UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-Q

[X] QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended September 30, 2004, or

[_] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission File Number 0-16106

APA ENTERPRISES, INC.
(Exact name of Registrant as specified in its charter)

MINNESOTA	41-1347235
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

2950 N.E. 84TH LANE, BLAINE, MINNESOTA 55449
(Address of principal executive offices and zip code)

(763) 784-4995
(Registrant's telephone number, including area code)

FORMER NAME: APA OPTICS, INC.
(FORMER NAME, FORMER ADDRESS, AND FORMER FISCAL YEAR END IF CHANGED SINCE LAST REPORT)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15 (d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to the filing requirement for the past 90 days.

Yes [X] No [_]

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Exchange Act).
Yes [_] No [X]

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date:

Class:	Outstanding at November 3, 2004
Common stock, par value $.01	11,872,331

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

APA ENTERPRISES, INC.
CONSOLIDATED CONDENSED BALANCE SHEETS
(UNAUDITED)

<S>	September 30, 2004 <C>	March 31, 2004 <C>
ASSETS		
Current assets:		
Cash and cash equivalents	$ 12,363,455	$ 13,544,910
Accounts receivable, net of allowance for uncollectible accounts of $48,107 at September 30, 2004 and $49,038 at March 31, 2004	1,540,890	1,787,541
Inventories	1,577,271	1,574,188
Prepaid expenses	140,059	174,503
Bond reserve funds	88,368	133,865
Total current assets	15,710,043	17,215,007
Property, plant and equipment, net	4,213,792	4,550,956
Other assets:		
Bond reserve funds	334,238	332,433
Goodwill	3,422,511	3,422,511
Other	490,692	562,609
	4,247,441	4,317,553
Total assets	$ 24,171,276	$ 26,083,516
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term debt	$ 1,475,827	$ 1,637,923
Accounts payable	990,865	1,050,690
Accrued compensation	586,281	645,293
Accrued expenses	239,749	212,713
Total current liabilities	3,292,722	3,546,619
Long-term debt	130,284	173,836
Shareholders' equity:		
Undesignated shares	-	-
Preferred stock	-	-
Common stock	118,723	118,723
Additional paid-in capital	51,952,038	51,980,946
Accumulated deficit	(31,322,491)	(29,736,608)
Total shareholders' equity	20,748,270	22,363,061
Total liabilities and shareholders' equity	$ 24,171,276	$ 26,083,516

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SEE ACCOMPANYING NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

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APA ENTERPRISES, INC.
CONSOLIDATED CONDENSED STATEMENTS OF OPERATIONS
(UNAUDITED)

	Three Months Ended September 30,		Six Months Ended September 30,	
<S>	2004 <C>	2003 <C>	2004 <C>	2003 <C>
Revenues	$ 3,668,068	$ 3,557,586	$ 7,355,786	$ 5,128,562
Costs and expenses:				
Cost of sales	2,885,804	3,358,169	5,972,647	5,230,034
Research and development	220,595	210,861	411,803	408,964
Selling, general and administrative	1,476,049	1,686,796	2,816,858	2,754,958
	4,582,448	5,255,826	9,201,308	8,393,956

Loss from operations	(914,380)	(1,698,240)	(1,845,522)	(3,265,394)
Gain on sale of operations	-	-	208,314	-
Other income	57,062	31,502	104,256	108,087
Other expense	(24,979)	-	(50,231)	(54,580)
	32,083	31,502	262,339	53,507
Loss before income taxes	(882,297)	(1,666,738)	(1,583,183)	(3,211,887)
Income taxes	750	750	2,700	1,000
Net loss	$ (883,047)	$(1,667,488)	$(1,585,883)	$(3,212,887)
Net loss per share:				
Basic and diluted	($0.07)	($0.14)	($0.13)	($0.27)
Weighted average shares outstanding:				
Basic and diluted	11,872,331	11,872,331	11,872,331	11,872,331

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SEE ACCOMPANYING NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

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APA ENTERPRISES, INC.
CONSOLIDATED CONDENSED STATEMENTS OF CASH FLOWS
(UNAUDITED)

	Six Months Ended September 30,	
	2004	2003
<S>	<C>	<C>
OPERATING ACTIVITIES		
Net loss	$(1,585,883)	$(3,212,887)
Adjustments to reconcile net loss to net cash used in operating activities, net of acquisition:		
Depreciation and amortization	471,791	451,852
Stock based compensation	(28,908)	29,879
Changes in operating assets and liabilities:		
Accounts receivable	246,651	(797,873)
Inventories	(3,083)	(145,819)
Prepaid expenses and other	36,131	(99,956)
Accounts payable and accrued expenses	133,199	729,934
Net cash used in operating activities	(730,102)	(3,044,870)
INVESTING ACTIVITIES		
Purchases of property and equipment	(289,397)	(234,176)
Acquisition of business	-	(1,960,000)
Other	-	(7,375)
Net cash used in investing activities	(289,397)	(2,201,551)
FINANCING ACTIVITIES		
Repayment of long-term debt	(205,648)	(340,028)
Increase in bond reserve funds	43,692	4,248
Net cash used in financing activities	(161,956)	(335,780)
Decrease in cash and cash equivalents	(1,181,455)	(5,582,201)
Cash and cash equivalents at beginning of period	13,544,910	22,235,686
Cash and cash equivalents at end of period	$12,363,455	$16,653,485
Noncash investing and financing activities		
Capital expenditure included in accounts payable	$ (225,000)	-

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SEE ACCOMPANYING NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

NOTE 1. BASIS OF PRESENTATION

The accompanying condensed financial statements have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission. Accordingly, they do not include all of the information and footnotes required by accounting principles generally accepted in the United States of America for complete financial statements. For further information, refer to the financial statements and footnotes thereto included in the Company's annual report on Form 10-K for the year ended March 31, 2004.

In the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary for a fair presentation have been included. Certain reclassifications of previously reported amounts have been made to conform that presentation to the current period presentation.

NOTE 2. NET LOSS PER SHARE

The following table sets forth the computation of basic and diluted net loss per share:

	Three Months Ended September 30,		Six Months Ended September 30,	
	2004	2003	2004	2003
Numerator for basic and diluted net loss	$ (883,047)	$(1,667,488)	$(1,585,883)	$(3,212,887)
Denominator for basic and diluted net loss per share- weighted-average shares outstanding	11,872,331	11,872,331	11,872,331	11,872,331
Basic and diluted net loss per share	($0.07)	($0.14)	($0.13)	($0.27)

Common stock options and warrants to purchase 873,742 and 1,014,197 shares of common stock with a weighted average exercise price of $6.65 and $6.70 were outstanding at September 30, 2004 and 2003, respectively, but were excluded from calculating diluted net loss per share because they were antidilutive.

NOTE 3. ACQUISITION

On June 27, 2003, the Company acquired certain assets of Americable, Inc. The acquisition was accounted for as a purchase and, accordingly, results of operations relating to the purchased assets have been included in the statement of operations from the date of acquisition. There are no contingent payments related to the acquisition. The Company reclassified certain balances from the original Americable purchase price allocation as part of an asset valuation adjustment. The adjustment was made after determining the fair value of the assets purchased. The result of the change was a decrease in inventory and property, an increase in accounts receivable, and an increase

in goodwill. This did not change the purchase price of the transaction. The purchase price and assets acquired with purchase price adjustments are as follows:

	Original Purchase Price Allocation	Purchase Price Adjustment	Revised Purchase Price Allocation
Accounts receivable	$ 594,000	$ 46,279	$ 640,279
Inventory	638,000	(13,944)	624,056
Property, plant and equipment	450,000	(49,186)	400,814
Assets purchased	1,682,000	(16,851)	1,665,149

Goodwill	278,000	16,851	294,851
Purchase price	$ 1,960,000	$ -	$ 1,960,000

</TABLE>

Goodwill is expected to be fully deductible for tax purposes.

NOTE 4. SEGMENT REPORTING

The Company has identified two reportable segments based on its internal organizational structure, management of operations, and performance evaluation. These segments are Optronics (historically referred to as the APA Optics, Inc. segment) and Cables and Networks (historically referred to as the APACN segment). Optronic's revenue is generated in the design, manufacture and marketing of ultraviolet (UV) detection and measurement devices and optical components. Cables & Network's revenue is derived primarily from standard and custom fiber optic cable assemblies, copper cable assemblies, value added fiber optics frames, panels and modules. Expenses are allocated between the companies based on detailed information contained in invoices. In addition, corporate overhead costs for management's time and other expenses are allocated. Segment detail is summarized as follows (unaudited, in thousands):

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	Optronics	Cables & Networks	Eliminations	Consolidated
<S>	<C>	<C>	<C>	<C>
THREE MONTHS ENDED SEPTEMBER 30, 2004				
External sales	$ 149	$ 3,623	$ (104)	$ 3,668
Cost of sales	389	2,601	(104)	2,886
Operating income (loss)	(1,025)	111	-	(914)
Depreciation and amortization	179	53	-	232
Capital expenditures	2	26	-	28
Total assets	24,056	7,506	(7,391)	24,171
THREE MONTHS ENDED SEPTEMBER 30, 2003				
External sales	$ 61	$ 3,497	-	$ 3,558
Cost of sales	680	2,678	-	3,358
Operating loss	(1,432)	(266)	-	(1,698)
Depreciation and amortization	185	54	-	239
Capital expenditures	31	127	-	158
Total assets	28,428	7,652	(7,039)	29,041

	Optronics	Cables & Networks	Eliminations	Consolidated
SIX MONTHS ENDED SEPTEMBER 30, 2004				
External sales	$ 292	$ 7,295	$ (231)	$ 7,356
Cost of sales	961	5,243	(231)	5,973
Operating income (loss)	(2,062)	216	-	(1,846)
Depreciation and amortization	364	108	-	472
Capital expenditures	236	53	-	289
Total assets	24,056	7,506	(7,391)	24,171
SIX MONTHS ENDED SEPTEMBER 30, 2003				
External sales	$ 122	$ 5,014	(7)	$ 5,129
Cost of sales	1,359	3,878	(7)	5,230
Operating loss	(2,796)	(469)	-	(3,265)
Depreciation and amortization	368	84	-	452
Capital expenditures	101	133	-	234
Total assets	28,428	7,652	(7,039)	29,041

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NOTE 5. SALE OF OPTICS MANUFACTURING OPERATIONS

In January, 2004 the Company announced the discontinuance of optics manufacturing at its Blaine facility. The closure was the result of aggressive off-shore pricing and continued lower demand for this product line. This resulted in a charge of $171,000 taken in the 4th quarter ended March 31, 2004. The Company sold its optics manufacturing operations on April 14, 2004 for $220,000. The terms of the sale required the Company to restructure a loan with the City of Aberdeen which included an upfront loan payment of $89,305 and payment of the remaining $140,000 loan amount in seven annual installments of $20,000 each beginning June 30, 2004.

NOTE 6. STOCK BASED COMPENSATION

The Company has various incentive and non-qualified stock option plans which are used as an incentive for directors, officers, and other employees. The Company uses the intrinsic value method to value stock options issued to employees. Under this method, compensation expense is recognized for the amount by which the market price of the common stock on the date of grant exceeds the exercise price. The Company's stock based compensation expense also reflects the

benefit of the cancellation of previously unvested expensed options. The Company recognized compensation income of $15,446 and $28,908 for the three and six months ended September 30, 2004, and compensation expense of $29,879 for the three and six months ended September 30, 2003. For those stock options granted where the exercise price was equal to the market value of the underlying common stock on the date of grant, no stock-based employee compensation cost is reflected in the net loss. Had the fair value method been applied, our compensation expense would have been different. The following table

illustrates the effect on net loss and net loss per share if the Company had applied the fair value method, to stock-based employee compensation for the following three months ended:

	Three Months Ended September 30,		Six Months Ended September 30,	
	2004	2003	2004	2003
Net loss to common shareholders - as reported	$ (883,047)	$(1,667,488)	$(1,585,883)	$(3,212,887)
Less: Total stock-based employee compensation expense determined under fair value based method for all awards, net of related tax effects	(37,980)	(50,318)	(86,322)	(100,635)
Net loss - pro forma	$ (921,027)	$(1,717,806)	$(1,672,205)	$(3,313,522)
Basic and diluted net loss per common share - as reported	($0.07)	($0.14)	($0.13)	($0.27)
Basic and diluted net loss per common share - pro forma	($0.08)	($0.15)	($0.14)	($0.28)

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Statements in this Report about future sales prospects and other matters to occur in the future are forward looking statements and are subject to uncertainties due to many factors, many of which are beyond our control. These factors include, but are not limited to, the continued development of our products, acceptance of those products by potential customers, our ability to sell such products at a profitable price, and our ability to fund our operations. For further discussion regarding these factors, see "Factors That May Influence Future Results."

OVERVIEW

APA Enterprises, Inc., (formerly known as APA Optics, Inc.) consisting of the Optronics group and the Cables & Networks group, develops, designs, manufactures and markets fiber optics, copper and gallium nitride (GaN) based components and devices for industrial, commercial, consumer and scientific applications. Optronics is active in the development, design, manufacture and marketing of ultraviolet (UV) measurement instruments for consumers and industrial customers, and gallium nitride (GaN) based transistors for power amplifiers and other commercial applications. Cables & Networks designs, manufactures and markets a variety of fiber optic and copper components to the data communication and telecommunication industries. Both groups also source from third parties components and devices for direct and value-added sales to our customers in all these technology areas.

Cables & Networks' internally manufactured products primarily include a broad line of standard and custom fiber optic cable assemblies, copper cable assemblies, optical components, value added fiber optic distribution frames, panels and modules. These products are manufactured at the Cables & Networks plant in Plymouth, Minnesota and Optronics' facility in Aberdeen, South Dakota, and marketed to broadband service providers, commercial data networks, and original equipment manufacturers. Cables & Networks acquired certain assets of

Computer System Products, Inc. ("CSP") on March 14, 2003 and certain assets of Americable, Inc. ("Americable") on June 27, 2003. Several of the items discussed under "Results of Operations" show significant changes from the comparable periods in the preceding fiscal year as a result of these acquisitions.

In January 2004 Optronics terminated its optics manufacturing in Blaine, Minnesota as described in Note 5. Additionally in January 2004 Optronics consolidated its fiber optics operations within Blaine. Optronics plans to continue to market and sell fiber optic products using mainly Cables & Network's sales team and channels. We outsource several components from third parties including passive optical splitters, arrayed waveguides (AWGs) and wavelength division multiplexers (WDMs) based on Thin Film Filter (TFF) technology, which we combine with our internally manufactured products to create value added components for our customers. The majority of our outsourced product providers are located offshore.

Most companies in the communications industry have been affected by the slowdown in telecommunications equipment spending over the past several years. Decreased demand and competition have continued to put downward pressure on margins. This downward pressure is likely to continue and we will need to reduce operating costs and improve efficiencies to remain competitive in the marketplace.

Optronic's consumer UV detection product, the SunUVTM Personal UV Monitor (PUVM, formerly SunWatch) continues in low volume production. We are shipping small quantities to retailers and catalog customers on an ongoing basis. The offshore manufacturer is maintaining a flow of product, but low yield caused primarily by mechanical and cosmetic issues has limited our ability to pursue larger orders from our distribution channels. High volume manufacturing is being addressed with the current supplier. We have selected another supplier for our PUVM's. Our goal is to qualify this supplier prior to the initiation of production runs. We anticipate production samples for qualification will be available during the early part of the fourth quarter of fiscal 2005.

In addition to the UV consumer product line, Optronics has reconfigured its TrUVMeterTM for monitoring UV radiation printing and curing systems, which is a growing segment of the printing and coating industries. This reconfiguration involves detection and analysis of four light bands (all in the UV spectral range) using four separate detector assemblies, as compared to only one in the TrUVMeterTM. We have completed the design and major development tasks for this product, called Profiler M. We introduced the Profiler M at the Specialty Graphics and Imaging trade show held in Minneapolis in October 2004. Subsequently we have shipped test units for customer evaluation. Our plans call for integrating customers' feedback in the final configuration and initiating manufacturing of the Profiler M. We anticipate units will be available for sale during the fourth quarter of fiscal 2005.

Optronics continues to develop transistors based on GaN/AlGaN (gallium nitride/aluminum gallium nitride) for base transceiver station power amplifier applications while assessing other commercialization opportunities. With assistance from outside foundries we are processing, packaging and testing transistors built from our material. Our plan is to continue characterizing demonstration power amplifiers built using AlGaN/GaN based transistors while qualifying the long term reliability of these devices.

During the latter part of fiscal 2004 we purchased a multi-wafer (6 wafers, 2 inches in diameter) metal organic chemical vapor deposition (MOCVD) system to supply high performance epitaxial wafers for internal requirements as well as for other potential customers. Installation of this system will be completed within the third fiscal quarter of 2005 at a leased facility that provides state-of-the-art characterization equipment. Included in the reactor purchase was a quantity of wafers, grown at the vendor's application lab to APA's specifications. These wafers were grown to demonstrate the capability of the tool and to serve as a bridge until the reactor is brought on-line. These wafers are currently being processed and evaluated.

We will be working with potential epi-wafer customers to initially qualify our material during the third quarter of fiscal 2004. This qualification process is dependent on the customer fabrication and testing schedule and typically ranges from several weeks to several months. We expect to work toward wafer supply agreements with these potential customers, leveraging our cutting edge material and fundamental patent position.

RESULTS OF OPERATIONS

THREE MONTHS ENDED SEPTEMBER 30, 2004 VS. THREE MONTHS ENDED SEPTEMBER 30, 2003

Consolidated revenues for the three months ended September 30, 2004 increased $110,482, or 3%, to $3,668,068 from $3,557,586 in 2003.

Revenues at Cables & Networks were $3,622,735, compared to sales of $3,497,188 reported in the same quarter a year ago, an increase of 4%. Sales for

the current quarter to broadband service provider and commercial data networks were $2,478,000 versus $2,031,000. The increase was due to revenue from additional customers in the Fiber-to-the-Home market. Sales to OEM's were $1,145,000 versus $1,466,000 in the year ago period. The decrease is due to a focus away from lower margin products as well as lower demand in the market. We expect that future sales of Cables & Networks products will continue to account for a substantial portion of our revenue. We anticipate revenues may decline slightly due to seasonality in the third quarter of fiscal 2005, consistent with the decline experienced by Cables & Networks during the prior year's quarter.

Gross revenues at Optronics increased $88,796, or 147%, to $149,194 from $60,398 in the same quarter a year ago. Gross revenues for the second quarter ended reflect approximately $103,800 of sales to Cables & Networks for fiber optics products and subcontracted labor versus none in the comparable period last year. These sales are eliminated as intercompany sales in the consolidated financials in each quarter. The net decrease in revenues for the quarter was due primarily to lower sales of fiber optics and optics products, offset by additional sales for foundry services.

COST OF SALES AND GROSS PROFIT

Cables & Network's gross profit increased $202,445, or 25%, to $1,021,683 from $819,238. Gross margins as a percent of revenues increased from 23% to 28%. The increase in margins reflects reduced production costs in the current quarter for duplicate overhead and personnel costs absorbed in the prior year while operating and consolidating multiple facilities, as well as an increased focus on selling higher margin products.

Gross cost of sales at Optronics decreased $291,606, or 43%, to $388,613 from $680,219. Gross cost of sales reflects approximately $103,800 related to cost of sales to Cables & Networks for fiber optics products and subcontracted labor versus none last year. These costs are eliminated as intercompany cost of sales in the consolidated financials in each quarter. The net decrease in cost of sales is due to lower material and production expenses related to the closure of the optics manufacturing line as well as lower personnel costs associated with cost reduction efforts.

We anticipate comparable gross margins and cost of sales for Cables & Networks and Optronics for the third quarter.

RESEARCH AND DEVELOPMENT EXPENSES

Research and development expenses consist of the research and development expense at Optronics. There have been no research and development expenses at Cables & Networks. Expenses were $220,595, relatively unchanged between periods. We expect research and development expenses to grow slightly in the third quarter.

SELLING, GENERAL AND ADMINISTRATIVE

Consolidated S, G & A expenses decreased $210,747, or 12%, to $1,476,049 from $1,686,796 in 2003.

Selling, general and administrative expenses at Cables & Networks decreased $174,391, or 16%, to $910,771 from $1,085,162. The majority of the decrease is attributable to the elimination of duplicate and one time expenses related to operating multiple facilities and consolidating them in the fiscal 2004 quarter, offset by slightly higher administration and professional costs.

Selling, general and administrative expenses at Optronics decreased $36,356, or 6%, to $565,278 from $601,634. The decrease is due to lower personnel and related costs associated with cost reductions implemented over fiscal year 2004, offset slightly by higher professional fees.

INCOME (LOSS) FROM OPERATIONS

Consolidated losses from operations decreased $783,860, or 46%, to $914,380 from $1,698,240 in 2003.

The income from operations at Cables & Networks was $110,912 versus a loss of $265,924 in the fiscal 2004 quarter. The increased income in the quarter was mainly the result of a combination of increased gross margins and the reduction in duplicate expenses relating to multiple facilities absorbed in the prior year period.

The loss from operations at Optronics was $1,025,292, a decrease of $407,024, or 28%. The decrease in the loss is primarily the result of the cost reductions implemented over the prior fiscal year, mainly for personnel reductions and the elimination of the optics line of business. We expect to incur losses at Optronics until we realize significant revenues from the sales of our PUVM and GaN related products.

OTHER INCOME AND EXPENSE

Consolidated other income and expense increased $581 to $32,083 from $31,502.

Other expense at Cables & Networks increased approximately $8,500 for interest expense due to a larger outstanding debt balance in the current period.

Other income at Optronics increased $32,976 to $128,166. Interest income increased approximately $23,000 due to a higher outstanding debt balance due from Cables & Networks and higher amount earned on short term investments, while other income increased approximately $10,000 from facility rental.

NET INCOME (LOSS)

Consolidated net loss for the quarter decreased $784,441, or 47%, to $883,047, or $.07 cents per share, from $1,667,488, or $.14 cents per share in the year ago period.

Cables & Networks had net income of $37,160 in the quarter, compared to a loss of $331,103 in the year ago quarter. The increase reflects improved gross margins through reduced production costs and reduced S, G, & A expenses attributable to operating multiple facilities in the year ago period.

Optronics recorded a net loss of $920,207, a decrease of $416,178, or 31%, from the loss of $1,336,385 reported in the same period of fiscal 2004. The decrease is due mainly to cost reductions implemented over the past year. While cost reductions implemented so far at Optronics will help lower the overall losses for the Company, achieving profitability in the future will strongly depend upon Optronic's ability to manufacture and market gallium-nitride products.

SIX MONTHS ENDED SEPTEMBER 30, 2004 VS. SIX MONTHS ENDED SEPTEMBER 30, 2003

Consolidated revenues for the six months ended September 30, 2004 increased $2,227,224, or 43%, to $7,355,786 from $5,128,562 in 2003.

Revenues at Cables & Networks increased $2,281,007, or 45% to $7,294,547 from $5,013,540. The increase is attributable to higher revenues in the first quarter of fiscal 2005 quarter generated by the acquisition from Americable, Inc., which occurred at the end of the first quarter of fiscal 2004. The Americable assets contributed no corresponding revenues for the first quarter of fiscal 2004. Sales to broadband service provider and commercial data networks were $4,961,000 or 68% of revenue, and sales to OEM's were $2,334,000, or 32% of revenue. This compares to 60% for broadband and commercial data networks and 40% for OEM's in the prior period. The change reflects higher demand in the Fiber-to-the-Home market, offset by lower demand from OEM's.

Gross revenues at Optronics increased $169,496, or 139%, to $291,688 from $122,192 in the same period a year ago. Gross revenues reflect approximately $230,000 of sales to Cables & Networks for fiber optics products and subcontracted labor versus $7,100 last year. These sales are eliminated as intercompany sales in the consolidated financials in each quarter. The net decrease in revenues is due primarily to lower sales of fiber optics and optics products.

COST OF SALES AND GROSS PROFIT

Cables & Network's gross profit increased $915,821, or 81%, to $2,051,623 from $1,135,802. The increase is mainly to higher margins generated in the first quarter of fiscal 2005 generated by the acquisition of Americable, Inc. Gross margins as a percent of revenues increased from 23% to 28%. The increase in margin percentage reflects reduced production costs for overhead and personnel costs absorbed in the prior year while operating and combining multiple facilities, as well as an increased focus on selling higher margin products.

Gross cost of sales at Optronics decreased $399,294, or 29%, to $960,172 from $1,359,466. Gross cost of sales reflects $230,000 related to cost of sales to Cables & Networks for fiber optics products and subcontracted labor versus $7,100 last year. These costs are eliminated as intercompany cost of sales in the consolidated financials in each quarter. The net decrease in cost of sales is due to lower material and production expenses related to the closure of the optics manufacturing line as well as lower personnel costs associated with cost reduction efforts.

RESEARCH AND DEVELOPMENT EXPENSES

Research and development expenses consist of the research and development expense at Optronics. There have been no research and development expenses at Cables & Networks. Expenses were $411,803, relatively unchanged between periods.

SELLING, GENERAL AND ADMINISTRATIVE

Consolidated S, G & A expenses increased $61,900, or 2%, to $2,816,858 from

$2,754,958 in 2003.

Selling, general and administrative expenses at Cables & Networks increased $231,453, or 14%, to $1,836,030 from $1,604,577. The majority of the increase is attributable to expenses generated by the acquisition from Americable, Inc. which occurred at the end of the first quarter of fiscal 2004 and had no expenses in the fiscal 2004 first quarter.

Selling, general and administrative expenses at Optronics decreased $169,553, or 15%, to $980,828 from $1,150,381. The decrease is due to lower personnel and related costs associated with cost reductions implemented over fiscal year 2004.

INCOME (LOSS) FROM OPERATIONS

Consolidated losses from operations decreased $1,419,872, or 43%, to $1,845,522 from $3,265,394 in 2003.

The income from operations at Cables & Networks was $215,593 versus a loss of $468,775 in the year ago period. The increased income was mainly the result of a combination of increased revenues and gross margins as well as reductions in S, G, & A expenses relating to multiple facilities absorbed in the prior year.

The loss from operations at Optronics was $2,061,115, a decrease of $735,504, or 26%. The decrease in the loss is primarily the result of the cost reductions implemented over the prior fiscal year, mainly for personnel reductions, and the elimination of the optics line of business.

OTHER INCOME AND EXPENSE

Consolidated other income and expense increased $208,832 to $262,339 from $53,507.

Higher income at Cables & Networks in fiscal 2004 was due to management fee income earned in relation to the acquisition from CSP. Interest expense at Cables & Networks increased $42,773. The increase is due to a larger outstanding debt balance mainly related to the acquisition of Americable late in the second quarter in fiscal 2004.

Other income at Optronics increased $268,179, or 147%, to $451,035 from $182,856. The sale of the optics manufacturing operations in April 2004 and related facility income accounted for $230,000 of the increase. Interest income increased slightly due to a higher outstanding debt balance due from Cables & Networks. Interest expense was $45,662, relatively unchanged between periods.

NET INCOME (LOSS)

Consolidated net loss decreased $1,627,004, or 51%, to $1,585,883, or $.13 cents per share, from $3,212,887, or $.27 cents per share in the year ago period.

Cables & Networks had net income of $70,359 versus a loss of $548,482 in the year ago period. The increase reflects improved gross margins, mainly through reduced production costs, and reduced S, G, & A expenses attributable to operating multiple facilities in the prior year.

Optronics recorded a net loss of $1,656,242, a decrease of $1,008,163, or 38%, from the loss of $2,664,405 reported in the same period of fiscal 2004. The decrease is due mainly to cost reductions relating to personnel implemented over the past year as well as the gain on sale of the optics manufacturing business and the elimination of its related expenses.

LIQUIDITY AND CAPITAL RESOURCES
- ----------------------------------

The Company's cash and cash equivalents consist primarily of money market funds, U.S. Government instruments or other government instruments with original maturities of less than three months.

Cash used in operating activities was $730,102 for the six month period ending September 30, 2004 compared to $3,044,870 used in the same period in fiscal 2004. The decrease in the cash used between the two periods reflects a decrease in loss from operations of $1,419,872, achieved by a combination of increased revenue and profitable operations at Cables & Networks and decreased costs at Optronics due to cost reduction efforts and a gain on the sale of the optics manufacturing business at Optronics in April 2004.

We used net cash of $289,397 in investing activities for the six months ended September 30, 2004 compared to $2,201,551 used in the same period of the preceding fiscal year. The use of cash in the six months ended September 30, 2004 reflects capital expenditures mainly for production equipment at Optronics. For the six months ended September 30, 2003, $1,960,000 was used to purchase the

assets of Americable, Inc. We anticipate approximately $600,000 to $800,000 in capital expenditures in fiscal 2005.

Net cash used in financing activities for the six months ended September 30, 2004 totaled $161,956. We used $205,648 for the scheduled reduction of debt and generated $43,692 from the reduction of bond reserve funds. During the same period in fiscal 2004 we used $335,780 in financing activities, of which $340,028 was used for the scheduled reduction of debt and $4,248 was generated from the reduction of bond reserve funds.

We believe we have sufficient funds for operations for at least the next twelve months.

Our contractual obligations and commitments are summarized in the table below (in 000's):

<TABLE>
<CAPTION>

	Total	Less than 1 Year	1-3 years	4-5 years	After 5 years
<S>	<C>	<C>	<C>	<C>	<C>
Long-term debt	$1,606	$ 1,476	$ 70	$ 40	$ 20
Leases	1,285	527	730	28	-
Total Contractual Cash Obligations	$2,891	$ 2,003	$ 800	$ 68	$ 20

</TABLE>

Application of Critical Accounting Policies

In preparing our consolidated financial statements, we make estimates, assumptions and judgments that can have a significant impact on our revenues, loss from operations and net loss, as well as on the value of certain assets and liabilities on our consolidated balance sheet. We believe that there are several accounting policies that are critical to an understanding of our historical and future performance, as these policies affect the reported amounts of revenues, expenses and significant estimates and judgments applied by management. While there are a number of accounting policies, methods and estimates affecting our consolidated financial statements, areas that are particularly significant include:

- Revenue recognition;

- Accounting for income taxes; and

- Valuation and evaluating impairment of long-lived assets and goodwill

Revenue Recognition

Revenue is recognized when persuasive evidence of an arrangement exists, the product has been shipped, acceptance by the customer is reasonably certain and collection is probable.

Accounting for Income Taxes

As part of the process of preparing our consolidated financial statements, we are required to estimate our income tax liability in each of the jurisdictions in which we do business. This process involves estimating our actual current tax expense together with assessing temporary differences resulting from differing treatment of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities. We must then assess the likelihood that these deferred tax assets will be recovered from future taxable income and, to the extent we believe that recovery is not more likely than not or unknown, we must establish a valuation allowance.

Significant management judgment is required in determining our provision for income taxes, our deferred tax assets and liabilities and any valuation allowance recorded against our deferred tax assets. At March 31, 2004, we recorded a full valuation allowance of $11,075,084 against our deferred tax assets, due to uncertainties related to our ability to utilize our deferred tax assets, consisting principally of certain net operating losses carried forward. The valuation allowance is based on our estimates of taxable income by jurisdiction and the period over which our deferred tax assets will be recoverable. The Company had U.S. net operating loss (NOL) carryforwards of approximately $27,899,000 which expire in fiscal years 2004 to 2024.

Realization of the NOL carryforwards and other deferred tax temporary

differences are contingent on future taxable earnings. The deferred tax asset was reviewed for expected utilization using a "more likely than not" approach by assessing the available positive and negative evidence surrounding its recoverability. We will continue to assess and evaluate strategies that will enable the deferred tax asset, or portion thereof, to be utilized, and will reduce the valuation allowance appropriately at such time when it is determined that the "more likely than not" approach is satisfied.

Valuation and evaluating impairment of long-lived assets and goodwill

Goodwill represents the excess of the purchase price over the fair value of net assets acquired. Goodwill should not be amortized but reviewed for impairment at the fiscal year end or whenever conditions exist that indicate an impairment could exist. The Company performed the annual impairment test in fiscal years 2004 and 2003 and concluded that no impairment had occurred.

The Company evaluates the recoverability of its long-lived assets and requires recognition of impairment of long-lived assets in the event that events or circumstances indicate an impairment may have occurred and when the net book value of such assets exceeds the future undiscounted cash flows attributed to such assets. We assess the impairment of long-lived assets whenever events or changes in circumstances indicate that the carrying value may not be recoverable. No impairment of long-lived assets has occurred through September 30, 2004.

FACTORS THAT MAY INFLUENCE FUTURE RESULTS

The statements contained in this report on Form 10-Q that are not purely historical are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, including, without limitation, statements regarding the Company's expectations, hopes, beliefs, anticipations, commitments, intentions and strategies regarding the future. Forward-looking statements include, but are not limited to, statements contained in "Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations." Actual results could differ from those projected in any forward-looking statements for the reasons, among others, detailed below. We believe that many of the risks detailed here are part of doing business in the industry in which we compete and will likely be present in all periods reported. The fact that certain risks are characteristic to the industry does not lessen the significance of the risk. The forward-looking statements are made as of the date of this Form 10-Q and we assume no obligation to update the forward-looking statements or to update the reasons why actual results could differ from those projected in the forward-looking statements.

Unless we generate significant revenue growth, our expenses and negative cash flow will significantly harm our financial position.

We have not been profitable since fiscal 1990. As of September 30, 2004, we had an accumulated deficit of $31.3 million. We may incur operating losses for the foreseeable future, and these losses may be substantial. Further, we may continue to incur negative operating cash flow in the future. We have funded our operations primarily through the sale of equity securities and borrowings. We have significant fixed expenses and we expect to continue to incur significant and increasing manufacturing, sales and marketing, product development and administrative expenses. As a result, we will need to generate significantly higher revenues while containing costs and operating expenses if we are to achieve profitability.

Declining average selling prices for our fiber optic products will require us to reduce production costs to effectively compete and market these products.

Since the time we first introduced our fiber optic components to the marketplace we have seen the average selling price of fiber optic components decline. We expect this trend to continue. To achieve profitability in this environment we must continually decrease our costs of production. In order to reduce our production costs, we will continue to pursue one or more of the following:

- Seek lower cost suppliers of raw materials or components.
- Work to further automate our assembly process.
- Develop value-added components based on integrated optics.
- Seek offshore sources for assembly services.

We will also seek to form strategic alliances with companies that can supply these services. Decreases in average selling prices also require that we increase unit sales to maintain or increase our revenue. There can be no guarantee that we will achieve these objectives. Our inability to decrease production costs or increase our unit sales could seriously harm our business, financial condition and results of operations.

Demand for our products is subject to significant fluctuation. Adverse market conditions in the communications equipment industry and any slowdown in the United States economy may harm our financial condition.

Demand for our products is dependent on several factors, including capital expenditures in the communications industry. Capital expenditures can be cyclical in nature and result in protracted periods of reduced demand for component parts. Similarly, periods of slow economic expansion or recession can result in periods of reduced demand for our products. The current U.S. economic slowdown has been more profound in the telecommunications market, resulting in a significant reduction in capital expenditures for the Company's products. It is impossible to predict how long the slowdown will last. Such periods of reduced demand will harm our business, financial condition and results of operations. Changes to the regulatory requirements of the telecommunications industry could also affect market conditions, which could also reduce demand for our products. Moreover, some of our customers have experienced serious financial difficulties, which in certain cases have resulted in bankruptcy filings or cessation of operations.

Our industry is highly competitive and subject to pricing pressure.

Competition in the communications equipment market is intense. We have experienced and anticipate experiencing increasing pricing pressures from current and future competitors as well as general pricing pressure from our customers as part of their cost containment efforts. Many of our competitors have more extensive engineering, manufacturing, marketing, financial and personnel resources than we do. As a result, these competitors may be able to respond more quickly to new or emerging technologies and changes in customer requirements or to offer more aggressive price reductions.

Our sales could be negatively impacted if one or more of our key customers substantially reduce orders for our products.

If we lose a significant customer, our sales and gross margins would be negatively impacted. In addition, the loss of sales may require us to record impairment, restructuring charges or exit a particular business or product line.

We may be required to rapidly increase our manufacturing capacity to deliver our products to our customers in a timely manner.

Manufacturing of our products is a complex and precise process. We have limited experience in rapidly increasing our manufacturing capacity or in manufacturing products at high volumes. If demand for our products increases, we will be required to hire, train and manage additional manufacturing personnel and improve our production processes in order to increase our production capacity. There are numerous risks associated with rapidly increasing capacity, including:

- Difficulties in achieving adequate yields from new manufacturing lines,

- Difficulty maintaining the precise manufacturing processes required by our products while increasing capacity,

- The inability to timely procure and install the necessary equipment, and

- Lack of availability of qualified manufacturing personnel.

If we apply our capital resources to expanding our manufacturing capacity in anticipation of increased customer orders, we run the risk that the projected increase in orders will not be realized. If anticipated levels of customer orders are not received, we will not be able to generate positive gross margins and profitability.

Our dependence on outside manufacturers may result in product delivery delays.

We purchase components and labor that are incorporated into our products from outside vendors. In the case of the SunUV(R) Personal UV Monitor, we supply components to an outside assembler who delivers the completed product. If these vendors fail to supply us with components or completed assemblies on a timely basis, or if the quality of the supplied components or completed assemblies is not acceptable, we could experience significant

delays in shipping our products. Any significant interruption in the supply or support of any components or completed assemblies could seriously harm our sales and our relationships with our customers. In addition, we have increased our reliance on the use of contract manufacturers to make our products. If these contract manufacturers do not fulfill their obligations or if we do not properly manage these relationships, our existing customer relationships may suffer.

Our products may have defects that are not detected before delivery to our customers.

Some of the Company's products are designed to be deployed in large and complex networks and must be compatible with other components of the system, both current and future. Our customers may discover errors or defects in our products only after they have been fully deployed. In addition, our products may not operate as expected over long periods of time. In the case of the SunUV(R) Personal UV Monitor, a consumer product, customers could encounter a latent defect not detected in the quality inspection. If we are unable to fix errors or other problems, we could lose customers, lose revenues, suffer damage to our brand and reputation, and lose our ability to attract new customers or achieve market acceptance. Each of these factors would negatively impact cash flow and would seriously harm our business, financial condition and results of operations.

Consolidation among our customers could result in our losing a customer or experiencing a slowdown as integration takes place.

It is likely that there will be increased consolidation among our customers in order for them to increase market share and achieve greater economies of scale. Consolidation is likely to impact our business as our customers focus on integrating their operations and choosing their equipment vendors. After a consolidation occurs, there can be no assurance that we will continue to supply the surviving entity.

We must introduce new products and product enhancements to increase revenue.

The successful operation of our business depends on our ability to anticipate market needs and develop and introduce new products and product enhancements that respond to technological changes or evolving industry standards on a timely and cost-effective basis. Our products are complex, and new products may take longer to develop than originally anticipated. These products may contain defects or have unacceptable manufacturing yields when first introduced or as new versions are released. Our products could quickly become obsolete as new technologies are introduced or as other firms introduce lower cost alternatives. We must continue to develop leading-edge products and introduce them to the commercial market quickly in order to be successful. Our failure to produce technologically competitive products in a cost-effective manner and on a timely basis will seriously harm our business, financial condition and results of operations.

Our markets are characterized by rapid technological changes and evolving standards.

The markets we serve are characterized by rapid technological change, frequent new product introductions, changes in customer requirements and evolving industry standards. In developing our products, we have made, and will continue to make, assumptions with respect to which standards will be adopted within our industry. If the standards that are actually adopted are different from those that we have chosen to support, our products may not achieve significant market acceptance.

Customer payment defaults could have an adverse effect on our financial condition and results of operations.

As a result of adverse conditions in the telecommunications market, some of our customers have and may continue to experience financial difficulties. In the future, if customers experiencing financial problems default and fail to pay amounts owed to the Company, we may not be able to collect these amounts or recognize expected revenue. In the current environment in the telecommunications industry and in the United States and global economies, it is possible that customers from whom we expect to derive substantial revenue will default or that the level of defaults will increase. Any material payment defaults by our customers would have an adverse effect on our results of operations and financial condition.

Our products may infringe on the intellectual property rights of others.

Our products are sophisticated and rely on complicated manufacturing processes. We have received multiple patents on aspects of our design and manufacturing processes and we have applied for several more. Third parties may still assert claims that our products or processes infringe upon their intellectual property. Defending our interests against these claims, even if they lack merit, may be time consuming, result in expensive litigation and divert management attention from operational matters. If such a claim were successful, we could be prevented from manufacturing or selling our current products, be forced to redesign our products, or be forced to license the relevant intellectual property at a significant cost. Any of these actions could harm our business, financial condition or results of operations.

Acquisitions or investments could have an adverse affect on our business.

In March 2003, we completed the acquisition of the assets of CSP as part of our strategy to expand our product offerings, develop internal sources of components and materials, and acquire new technologies. We acquired the assets of Americable, Inc. in June 2003 and integrated them with the assets of CSP. We intend to continue reviewing acquisition and investment prospects. There are inherent risks associated with making acquisitions and investments including but not limited to:

- Challenges associated with integrating the operations, personnel, etc., of an acquired company;
- Potentially dilutive issuances of equity securities;
- Reduced cash balances and or increased debt and debt service costs;
- Large one-time write-offs of intangible assets;
- Risks associated with geographic or business markets different than those we are familiar with; and
- Diversion of management attention from current responsibilities.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Our exposure to market risk for changes in interest rates relates primarily to our investment portfolio. We invest in short-term securities of high credit issuers with maturities ranging from overnight up to 24 months. The average maturity of the portfolio does not exceed 12 months. The portfolio includes only marketable securities with active secondary or resale markets to ensure liquidity. We have no investments denominated in foreign country currencies and, therefore, our investments are not subject to foreign exchange risk.

ITEM 4. CONTROLS AND PROCEDURES.

a. Evaluation of disclosure controls and procedures. The Company's chief executive officer and chief financial officer have concluded that as of the end of the fiscal period covered by this report the Company's disclosure controls and procedures (as defined in Exchange Act Rule 13a-14(c)) were sufficiently effective to ensure that the information required to be disclosed by the Company in the report was gathered, analyzed and disclosed with adequate timeliness, accuracy and completeness.

b. Changes in internal controls. There were no changes in the Company's internal controls over financial reporting during the fiscal period covered by this report that materially affected, or are likely to materially affect, the Company's control over financial reporting.

PART II

ITEMS 1 THROUGH 3. NOT APPLICABLE

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

(a) The annual meeting of shareholders of the Company was held on August 19, 2004. As of the record date, July 6, 2004, there were 11,872,331 shares of Common Stock issued and outstanding. There were present and voting at the meeting, in person or by proxy, 10,506,044 shares of Common Stock (approximately 88% of the total issued and outstanding).

(b) (1) The election of 5 directors to serve for one-year terms was approved. The individual results are as follows. There were no broker non-votes.

Name	Affirmative Votes	Voting Authority Withheld	Abstain
Anil K. Jain	10,422,290	83,754	-
Kenneth A. Olsen	10,402,290	103,754	-
John G. Reddan	10,437,190	68,854	-
Ronald G. Roth	10,453,890	52,154	-
Stephen L. Zuckerman, MD	10,452,290	53,754	-

(c) The change of company name to APA Enterprises, Inc. from APA Optics, Inc. was approved. The individual results are as follows. There were no broker non-votes.

For Name Change	Against Name Change	Abstain
10,380,245	92,344	30,544

ITEM 5. NOT APPLICABLE

ITEM 6. EXHIBITS AND REPORTS ON FORM 8-K.

(a) Exhibits.

Exhibit 3.1 - Restated Articles of Incorporation, as amended

Exhibit 10.1 (c) - Lease Agreement with Jain-Olsen Properties

Exhibit 10.9 (b) - Amendment of Sublease Agreement with Veeco Compound Semiconductor

Exhibit 31.1 - Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

Exhibit 32.1 - Certification required of Chief Executive Officer and Chief Financial Officer by Section 906 of the Sarbanes Oxley Act of 2002

(b) Reports on Form 8-K.

None.

Signatures

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

APA ENTERPRISES, INC.

11/5/04	/s/ Anil K. Jain
Date	Anil K. Jain President, Chief Executive Officer and Chief Financial Officer (Principal Executive and Principal Financial Officer)
11/5/04	/s/ Daniel Herzog
Date	Comptroller (Principal Accounting Officer)

STATE OF MINNESOTA
OFFICE OF THE SECRETARY OF STATE

ARTICLES OF AMENDMENT OF APA OPTICS, INC.

Pursuant to the provisions of Minn. Stat. Sec. 302A.135, the following amendment to the Articles of Incorporation of APA OPTICS, INC., a Minnesota corporation, was approved and adopted pursuant to Minn. Stat. Chapter 302A.

Paragraph 1.01 of Article 1 of the Articles of Incorporation of APA OPTICS, INC., is hereby amended in its entirety to read as follows:

1.01 The name of this Corporation is APA ENTERPRISES, INC.

I swear the foregoing is true and accurate and that I have the authority to sign these Articles of Amendment on behalf of the Corporation.

Dated: August 20, 2004

APA OPTICS, INC.

/s/ Anil K. Jain

Anil K. Jain
Its: President

AMENDED AND RESTATED LEASE AGREEMENT

<TABLE>
<CAPTION>

<S>	<C>
LANDLORD:	Jain-Olsen Properties, a Minnesota general partnership. Landlord is a limited liability general partnership under Minn. Stat. 323A.10-03.
TENANT:	APA Optics, Inc., a Minnesota corporation
LEASE DATE:	June 23, 2004
LEASE TERM:	December 1, 2004 ("Commencement Date") to and including November 30, 2009. Tenant may extend the Lease Term for two (2) five- (5) year extension terms ("Extension Terms") as provided in Section 5 below of this Lease.
USE:	Industrial, Warehouse, and Office
BASE RENT:	Determined as provided in Section 4 below
ADDITIONAL RENT:	All sums payable by Tenant pursuant to this Lease, except Base Rent
RENT:	Base Rent plus Additional Rent
RENT PAYMENT ADDRESS:	2950 NE 84th Lane, Blaine, Minnesota, or such other place as Landlord from time to time designates in writing
SECURITY DEPOSIT:	None
PREMISES:	The property located in Ramsey County, Minnesota, legally described as follows and commonly known as: Lot 4, Block 3, North Star Industrial Park (the "Land"), the building located on the Land (the "Building") and the surface parking lot on the Land surrounding the Building.
PRIOR LEASE:	This Amended and Restated Lease replaces the Sublease dated December 1, 1984, the Sublease Amendment and Option Agreement dated March 11, 1985, and the Amendment and Extension of Sublease dated August 31, 1999 (collectively, the "Prior Lease"). The Prior Lease is terminated effective as of the Commencement Date and Landlord and Tenant hereby release each other from any and all claims under the Prior Lease.
OPTION TO PURCHASE:	Tenant has the right to purchase the Premises during the Lease Term as described in Schedule A, attached.

</TABLE>

IN CONSIDERATION OF the lease for the Premises, the Rent agreed to be paid, and all other covenants and agreements herein contained,

LANDLORD AND TENANT agree as follows:

1. PREMISES. Landlord hereby leases to Tenant the Premises identified above and Tenant hereby takes such Premises from Landlord subject to the terms and conditions of this Lease (including as set forth above) and for the Lease Term set forth above.

2. USE. The Premises shall be used by Tenant only for the Use identified above, in compliance with all applicable federal, state and local laws, ordinances, codes, rules, regulations and orders. Tenant shall, at its expense, make any alterations and improvements required at any time in order for the Premises and the use thereof to comply with such laws, ordinances, codes, rules, regulations and orders. No part of the Premises shall be used for any purpose which constitutes a nuisance or which is dangerous, illegal or offensive. Tenant shall indemnify and hold harmless Landlord, and Landlord's partners, agents, and employees, against all claims, costs, and liabilities arising out of the storage, use, generation or disposal of any such materials on the Premises by or at the sufferance of Tenant, including all costs of removal, cleanup and restoration.

3. OCCUPANCY OF PREMISES. Tenant hereby accepts the Premises in their "as-is" condition at the Commencement Date. Tenant acknowledges that Landlord has made no other representations as to the repair of the Premises, nor promises to alter, remodel or improve the Premises.

4. BASE RENT. Tenant agrees to pay to Landlord the Base Rent in equal monthly installments in advance on or before the first day of each month during the Lease Term, without demand, deduction or set-off. Payment shall be made at the Rent Payment Address set forth above. If the Lease Term begins on other than the first day of the month or ends on other than the last day of the month, the Base Rent for that month shall be pro-rated. Base Rent shall be determined as follows:

a. Base Rent during the period from the Commencement Date through December 31, 2004 shall be $117,487.80, annually, payable in equal monthly installments of $9,790.65.

b. On January 1 of each year through the Lease Term, including any Extension Term, the Base Rent shall be increased by 100% of the increase, if any, in the Consumer Price Index during the preceding calendar year.

5. EXTENSION. Tenant may extend the Lease Term by five (5) years ("First Extension Term") by giving written notice to Landlord no later than one hundred twenty (120) days before the last day of the initial Lease Term, Tenant may extend the Lease Term for an additional five (5) years ("Second Extension Term") by giving written notice to Landlord no later than 120 days before the last day of the First Extension Term. The term "Lease Term" as used in this Lease shall include any such Extension Term provided that Tenant has exercised the extension rights granted herein. The terms and conditions of this Lease during any Extension Term shall be the terms and conditions provided herein except that Base Rent shall be adjusted as provided in Section 4 of this Lease. Tenant shall not be entitled to extend the Lease Term at any time when Tenant is in default under this Lease.

6. CERTAIN ADDITIONAL RENT. Tenant agrees to pay to Landlord as Additional Rent, upon demand, all attorneys' fees and other fees and out-of-pocket costs and expenses, if any, incurred by Landlord in connection with any delinquencies or defaults by Tenant

hereunder or enforcing the provisions hereof, and the amount of any gross receipts tax, sales tax or similar tax (but excluding therefrom any income tax) paid or which will be payable by Landlord by reason of the receipt hereunder of Base Rent or any other amounts, the renting of the Premises to Tenant or Tenant's occupancy of the Premises.

7. MAINTENANCE OF PREMISES. Tenant, at its expense, shall keep the Premises, including the building, all fixtures and facilities related thereto, and leasehold improvements, and all trade fixtures, personal property, equipment and signs thereon, including those owned by Tenant, in good order and condition, ordinary wear and tear excepted, and make all repairs and replacements, whether structural or otherwise, which may become necessary to keep the Premises in the condition required by this Lease, or which may be ordered by any governmental authority during the Lease Term. Tenant shall pay for all utilities used within the Premises during the Lease Term, including all taxes, penalties, surcharges, and maintenance costs pertaining thereto.

8. RELEASE AND INDEMNITY.

a. Neither Landlord nor Tenant, nor their respective partners, officers, directors, agents and employees, shall be liable to the other, or those claiming through or under the other, for injury, death, property damage, burglary, theft or disappearance occurring in, on or about the Premises and appurtenances thereto, unless due to gross negligence or willful misconduct.

b. Landlord and Tenant each hereby expressly release each other and their respective partners, officers, directors, agents, and employees, from any claim or cause of action for any loss or damage whatsoever arising from or in the Premises or the business conducted therefrom, except as noted in 8a above. It is the intention of the parties that they shall look only to their insurance carrier, if any, for payment of such loss.

c. Notwithstanding the foregoing, Tenant hereby agrees to indemnify Landlord and its partners, agents and employees, and to hold them harmless against any claim, damage, cost, and expense (including attorney's fees) and liability (collectively, "loss") arising out of any claim by any third party for personal injury or property damage arising from the Premises or the business conducted at the Premises, to the extent that such loss is not covered by insurance, but only if the claim does not involve gross negligence or willful misconduct of Landlord.

9. INSURANCE.

a. Tenant, at its sole cost and expense, shall maintain in effect at all times during the Lease Term the following insurance:

(i) A Commercial General Liability Insurance policy providing coverage on an "occurrence" rather than on a "claims made" basis, which policy shall include coverage for bodily injury, property damage, personal injury, and contractual liability (applicable to this Lease). Such policy shall provide coverage of at least

$6,000,000 for each occurrence and annual aggregate coverage of at least $6,000,000.

(ii) Insurance on the Building against loss by fire and other hazards covered by the Special Form policy or equivalent, and including contingent liability from operation of building laws coverage, in an amount not less than the full insurable replacement value. Such policy shall have an "agreed amount" endorsement or otherwise exclude co-insurance participation by the insured, and may include a deductible in an amount not greater than $10,000. While any building or other improvement is in the course of being constructed or rebuilt on the Land, such insurance shall be in builder's risk, completed value form.

(iii) Equipment Breakdown insurance on Landlord's equipment in the Building for risks not covered by the Special Form insurance described in clause 9a(ii) above in an amount not less than the full insurable replacement value of such equipment.

(iv) If the Land or any part thereof is located in a designated flood-hazardous area, flood insurance insuring the Building in an amount equal to the maximum limit of coverage made available with respect to the Premises under the Federal Flood Disaster Protection Act of 1973, as amended, and the regulations issued thereunder.

(v) Rent loss and rental value insurance insuring Landlord against loss of rental under this Lease in amount equal to at least the total Base Rent and Additional Rent payable hereunder for a period of 12 months.

(vi) Worker's compensation and disability insurance with limits at least as great as required by law.

b. All property insurance policies shall name Landlord as the insured party. All liability insurance policies shall name both Landlord and Tenant as insured parties. If Landlord so elects, such policies shall also include the holders of any mortgages now or hereafter encumbering the Premises. In the event that the holder of such a mortgage is named as an insured under any of the foregoing property insurance policies, the proceeds under such policies shall be made payable to such mortgagee or mortgagees pursuant to standard mortgagee clauses. Each of the foregoing policies shall contain the agreement of the insurer that:

(i) Such policies shall not be cancelled except upon 30 days' prior notice to each named insured;

(ii) The coverage afforded thereby shall not be affected by the performance of any work or alterations in or about the Premises;

(iii) The insurer waives all rights of subrogation against all named insureds;

(iv) The insurance provided to Landlord thereunder shall not be affected by any defense the insurer may have against Tenant or any other person; and

(v) Such policies waive contribution from any other insurance carried by Tenant or any other person.

c. All policies required by this Section shall be carried in such companies and upon such forms as Landlord and Landlord's mortgagee from time to time approve. Evidence of the insurance required to be furnished hereunder shall be deposited with the Landlord prior to the commencement of the Lease Term, and renewals thereof, and evidence of the payment of premium to continue coverage in force shall all be deposited with Landlord not less than 30 days prior to the date on which such insurance would otherwise expire. Tenant shall provide copies of all policies and certificates of insurance to Landlord upon request. At Landlord's option, exercised in writing, in the event Tenant shall fail to provide such policies, Landlord may obtain such insurance and the entire cost thereof shall be due and payable as Additional Rent upon billing by Landlord.

d. Whenever appropriate, the property insurance required to be maintained during the Lease Term shall be endorsed or supplemented, at Tenant's sole cost and expense, during any period when alterations are in progress, to provide for builder's risk insurance written on a so-called completed value form. Workman's compensation insurance covering all persons employed in connection with the work and with

respect to whom death or bodily injury claims could be asserted against Landlord, Tenant or the Premises, and comprehensive general public liability insurance, providing full coverage with respect to any accident, injury or occurrence involving, relating to, or arising during or as a result of such alteration, naming Landlord and Tenant as insureds, with limits of not less than those required for commercial general liability insurance hereunder, shall be maintained by Tenant (or Tenant's independent contractor) at Tenant's (or at such contractor's) sole cost and expense at all times when any work is in progress in connection with any such alteration.

e. Tenant shall likewise at Tenant's sole expense observe and comply with the requirements of all policies of public liability and property insurance, and all other policies of insurance at any time in force with respect to the Premises, and Tenant shall, in the event of any violation or any attempted violation of the provisions of this Article by any subtenant or occupant, take all required steps, immediately upon knowledge of such violation or attempted violation, to remedy or prevent the same, as the case may be.

f. Tenant, at its sole expense, shall obtain and maintain in effect insurance covering its personal property, including equipment, fixtures, furnishings and leasehold improvements (except for leasehold improvements which are deemed Landlord's property under this Lease and are insured as a part of the Building).

g. Tenant shall be responsible for payment of all retentions, deductibles, self-insured amounts, and other similar payments which are conditions precedent to payment by the insurer.

10. PROTECTION OF COVERAGE. Tenant shall not do or permit to be done, or keep or permit to be kept on the Premises, anything that will contravene any insurance against loss by fire or other causes. Under no circumstances shall Tenant keep or permit to be kept; or do or permit to be done, in or about the Premises anything of a character so

hazardous as to render it difficult, impracticable or impossible to secure such insurance in companies acceptable to the Landlord. Further, immediately upon notice, Tenant shall remove from the Premises and/or desist from any practice deemed to affect the insurance risk by the insurance companies or by any authority which administers applicable national or local fire codes or standards.

11. WAIVER OF SUBROGATION. Landlord and Tenant each hereby waives any and all rights of recovery against the other, its officers, partners, directors, officers, agents and employees, occurring on or arising out of the use and occupation of the Premises or the Building to the extent such loss or damage is covered by proceeds received from insurance required under this Lease to be carried by the other party. Landlord and Tenant shall each indemnify the other against any loss or expense, including reasonable attorneys' fees, resulting from the failure to obtain such waiver. This mutual waiver shall be in addition to, and not in limitation or derogation of, any other waiver or release contained in this Lease with respect to any loss of, or damage to, property of the parties hereto. Inasmuch as the above mutual waivers will preclude the assignment of any aforesaid claim by way of subrogation to an insurance company, Landlord and Tenant agree immediately to give to each insurance company providing a policy described in Section 9 of this Lease, written notice of the terms of said mutual waivers, and to have said insurance policies properly endorsed, if necessary, to prevent the invalidation of said insurance coverages by reason of said waivers. This Section shall not apply to workers' compensation insurance.

12. FIRE AND CASUALTY. If all or any part of the Premises is damaged by fire, the elements or any other casualty, Tenant shall give immediate written notice thereof to Landlord.

a. Except as provided in this Section 12, if fire or other casualty renders the whole or any material part of the Premises untenantable and Landlord determines (in Landlord's reasonable discretion) that it can make the Premises tenantable within 180 days after the date of the casualty, then Landlord will notify Tenant that Landlord will repair and restore the Premises to as near their condition prior to the casualty as is reasonably possible within the 180-day period (subject to delays caused by Tenant or matters not within the reasonable control of Landlord). Landlord will provide the notice within 45 days after the date of the casualty. In such case, this Lease shall remain in full force and effect, but Base Rent for the period during which the Premises are untenantable shall abate proportionately.

b. If fire or other casualty renders the whole or any material part of the Premises untenantable and Landlord determines (in Landlord's reasonable discretion) that it cannot make the Premises tenantable

within 180 days after the date of the casualty, then Landlord will so notify Tenant within 45 days after the date of the casualty and may, in such notice, terminate this Lease effective on the date of Landlord's notice.

c. If Landlord does not terminate this Lease as provided in this subsection, or if Landlord fails to notify Tenant of its election to rebuild or repair under Section 12a within 45 days after the casualty, Tenant may terminate this Lease by notifying Landlord within 60 days after the date of the casualty.

d. Notwithstanding any contrary language in this Section 12, if this Section 12 obligates Landlord to repair damage to the Premises caused by fire or other casualty and Landlord does not receive sufficient insurance proceeds to repair all of the damage, or if Landlord's lender does not allow Landlord to use sufficient proceeds to repair all of the damage, then Landlord, at Landlord's option, by notifying Tenant within 90 days after the casualty, may terminate this Lease effective on the day of Landlord's notice.

e. If this Lease is not terminated under Sections 12.b. through 12.d. following a fire or other casualty, then Landlord will repair and restore the Premises to as near their condition prior to the fire or other casualty as is reasonably possible with all commercially reasonable diligence and speed (subject to delays caused by Tenant or matters not within the reasonable control of Landlord).

f. In the event such destruction or damage shall make the Premises uninhabitable, all Base Rent paid in advance shall be apportioned and rebated as of the date of the destruction or damage and the Base Rent thereafter accruing shall be equitably and proportionately suspended and adjusted according to the nature, extent and duration of the destruction or damage, pending completion of repairs, except that in the event the destruction or damage is so extensive as to make it unfeasible for Tenant to conduct its business on the Premises, Base Rent shall be completely abated until Tenant resumes the conduct of its business on the Premises or 30 days after the repairs are complete, whichever event first occurs. Such adjustment, suspension or abatement of Base Rent shall not extend beyond the period of coverage nor reduce the amount otherwise payable hereunder by more than the amount of the rent-loss and rental value insurance then in effect pursuant to Section 9 hereof, it being the intention that Landlord shall continue to receive full rental payments from Tenant or such insurer throughout the period of any such work. In no event shall Additional Rent be abated.

g. Landlord shall not be responsible for repairing or restoring Tenant's leasehold improvements, personal property, machinery or equipment.

13. CONDEMNATION. If all or a substantial part of the Premises are taken for any public purpose or purchased under threat of such taking and the taking or purchase prevents or materially interferes with the Use of the Premises, this Lease shall terminate and the rent abate as of the date of taking for the remainder of the Lease Term. If part of the Building is so taken or purchased and this Lease is not terminated thereby, the rent payable from the date of taking for the remainder of the Lease Term shall be reduced proportionately. The entire award for the taking of the fee and leasehold shall belong to Landlord, but Landlord shall not be entitled to any award made to Tenant for Tenant's trade fixtures or for relocation and moving expenses.

14. TAXES. Tenant shall pay before delinquency all taxes, assessments, license fees, and other charges levied, assessed or charged by any authority upon or on account of the Premises for any period all of which is within the Lease Term, and its pro-rata share of such taxes, assessments, license fees and charges for any period part of which is within the Lease Term. In any calendar year, the real estate taxes and special assessments for that year are deemed to be those due and payable in such year. Receipts for any taxes, assessments, license fees and charges paid shall be delivered to Landlord not

less than 30 days prior to their due date. However, Tenant shall have no responsibility to pay any tax upon the income, profit, or business of Landlord, or any franchise, inheritance or estate tax which may be levied against the estate or interest of Landlord, except to the extent the tax is levied in lieu of taxes, assessments, fees or charges upon or on account of the Premises.

15. ASSIGNMENT.

a. Tenant shall not assign, sublease, mortgage, pledge or in any manner

transfer the Premises or any part thereof or this Lease without the prior written consent of Landlord. If Tenant is a partnership, corporation or other legal entity, any change in the partnership interest, stock or legal or beneficial ownership of such partnership, corporation or other entity which changes the effective control of Tenant shall be deemed an assignment of this Lease for purposes of this Section.

b. Landlord is not restricted in its ability to sell or encumber the Land, the Building, or the Premises as a whole or to assign its interest in this Lease; provided, however, that any transferee shall take subject to, and must agree to be bound by, the terms of this Lease.

16. ALTERATIONS BY TENANT. Tenant shall not make any alterations or improvements to the Premises costing more than $20,000 without the prior written approval of the Landlord, which consent shall not be unreasonably withheld or delayed. Landlord's approval may be conditioned on the Tenant's compliance with such requirements with respect to such alterations as Landlord may impose, including without limitation the furnishing of a bond or other security satisfactory to Landlord against mechanics' liens and claims therefore. Any such work approved by Landlord shall be done in a good, skillful manner in conformance with applicable building codes, free and clear of mechanics' liens and claims therefore. Any alterations and improvements shall unless otherwise agreed become the property of Landlord upon being affixed to the Premises and all right, title and interest of the Tenant therein shall immediately cease; but if directed by Landlord, Tenant, at its expense, shall remove any such alterations and improvements from the Premises at the expiration or earlier termination of this Lease, and repair any damage to the Premises caused by the installation or removal of such alterations and improvements.

17. MECHANICS' LIENS. Tenant will not permit any mechanics', laborers' material supplier's or other liens to stand against the Premises or any part thereof for any labor, skill, material or equipment furnished or claimed to be furnished to or an account of Tenant in connection with any work in or about the Premises. Tenant shall give Landlord immediate notice of the filing of any such lien and shall cause the lien to be discharged within 10 days of its filing.

18. SURRENDER. Upon expiration or earlier termination of this Lease, Tenant shall peaceably surrender the Premises broom-clean, in good condition and repair, reasonable wear and tear excepted. Tenant shall, at its expense, remove all leasehold improvements, trade fixtures, personal property, equipment and signs owned by Tenant from the Premises. Any property not removed on or before the expiration or termination of this Lease shall be deemed to have been abandoned. Any damage to the Premises

caused in the removal of such items shall be repaired by and/or at the expense of Tenant.

19. DEFAULT OF TENANT AND REMEDIES.

a. EVENTS OF DEFAULT AND REMEDIES. If Tenant fails to pay any Rent, Additional Rent, or other monies when due hereunder or within 10 days after notice from Landlord to perform any other of the terms, covenants, conditions or obligations of this Lease to be performed by Tenant, or if Tenant abandons or vacates the Premises, or if any proceeding is commenced by Tenant for the purpose of subjecting the assets of Tenant to any law relating to bankruptcy or insolvency or for an appointment of a receiver of Tenant or any of Tenant's assets, or if any such proceeding commenced against Tenant is not discharged within 60 days thereafter, or if Tenant makes a general assignment of Tenant's assets for the benefit of creditors, then in any such event, Tenant shall be in default hereunder and Landlord may at its option, in addition to any other rights and remedies it may have hereunder or at law or in equity or by statute or otherwise, terminate this Lease as to all future rights of Tenant, and/or regain, repossess and enjoy the Premises. If Landlord at any times terminates this Lease or regains and repossesses the Premises for any such default, in addition to any other remedies Landlord may have, Landlord may recover from Tenant, and Tenant shall indemnify Landlord against, all loss of rents and other damages Landlord may incur by reason of such default, including the cost of recovering and reletting the Premises, and reasonable attorneys' fees.

b. RIGHT OF LANDLORD TO CURE DEFAULT OF TENANT. Landlord may, at its option, instead of exercising any other rights or remedies available to it under this Lease or otherwise, enter into the Premises and perform such acts or spend such sums of money as is reasonably necessary to cure any default of Tenant herein, and the amount spent and cost incurred, including reasonable attorneys' fees, in curing such default shall be paid by Tenant as additional rent upon demand.

c. LEGAL AND OTHER EXPENSES. If suit is successfully brought for recovery of possession of the Premises, for the recovery of rent or any other amount due under the provisions of this Lease, or because of the breach of any other covenant herein contained on the part of Tenant to be kept or performed, Tenant shall pay Landlord all expenses incurred therefore, including reasonable attorneys' fees.

d. CUMULATIVE REMEDIES. No remedy herein or elsewhere in this Lease or otherwise by law, statute or equity conferred upon or reserved to Landlord shall be exclusive of any other remedy, but shall be cumulative, and may be exercised from time to time and as often as the occasion may arise.

e. OVERDUE PAYMENTS. All rents and other amounts due under this Lease from Tenant to Landlord shall be due on demand, unless otherwise specified, and if not paid within 10 days after the date when due, shall bear interest from the date when due at the rate of 4% per annum in excess of the then-current prime rate of interest as published in The Wall Street Journal (or, if such periodical no longer exists or no longer publishes the prime rate, a comparable rate designated by Landlord), or the highest rate permitted by law, whichever is less, until paid in full.

20. SUBORDINATION. Tenant agrees that this Lease shall be subordinate to any mortgage which may now or hereafter encumber the Premises and to any and all advances to be made thereunder and to the interest thereon and all renewals, replacements, and extensions thereof, and shall also be subordinate to all existing recorded restrictions, covenants, easements and agreements with respect to the Premises. Landlord is hereby irrevocably vested with full power and authority to subordinate Tenant's interest under this Lease to any mortgage lien hereafter placed on the Premises, and Tenant agrees upon demand to execute additional instruments subordinating this Lease as Landlord may reasonably require. If the interests of Landlord under this Lease shall be transferred by reason of foreclosure or other proceedings for enforcement or termination of any first mortgage on the Premises, Tenant shall be bound to the transferee (sometimes called the "Purchaser") under the terms, covenants and conditions of this Lease for the balance of the remaining Lease Term, including any extensions or renewals, with the same force and effect as if the Purchaser were the landlord under this Lease, and, if requested by the Purchaser, Tenant agrees to attorn to the Purchaser, including the mortgagee under any such mortgage if it be the Purchaser, as its Landlord.

21. ACKNOWLEDGMENT. Tenant shall, within 10 days after receipt of any request from Landlord therefor, execute and deliver to Landlord, or to any holder or proposed holder of a security interest in the Premises or to any proposed purchaser of the Premises, a certificate in recordable form, certifying that this Lease is in full force and effect and that there are no offsets against rent nor defenses to performance of Tenant under this Lease, or setting forth any such offsets or defenses claimed by Tenant, as the case may be, and as to such other matters as is reasonably requested. Tenant shall make no charge for executing and delivering such certificate.

22. HOLDING OVER. If Tenant remains in possession of the Premises after the expiration or termination of this Lease, Tenant shall be deemed to be occupying the Premises as a tenant at its sufferance, subject to all the conditions, provisions and obligations of this Lease insofar as the same can be applicable; provided, however, that the Base Rent required to be paid by Tenant during any holdover period shall be twice the amount of the Base Rent set forth above. No unauthorized holding over shall operate to renew or extend this Lease and Tenant shall indemnify Landlord against all claims for damages of any kind resulting from the holdover.

23. NOTICES. Any notice required or permitted under this Lease shall be deemed sufficiently given or served if sent by registered or certified mail, return receipt requested, postage prepaid, to Tenant at the Premises and to Landlord at the Rent Payment Address, and either party may be written notice at any time designate a different address to which notices shall subsequently be sent. Such notices shall be deemed received by the party to whom they are sent on the third day following the date of delivery to the United States Postal Service.

24. ENTRY BY LANDLORD. Landlord and any authorized representatives of Landlord may enter the Premises at any time during usual business hours upon reasonable notice or any time in case of emergency to inspect the same, to make any repairs or perform any work deemed necessary or desirable by Landlord. During the progress of any such work, Landlord may keep and store upon the Premises all necessary materials, tools and equipment. Landlord and any authorized representative of Landlord may also enter the Premises at any time during usual business hours to show the Premises to prospective purchasers or mortgagees, and may erect on the Premises suitable signs

indicating the Premises are available for sale. Landlord shall not interfere with Tenant's operations in the Premises any more than reasonably necessary under the circumstances, but shall not in any event be liable for inconvenience, annoyance, disturbance, loss of business or other damage to the Tenant.

25. SUCCESSORS AND ASSIGNS. The terms, covenants and conditions hereof are binding upon and inure to the benefit of Landlord and its successors and assigns, and are binding upon and inure to the benefit of Tenant and any of its successors and assigns as may be approved by Landlord or otherwise permitted under this Lease.

26. ENVIRONMENTAL MATTERS. Tenant agrees that Tenant, its agents and contractors shall not use, manufacture, store or dispose of any flammable explosives, radioactive materials, hazardous wastes or materials, toxic wastes or materials, polychlorinated biphenyls, asbestos, urea formaldehyde, petroleum products or related substances, or other similar substances as defined pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA"), 42 U.S.C. Statute Section 9601-9657, as amended), the Resource Conservation and Recovery Act of 1976 ("RCRA"), 42 U.S.C. Statute Section 6901, et. seq., Federal Water Pollution Control Act, 33 U.S.C. Statute Section 1251 et. seq., or the Clean Air Act, 42 U.S.C. Statute 7401 Et. Seq., Minnesota Environmental Response and Liability Act Minn. Stat. 115B ("MERLA") and the Minnesota Petroleum Tank Release Cleanup Act, Minn. Stat. 115C (collectively "Hazardous Materials") on, under or about the Premises, provided that Tenant may handle, store, use or dispose of products containing small quantities of Hazardous Materials, which products are of a type customarily found in businesses similar to that of Tenant, provided further that Tenant shall handle, store, use and dispose of any such Hazardous Materials in a safe and lawful manner and shall not allow such Hazardous Materials to contaminate the Premises or the environment.

If Landlord, in its sole discretion, believes that the Premises or the environment have become contaminated with Hazardous Materials, in breach of the provisions of this Lease, Landlord, in addition to its other rights under this Lease, may enter upon the Premises and obtain samples from the Premises, including the soil and groundwater under the building, for the purposes of analyzing the same to determine whether and to what extent the Premises or the environment have become so contaminated, Tenant shall reimburse Landlord for the costs of such inspection, sampling and analysis.

Without limiting the above, Tenant hereby indemnifies and holds Landlord harmless from and against any and all claims, losses, liabilities, damages, costs and expenses, including without limitation, attorneys' fees and costs, arising out of or in any way connected with the use, manufacture, storage, or disposal of Hazardous Materials by Tenant, its agents or contractors on, under or about the Premises including, without limitation, the cost of any required or necessary repair, cleanup or remediation and the preparation of any closure or other required plans in connection herewith. The indemnity obligations to Tenant under this clause shall survive any termination or expiration of this Lease.

27. DOCUMENT PREPARATION. Members of the firm of Moss & Barnett, A Professional Association ("Moss & Barnett"), drafted this Lease among the parties hereto and other agreements related to the ownership of Landlord and Tenant. Moss & Barnett has previously and currently represents Landlord and Tenant, the partners of Landlord ("Owners"), and may represent Landlord, Tenant and one or more of the Owners in the

future. The parties acknowledge and understand that this past and present legal representation by Moss & Barnett of such persons represents a potential or actual conflict of interest on the part of Moss & Barnett in drafting this Lease and any other documents or agreements arising out of this Lease. Owners, Landlord and Tenant consent to such representation and acknowledge and agree that they have either sought out separate legal counsel to advise them in connection with the Lease, or if they have not done so, have been given the opportunity to do so and have voluntarily chosen not to do so. The parties, by executing this Lease and with full knowledge of the past, present and future legal representation by Moss & Barnett of the persons and entities described herein, hereby consent to the drafting of the Lease by Moss & Barnett and waive (a) the right to object to Moss & Barnett's continued representation of the Owners, Landlord and/or Tenant, and (b) the right to assert this conflict or potential conflict of interest as the basis for making a claim against the other parties to this Lease, their affiliates or Moss & Barnett.

28. GENERAL.

    a. No waiver of any default hereunder shall be implied from any failure by the non-defaulting party to take action on account of such default

if such default persists or is repeated, and no express waiver shall affect any default other than the default specified in the express waiver and that only for the time and to the extent therein stated. One or more waivers by Landlord or Tenant shall not be construed as a waiver of a subsequent breach of the same covenant, term or condition.

b. This Lease and the Exhibits identified above, attached to and forming a part of this Lease, set forth all the covenants, promises, agreements, conditions and understandings between Landlord and Tenant affecting the Premises and there are no covenants, promises, agreements, conditions or understandings, either oral or written, between them other than are herein set forth.

c. The singular of all terms used herein shall include the plural, the plural s hall include the singular, and the use of any gender herein shall include all other genders, where the context so requires.

d. Tenant agrees to indemnify and hold harmless Landlord from all claims by any broker or agent of Tenant for compensation, commissions or charges arising out of this Lease or the negotiation of it. Landlord agrees to indemnify and hold harmless Tenant from all claims by any broker or agent of Landlord for compensation, commissions or charges arising out of this Lease or the negotiation of it.

e. Landlord and Tenant disclaim any intention to create a joint venture, partnership, or agency relationship.

f. This Lease is a Minnesota contract and all of its terms shall be construed according to the laws of Minnesota. Time is of the essence of each obligation of this Lease in which time is a factor.

g. Landlord and its partners, officers, agents and employees shall have no personal liability as to any of the obligations of Landlord under this Lease. Tenant agrees

to look solely to the estate and property of Landlord in the Premises for the collection of any judgment or other judicial proceeding requiring the payment of money by Landlord, and no other property or asset shall be subject to levy, execution or other procedure for satisfaction of Tenant's remedies.

IN WITNESS WHEREOF, Landlord and Tenant have duly executed this Lease as of the Lease Date set forth above.

LANDLORD:

JAIN-OLSEN PROPERTIES,
a Minnesota limited liability general partnership

By___/s/ Anil Jain___________

Its Managing General Partner

TENANT:

APA OPTICS, INC.,
a Minnesota corporation

By ___/s/ Anil Jain__________
Anil K. Jain
Its President

SCHEDULE A

Option to Purchase Premises

Right to Purchase

Tenant or its assigns may purchase the Premises by delivering to Landlord its written notice of its exercise within the Lease Term, provided that at the time of closing of the purchase Tenant must cure all monetary defaults (if any) under the Lease. If Tenant exercises its option to purchase the Premises within the last ninety (90) days of the Lease Term, and a closing on the purchase is not

held before the Lease Term has expired, then Tenant will be allowed to stay in possession of the Premises pursuant to the terms and conditions of the Lease until closing on the purchase of the Premises.

Purchase Price

If Tenant exercises its option to purchase the Premises, Landlord and Tenant shall attempt to agree upon a purchase price for the Premises. If they are unable to agree within 30 days after the date of written notice of exercise of the option, each party hereto shall appoint one appraiser not more than 20 days after the expiration of said 30 day period. The two appraisers shall, within 10 days after such 20 day period, appoint a third appraiser. Within 20 days after the appointment of the third appraiser, the three appraisers shall execute in duplicate a report stating the fair market value of the Premises. The report of the three appraisers shall be conclusive upon the parties, and in the event the three appraisers cannot agree, the report of the majority shall be conclusive upon the parties. In the event the third appraiser is not appointed within the time allowed, either party may apply to the Senior Judge of the Ramsey County District Court, and such judge shall appoint the third appraiser within 10 days after application is made. In the event the appraisers are unable to formulate a majority opinion within the time herein specified, either party may make application to the Senior Judge of the Ramsey County District Court and such judge shall prepare a report after taking such evidence as he deems necessary and proper, and in such event, the report of such judge shall be conclusive upon the parties. Each appraiser appointed shall be a M.A.I. appraiser and shall, before entering upon the performance of his duties, take an oath to honestly, fairly and impartially perform his duties as an appraiser and shall subscribe this oath before an officer then authorized by the laws of the State of Minnesota to administer oaths. The costs and fees of the single appraiser appointed by each party shall be paid by such party, but the fee of the third appraiser shall be paid equally by Landlord and Tenant. If either party makes application to the Senior Judge of Ramsey County District Court either to appoint a third appraiser or to make an appraiser's report, Landlord and Tenant shall share the expense of such application.

The parties may agree to use only one or two appraisers, rather than three, and to allocate the costs among themselves as they deem appropriate.

In setting the purchase price, the parties shall disregard any decreases in value due to Tenant's defaults under the Lease (including, without limitation, conditions of disrepair) and any increases in value attributable to improvements by Tenant which are not required by the Lease.

The purchase price, as determined by negotiation or by the appraisal report, shall be paid in cash upon delivery of a proper Warranty Deed to the Premises.

Title

Within a reasonable time after receipt of notice of exercise of the option, Landlord shall furnish Tenant with an Abstract of Title or Registered Property Abstract with proper searches to all lands included in the Premises. Tenant shall be allowed 30 days after receipt of the Abstract for examination of and objection to title. Objections shall be made in writing or deemed to be waived. If any objections are made, Landlord shall be allowed 120 days to make the title marketable. All required performance of Tenant under any purchase agreement for the Premises (a "PA") shall be suspended pending correction of title, but upon correction of title and within 20 days after written notice to Tenant, Tenant shall perform the PA according to its terms.

If title is not marketable and is not made so within 120 days from the date of written objections, any PA resulting from the exercise of this option shall, at the option of Tenant, be null and void. In such event, neither party shall be liable for damages to the other party under the PA. Tenant shall exercise its option to declare the PA null and void by delivering to Landlord a written notice to such effect within 10 days after the expiration of the 120-day cure period. If Tenant fails to deliver such a notice, the transaction shall proceed to closing as if there had been no title objections.

If title to said property is marketable or is made marketable within 120 days from the date of written objections, or if Tenant fails to declare the PA null and void, and Tenant then defaults in its agreement to pay the purchase price and continues in default for a period of 20 days after notice from Landlord to close, then Landlord may declare the exercise of the option null and void, time being of the essence hereof, and may retain all monies paid in the exercise of such option; but this provision shall not deprive either party of the right of enforcing specific performance, provided that such action for specific performance shall be commenced within six months after such right of action arises.

Closing

Subject to performance by Tenant, Landlord agrees to execute and deliver a Warranty Deed conveying marketable title to the Premises, subject only to the following exceptions:

(a) Governmental building and zoning laws and ordinances and state and federal regulations;

(b) Rights of subtenants of Tenant, its successors and assigns;

(c) Streets and highway rights-of-way as they now exist or may then exist;

(d) Real estate taxes, special assessments or installments thereof which are due and payable following the date of sale;

(e) Liens or encumbrances suffered or caused to be suffered by or through Tenant;

(f) Reservation of any minerals or mineral rights to the State of Minnesota; and

(g) Utility and drainage easements of record.

The closing shall be within 120 days of the determination of the purchase price, unless the closing is extended because of title defects. All rents accruing to the Premises prior to closing

shall be paid to Landlord until such time as the full purchase price (less amounts deposited in escrow, if any, for title defects) has been paid to Landlord and Landlord has delivered the Warranty Deed. The parties further agree that pro rata adjustments for rents, insurance premiums and other matters shall be made as of the date of delivery of the Warranty Deed.

Revocation
- ----------

The parties hereto hereby agree that, notwithstanding anything contained in the Lease to the contrary, Tenant shall have the right at its option to unilaterally revoke its exercise of the option to purchase the Premises at any time prior to determination of the purchase price or within 120 days after determination of the purchase price, but only if the purchase price is determined by the appraisal method provided above. Notice of revocation shall be given to Landlord in writing within the period of time specified in the preceding sentence.

AMENDMENT NO. 1 TO LEASE

This Amendment No. 1 to Lease is entered into as of this 18 day of August, 2004 (the "Amendment"), by and between Veeco Compound Semiconductor Inc., a Minnesota corporation (hereinafter "Landlord"), and APA Optics, Inc. a Minnesota corporation (hereinafter "Tenant").

The parties entered into a Lease as of June, 2004 which they now wish to amend (the "Lease"). Capitalized terms used but not defined herein shall have the meanings assigned to such terms in the Lease.

For good and valuable consideration, the parties agree to amend the Lease as follows:

1. Immediately following Section 6 of the Lease, a new Section 6A shall be added to read as follows:

6A. TENANT MACHINE USAGE: LANDLORD MACHINE USAGE.

During the term of this lease, Tenant shall provide usage of Tenant's Machine to the Landlord at prearranged times for the purposes of Customer demonstrations and related process development. In exchange for time used on the Tenant's Machine, Landlord shall make time available on Landlord's E300 Machine at a time-exchange rate. For every two (2) days that Landlord uses Tenant's Machine, one (1) day shall be made available for Tenant's usage on Landlord's E300 Machine.

Any usage of the Tenant's Machine by the Landlord or the Landlord's machine by the Tenant will be on a mutually agreeable schedule. In addition, Tenant and Landlord agree to schedule times so as not to unduly interfere with Tenant's business usage of the Tenant's Machine or Landlord's business usage of Landlord's machine. Any usage of the Tenant's Machine by the Landlord or the Landlord's machine by the Tenant will be evaluated by both the Landlord and Tenant to verify suitability and compatibility of the process.

Landlord will be held accountable for repairs to any Tenant equipment that is damaged by improper use or abuse by Landlord or its agents during the course of Customer demonstrations and related process development. Tenant will be held accountable for repairs to any Landlord equipment that is damaged by improper use or abuse by Tenant or its agents.

2. This Amendment may be executed in counterparts, each of which shall be deemed an original, but both of which together shall constitute one and the same instrument. A facsimile copy of a signed counterpart shall be treated the same as a signed original.

3. Except as amended hereby, the Lease shall continue in full force and effect.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands the day and year first written above.

LANDLORD:	TENANT:
Veeco Compound Semiconductor Inc.	APA Optics, Inc.
By /s/ Gregory Robbins	By /s/ Anil K. Jain
Its Secretary	Its Chief Executive Officer

Exhibit 31.1

CERTIFICATION

I, Anil K. Jain, certify that:

1. I have reviewed this quarterly report on Form 10-Q of APA Enterprises, Inc.;

2. Based on my knowledge, this quarterly report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this quarterly report, fairly represent in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. APA Enterprises, Inc.'s other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a and 15(e)) for APA Enterprises, Inc. and we have:

   a) Designed such disclosure controls and procedures to ensure that material information relating to APA Enterprises, Inc., including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Evaluated the effectiveness of our disclosure controls and procedures as of a date and presented in this quarterly report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on our evaluation.

   c) Disclosed in this report any change in APA Enterprises, Inc.'s internal control over financial reporting that occurred during the most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company's control over financial reporting.

5. APA Enterprises, Inc.'s other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to our auditors and the audit committee of our board of directors:

   a) All significant deficiencies and material weaknesses in the design or operation of internal controls over financial reporting which are reasonably likely to adversely affect APA Enterprises, Inc.'s ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls over financial reporting.

November 5, 2004

Signature: /s/ Anil K. Jain

Print Name: Anil K. Jain

Print Title: Chief Executive Officer and Chief Financial Officer

Exhibit 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of APA Enterprises, Inc. (the "Company") on Form 10-Q for the period ending September 30, 2004, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Anil K. Jain, Chief Executive Officer and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Sec. 1350, as adopted pursuant to Sec. 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Sections 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly represents, in all material respects, the financial condition and results of operations of the Company.

November 5, 2004

Signature: /s/ Anil K. Jain

Print Name: Anil K. Jain

Print Title: Chief Executive Officer and Chief Financial Officer