Form 11-K June 27, 2007	
	UNITED STATES
	SECURITIES AND EXCHANGE COMMISSION
	Washington, D.C. 20549
	FORM 11-K
	ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
þ	ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the fiscal year ended December 31, 2006
	Or
	TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the transition period from to
	Commission file number 1-7615
	KIRBY 401(k) PLAN
	Kirby Corporation 55 Waugh Drive, Suite 1000 Houston, Texas 77007

KIRBY 401(k) PLAN

Index to Financial Statements and Supplemental Schedule

	Page
Report of Independent Registered Public Accounting Firm	1
Statements of Net Assets Available for Benefits (Modified Cash Basis) – December 31, 2006 and 2005	2
Statements of Changes in Net Assets Available for Benefits (Modified Cash Basis) – Years ended December 31	,
2006 and 2005	3
Notes to Financial Statements (Modified Cash Basis)	4
Supplemental Schedule	
Schedule H, Line 4i – Schedule of Assets (Held at End of Year) (Modified Cash Basis) – as of December 31,	1.1
<u>2006</u>	11
Supplemental schedules, other than those listed above, are omitted because of the absence of the conditions which they are required.	under

Index

Report of Independent Registered Public Accounting Firm

Plan Administrator

Kirby 401(k) Plan:

We have audited the accompanying statements of net assets available for benefits (modified cash basis) of the Kirby 401(k) Plan (the Plan) as of December 31, 2006 and 2005 and the related statements of changes in net assets available for benefits (modified cash basis) for the years then ended. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As described in note 2, these financial statements and supplemental schedule were prepared on a modified cash basis of accounting, which is a comprehensive basis of accounting other than accounting principles generally accepted in the United States of America.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets available for benefits of the Plan as of December 31, 2006 and 2005 and the changes in net assets available for benefits for the years then ended, on the basis of accounting described in note 2.

Our audits were performed for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental schedule H, line 4i – schedule of assets (held at end of year) (modified cash basis) as of December 31, 2006 is presented for the purpose of additional analysis and is not a required part of the basic financial statements but is supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. The supplemental schedule is the responsibility of the Plan's management. The supplemental schedule has been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, is fairly stated, in all material respects, in relation to the basic financial statements taken as a whole.

KPMG LLP

Houston, Texas June 27, 2007

<u>Index</u>

KIRBY 401(k) PLAN

Statements of Net Assets Available for Benefits

(Modified Cash Basis)

December 31, 2006 and 2005

	2006	2005
Assets:		
Investments at fair value	\$ 101,430,888	75,964,993
Due from trustee	10,176,267	_
Cash, non-interest bearing	44,350	_
Accrued income	66,050	50,672
Due from broker for securities sold	108,393	35,732
Total assets	111,825,948	76,051,397
Liabilities:		
Due to broker for securities purchased	10,329,604	15,874
Net assets available for benefits	\$ 101,496,344	76,035,523
See accompanying notes to financial statements.		
see decompanying notes to initalicial statements.		
2		

<u>Index</u>

KIRBY 401(k) PLAN

Statements of Changes in Net Assets Available for Benefits

(Modified Cash Basis)

Years ended December 31, 2006 and 2005

		2006	2005
Additions to net assets attributed to:			
Contributions from participants		6,927,373	6,083,783
Contributions from employer		2,626,850	2,370,750
Rollover contributions		1,647,669	517,272
Interest and dividend income		1,485,939	962,163
Net appreciation in fair value of investments		9,462,615	4,671,167
Total additions		22,150,446	14,605,135
Deductions from net assets attributed to:			
Benefits paid to participants		6,865,892	4,709,550
Total deductions		6,865,892	4,709,550
Transfers to the plan from the Global Power Systems, L.L.C.			
Profit Sharing Plan (note 1)		10,176,267	_
Net increase		25,460,821	9,895,585
Net assets available for benefits, beginning of year		76,035,523	66,139,938
Net assets available for benefits, end of year		101,496,344	76,035,523
·			
See accompanying notes to financial statements.			
3			

Index

KIRBY 401(K) PLAN

Notes to Financial Statements

(Modified Cash Basis)

December 31, 2006 and 2005

(1) Description of the Plan

(a) General

The Kirby 401(k) Plan (the Plan) is a defined contribution 401(k) plan for the benefit of employees of Kirby Corporation (the Company) and certain subsidiaries. Each employee is eligible to join the Plan as of the first pay period following completion of one year of service and the attainment of age 18. Employees covered by collective bargaining agreements, the terms of which do not provide for participation in the Plan, are not eligible. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974, as amended (ERISA). Further information relating to the Plan's provisions is available in the Plan Document.

The Hollywood Marine, Inc. (HMI) 401(k) Plan (HMI Plan) was merged into the Plan, and all HMI balances were transferred to the Plan effective December 31, 1999. Commencing January 1, 2000, former HMI Plan participants are subject to the same plan provisions as the Plan participants. In connection with the plan merger, the Plan was amended on December 31, 1999 to include HMI employees.

The Global Power Systems, L.L.C. (GPS) Profit Sharing Plan (GPS Plan) was merged into the Plan, and all GPS balances were transferred to the Plan effective December 31, 2006. Commencing January 1, 2007, former GPS Plan participants are subject to the same plan provisions as the Plan participants. In connection with the plan merger, the Plan was amended on December 31, 2006 to include GPS employees.

(b) Plan Administration

The general administration of the Plan is the responsibility of the Company (the plan administrator). The plan administrator has broad powers regarding the operation and administration of the Plan and receives no compensation for service to the Plan. All administrative expenses, unless paid by the Company at its discretion, are paid by the Plan. During 2006 and 2005, all expenses were paid by the Company. Wells Fargo Bank (Wells) is the trustee of the Plan.

(Continued)

4

Index

KIRBY 401(K) PLAN

Notes to Financial Statements

(Modified Cash Basis)

December 31, 2006 and 2005

(c) Contributions

The Plan provides for basic employee pretax contributions to the Plan of up to 3% of covered compensation as defined, and for additional employee pretax contributions to the Plan of up to 14% of covered compensation subject to the provisions of the Internal Revenue Code of 1986, as amended (the Code). Participants age 50 or older during the Plan year may also elect to make a "catch-up" contribution, subject to certain Internal Revenue Service (IRS) limits (\$5,000 in 2006 and \$4,000 in 2005). The Company contributes matching employer contributions equal to 100% of basic employee pretax contributions. The Company does not match the additional employee pretax or catch-up contributions. Matching employer contributions were used to purchase Company common stock during 2005 and 2006 but employees were able to transfer the matching employer contributions to other funds upon receipt. Effective January 1, 2007, each participant has the right to direct his or her contributions and the Company's matching contributions, between the investment funds offered by the Plan, including Company common stock.

Effective April 1, 2005, all employees hired or rehired after April 1, 2005 will be automatically enrolled at a 3% pretax contribution rate, unless otherwise elected by the participant.

In addition, participants may contribute amounts representing rollovers from other qualified plans or from an individual retirement account.

(d) Benefits Payments and Loans

Benefits payments are made to participants upon retirement or termination of employment (or to the beneficiary in the event of death) and are in the form of lump sum distribution payments. A participant may request a loan for up to the lesser of 50% of the participant's vested interest or \$50,000, less the participant's highest outstanding loan balance during the preceding 12 months. Loans are typically repaid over a five-year period and bear interest at prime rate plus 1%. Interest rates ranged from 5% to 9.25% at December 31, 2006. Loans outstanding at December 31, 2006 mature from January 3, 2007 through December 31, 2011. Loans outstanding upon a participant's termination of employment are considered deemed distributions if not repaid and are deducted from the participant's account balance prior to distribution. These amounts are taxed to the participant in the year of the participant's termination. Former participants of the HMI Plan are eligible to receive in service withdrawals from their vested HMI account balance after attaining 59 ½ years of age.

Effective March 28, 2005, the Plan requires automatic distribution of participant accounts upon termination without the participants consent of amounts less than \$5,000 and greater than \$1,000. If the participant does not elect to have the amount paid directly to an eligible retirement plan or receive a distribution directly, then the Plan will pay the distribution to an individual retirement plan designated by the Plan administrator.

Amounts less than \$1,000 will continue to be paid directly to participants upon termination.

Effective October 14, 2005, the Plan was amended to include certain provisions of the Katrina Emergency Tax Relief Act of 2005.

(Continued)

5

Index

KIRBY 401(K) PLAN

Notes to Financial Statements

(Modified Cash Basis)

December 31, 2006 and 2005

(e) Vesting

Participants are 100% vested in their participant contributions and rollovers, if any. Participants, excluding former GPS plan participants, in the Plan have an immediate and fully vested interest in the portion of the account relating to employer contributions and may, upon resignation from or discharge by the employer, withdraw their entire account balance.

Employer contributions made to the prior HMI Plan are subject to a five-year vesting schedule based on the participant's HMI service date. Forfeitures of nonvested participants are credited to the accounts of former HMI Plan participants employed at year-end based on a formula that considers the total compensation, as defined, of all former HMI Plan participants for that plan year. Forfeitures in the amount of \$44,350 and \$54,543 as of December 31, 2006 and 2005, respectively, were available for allocation to former HMI Plan participants. As of December 31, 2006, all participants are 100% vested.

Employer contributions made to the prior GPS Plan are subject to a three-year vesting schedule based on the participant's GPS service date. Forfeitures of nonvested participants are credited to the accounts of former GPS Plan participants employed at year-end based on a formula that considers the total compensation, as defined, of all former GPS Plan participants for that plan year.

Effective January 1, 2007, employer contributions to former GPS Plan participants will be subject to the same vesting schedule as Kirby participants.

(f) Plan Termination

Although it has not expressed any intent to do so, the Company has the right under the Plan to terminate the Plan subject to the provisions of ERISA. In the event of termination, the amounts credited to the accounts of participants will be distributed to the participants after payment of expenses for distribution and liquidation.

(g) Valuation of Participant Accounts

Under the Plan, each participant's account is credited with the participant's contribution, the Company's matching contribution and an allocation of investment income (loss), net of administrative expenses. Investment income (loss) is allocated daily to participants. The benefit to which a participant is entitled is the benefit that can be provided from the participant's vested account.

(Continued)

6

Index

(2)

KIRBY 401(K) PLAN

Notes to Financial Statements

(Modified Cash Basis)

December 31, 2006 and 2005

Summary of Significant Accounting Policies

(a) Basis of Presentation

The accompanying financial statements have been prepared on the modified cash basis, which is a comprehensive basis of accounting other than U.S. generally accepted accounting principles, and is an acceptable method of reporting under Department of Labor regulations. The modified cash basis of accounting utilizes the cash basis of accounting while carrying investments at fair value and recording investment income (loss) on the accrual basis. Consequently, contributions are recognized when received rather than when earned, and expenses are recognized when paid rather than when the obligation is incurred. As of December 31, 2006, \$121,377 of employee contributions and \$48,415 of employer contributions for the 2006 Plan year had not been remitted to the trust. As of December 31, 2005, \$106,692 of employee contributions and \$47,250 of employer contributions for the 2005 Plan year had not been remitted to the trust. As of December 31, 2006 and 2005, \$82,619 and \$79,376, respectively, of excess deferrals were held by the trust and distributed to participants subsequent to year end. As of December 31, 2006 and 2005, \$40,753 and \$60,892, respectively, of participant loan balances were in default and deemed distributed subsequent to year end. Under U.S. generally accepted accounting principles, these amounts would have been reflected as accounts receivable, accounts payable, and a reduction of outstanding participant loans, respectively.

(b) Use of Estimates

The preparation of financial statements requires Plan management to make estimates and assumptions that affect the reported amounts of assets, liabilities, and disclosure of contingent assets and liabilities, and changes therein. Actual results could differ from those estimates.

(c) Investment Valuation

Investments in mutual funds and Company common stock are stated at fair value based on quoted market prices. Investments in common trust funds are stated at fai