendix G

Universal Specialty Polymers
Statement of Income

	For the Twelve Months Ending December 31,		
	2004	2003	2002
Sales	$9,782,430	$9,521,277	$8,105,173
Bad debt recovery		451	489
Re-stocking fees	21,312	17,736	9,218
Sales returns	(259,656)	(381,041)	(199,373)
Sales discounts	(18,738)	(3,315)	(4,535)
Total sales	9,525,349	9,155,108	7,910,871
Cost of goods sold[2]	6,499,931	5,593,715	4,755,096
Gross profit	3,025,418	3,561,393	3,155,775
Operating expenses			
Advertising/marketing	117,472	133,710	117,423
Amortization expense	20,310	20,311	20,312
Automobile expense	14,997	12,700	12,617
Bad debt expense	19,133	2,938	6,019
Bank charges – administration	10,442	9,893	13,948
Credit card service charge	6,155	6,886	3,640
Commissions	114,721	86,310	91,456
Computer expenses	26,584	28,361	18,725
Delivery charges	8,496	10,880	10,701
Directors' fees	2,500	5,000	5,000
Donations/contributions	8,200	14,296	3,750
Depreciation	123,008	107,814	88,438
Dues/publications	14,606	23,047	19,044
Employee benefits	46,276	88,182	56,852
Entertainment	7,844	13,572	13,066
Fees and licenses	1,157	454	1,005
Insurance – Health	62,744	65,542	70,887
Insurance – Life	9,668	15,364	4,648
Insurance – Other	121,562	114,660	73,640
Insurance – Workman's Comp	51,048	892	46,643
Interest expense	23,111	18,239	28,008
Licenses/testing	33,555	51,055	53,562
Meals	31,332	32,091	14,174
Miscellaneous expense	248	2,099	580
Office supplies	29,014	28,166	32,780
Outside services	11,088	22,946	11,408
Payroll expenses	5,221	5,481	4,248
Postage	4,876	4,387	8,281
Printing	4,562	9,975	15,010

Professional fees	68,657	87,928	32,812
Recruiting charges	32,935	12,172	29,791
Reimbursed expenses			558
Rent	163,500	149,400	160,150
Rentals – equipment	37,478	29,893	16,364
Royalty – FlowCrete	18,179	15,835	
Royalty – Morton		10,975	19,795
Repairs and maintenance	61,990	81,767	85,793
Seminars	728	938	2,519
Salaries	1,032,912	1,116,775	1,029,949
Supplies	138,955	162,929	176,462
Taxes – ad valorem	46,696	42,249	71,407
Taxes – payroll	135,907	141,040	123,300
Taxes – other	7,072	8,005	7,184
Telephone	25,920	36,561	47,249
Trade show expense	52,771	49,155	25,543
Training	11,423	21,521	8,961
Travel expense	87,825	89,825	87,999
Uniforms	26,413	24,573	19,516
Utilities	56,172	48,158	38,753
Waste disposal	57,190	41,901	33,201
Total operating expenses	2,992,655	3,106,853	2,863,323
Income from operations	32,763	454,540	292,452
Other income and expenses			
Loss/gain on sale of asset	(1,926)	339	(18,630)
Loss/gain on investment		(4,784)	
Miscellaneous income	118,000	30,000	
Dividend income	1,857	55	130
Interest income	2,633	3,055	5,436
Other income		600	
Income – FlowCrete			8,553
Total other income	120,564	29,265	(4,511)
Net income	$153,327	$483,805	$287,941

Universal Specialty Polymers
Balance Sheet

	As of December 31,		
	2004	2003	2002
Assets			
Current assets			
Cash – checking[3]	($651,172)	($1,095,846)	($350,695)
Cash – payroll account	17,345	14,143	5,710
Petty cash	400	400	400
Accounts receivable	1,579,794	1,825,339	985,168
Intercompany notes receivable		68,485	35,083
Notes receivable	4,764	47,165	69,110
Employee loans			5,000
Inventory	1,517,768	1,454,248	1,348,629
Total current assets	2,468,899	2,313,935	2,098,405
Fixed assets			
Furniture and fixtures	38,524	38,524	34,980
Computer hardware and software	220,568	159,566	140,988
Phone system	16,290	16,290	16,290
Equipment	638,677	636,532	497,087
Leasehold improvements	95,529	78,479	56,820
Less accumulated depreciation	(562,723)	(459,412)	(383,994)
Total fixed assets	446,865	469,978	362,170
Other assets			
Deposits – Texans	13,750	13,750	
Prepaid insurance	6,027	20,329	35,540
Deposits	4,000	4,000	20,952
Organizational costs – Marine	4,640	4,640	4,640
Goodwill, less accumulated amortization	146,119	166,430	186,741
Note receivable – Cross[4]		6,970	6,970
Note receivable – LPNA	50,000	20,000	20,000
Note receivable – Edison	23,270	76,000	76,000
Note receivable – Flowcrete NA L.P.[5]			40,000
Note receivable – USPCS			25,000
Total other assets	247,807	312,119	425,842
Total assets	$3,163,570	$3,096,032	$2,886,417
Liabilities and Partners' Capital			
Current Liabilities			
SEP payable – accrual[6]	$39,972	$75,655	$48,534
Accounts payable	391,892	380,298	234,036
Purchase clearing	71,209	1,089	15,023
Flex spending (sec 125)[7]	(134)	(2,005)	

FlowCrete royalty – accrual	8,392	6,596	
Morton royalty – accrual		10,975	19,795
Prepayments – accounts receivable	41,351		415,303
Sales tax payable	137		(5)
Total current liabilities	552,818	472,608	732,686
Long-term liabilities			
Note payable – phone system		10,443	13,728
Note payable – Cross	175,045		
Total liabilities	772,863	483,051	746,413
Partners' capital			
Partners' capital	152,299	152,299	152,299
Dividends	(330,600)		
Retained earnings	2,460,681	1,976,877	1,699,764
Current earnings	153,327	483,805	287,941
Partners' capital	2,435,708	2,612,980	2,140,004
Total liabilities and partners' capital	$3,163,570	$3,096,032	$2,886,417

Endnotes:

[1] Edison initially owned 75 percent of the business and was managing partner. Over the years, the other partners withdrew from the business one by one. By 2005, Edison owned 100 percent of USP.

[2] The amount shown for Cost of Goods Sold includes only the cost of raw materials. Edison estimated that labor cost related to producing goods was about 8 percent of the selling price.

[3] The amount shown for Cash – Checking includes the balance in the checking account, offset by the outstanding balance in the line of credit that USP had at the bank.

[4] Cross was the USP VP of marketing; he left the company in 2004.

[5] Flowcrete NA L.P. was a joint venture formed with a United Kingdom company that manufactures various flooring products. The joint venture was formed in 2002 and dissolved in 2003.

[6] The SEP Payable is an employee/owner retirement plan.

[7] Flex Spending is a plan that allows employees to have an amount deducted from their paychecks, to be used to pay for health care costs.

Appendix H

LP North America Distribution, Inc.
Statement of Income

	For the Twelve Months Ended December 31,		
	2004	2003	2002
Sales	$2,379,191	$1,801,072	$371,770
Sales returns	(27,519)	(32,632)	
Sales discounts	(10)	(7)	(93)
Miscellaneous income			19
Total sales	2,351,661	1,768,433	371,696
Cost of goods sold	1,750,930	1,390,463	275,724
Gross profit	600,731	377,970	95,972
Operating expenses			
Amortization expense	606	606	455
Bank charges – administration	1,329	3634	438
Credit card service charge	1,614	858	125
Commissions	300,540	197,403	42,911
Employee benefits	300	320	
Licenses/testing		600	
Meals	60	161	
Miscellaneous expense	30,000	30,000	
Office supplies	20	54	25
Payroll expenses	904	896	
Postage	12	175	
Printing		252	5,572
Professional fees	755	800	
Rent	24,449	20,259	
Rentals – equipment		338	
Salaries	40,500	30,000	
Taxes – ad valorem	3,098		
Taxes – payroll	3,691	3,144	
Taxes – federal income tax		16,647	
Taxes – other	3,758	2,076	
Travel expense	306	3,062	494
Total operating expenses	411,943	311,286	50,021
Income from operations	188,789	66,684	45,951
Income – FlowCrete	303	361	89
Net income	$189,092	$67,046	$46,040

LP North America Distribution, Inc.
Balance Sheet

	As of December 31,		
	2004	2003	2002
Assets			
Current assets			
Cash	$69,784	$27,811	$60,329
Accounts receivable	354,406	207,505	142,807
Inventory	164,816	239,257	16,495
Total current assets	589,006	474,573	219,631
Other assets			
Prepaid federal income tax	17,000	7,000	
Organizational costs	3,032	3,032	3,032
Less accumulated amortization	(1,516)	(910)	(455)
Total other assets	18,516	9,122	2,577
Total assets	$607,522	$483,695	$222,207
Liabilities and shareholders' equity			
Current liabilities			
Intercompany payables – USP		$2,347	$494
Accounts payable	228,595	241,934	136,645
Note payable – USP		61,000	
Accrued commissions	44,797	34,534	17,908
Federal income tax payable		16,647	
Sales tax payable		31	
Total current liabilities	273,392	356,494	155,047
Long-term liabilities			
Note payable – USP	50,000	20,000	20,000
Total liabilities	323,392	376,494	175,047
Shareholders' equity			
Shareholder – Edison			900
Shareholder – Arthur			110
Shareholder – Cross			110
Common stock	1,010	1,120	
Retained earnings	94,028	39,036	
Current earnings	189,092	67,046	46,040
Total shareholders' equity	284,130	107,202	47,160
Total liabilities and shareholders' equity	$607,522	$453,695	$222,207

Appendix I

USP Construction Services
Statement of Income

	For the Year Ended December 31,	
	2004	2003
Sales	$891,123	880,032
Re-stocking fees	(5,107)	
Total sales	886,016	
Cost of goods sold	695,352	866,278
Gross profit	190,663	13,754
Operating expenses		
Advertising/marketing	30	18
Administrative fees	88,000	
Amortization	224	224
Bank charges	300	300
Commissions	7,692	
Entertainment	65	203
Insurance		500
Meals	10	65
Miscellaneous expenses		204
Outside services	6,260	
Professional fees	795	580
Rentals – equipment	1,634	2,152
Taxes – federal income taxes		89
Taxes – franchise	(1,587)	
Travel expense	1,041	501
Total operating expenses	104,462	4,836
Income from operations	86,199	8,918
Other income – income from FlowCrete	696	123
Net income	86,895	$9,041

USP Construction Services
Balance Sheet

	As of December 31,	
	2004	2003
Assets		
Current assets		
Cash	$110,742	$5,505
Accounts receivable	718	764,829
Total current assets	111,460	$770,334
Other assets		
Prepaid federal income tax	11	
Organization costs	1,118	1,118
Less accumulated amortization	(447)	(224)
Total other assets	682	894
Total assets	$112,141	$771,228
Liabilities and Shareholders' Equity		
Inter-company payable – USP		$5,138
Accounts payable	2,049	736,982
Federal income tax payable		89
Total current liabilities		$742,208
Shareholders' Equity		
Common stock	800	1,000
Retained earnings	22,398	18,978
Current earnings	86,895	9,041
Total shareholders' equity	110,092	20,020
Total liabilities and shareholders' equity	112,141	771,228