
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

- ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2015

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

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Report of Independent Registered Public Accounting Firm

The Plan Administrator
Kirby 401(k) Plan:

We have audited the accompanying statement of net assets available for benefits (modified cash basis) of the Kirby 401(k) Plan (the Plan) as of December 31, 2015, and the related statement of changes in net assets available for benefits (modified cash basis) for the year then ended. These financial statements are the responsibility of Plan management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit 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 audit provides a reasonable basis for our opinion.

As described in Note 2, these financial statements and supplementary information 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 (modified cash basis) of the Plan as of December 31, 2015, and the changes in net assets available for benefits (modified cash basis) for the year then ended, on the basis of accounting described in Note 2.

The supplementary information in the accompanying schedule of schedule of assets (held at end of year) (modified cash basis) as of December 31, 2015, has been subjected to audit procedures performed in conjunction with the audit of the Plan's financial statements. The supplementary information is presented for the purpose of additional analysis and is not a required part of the financial statements but includes supplemental 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 information is the responsibility of Plan management. Our audit procedures included determining whether the supplemental information reconciles to the financial statements or the underlying accounting and other records, as applicable and performing procedures to test the completeness and accuracy of the information presented in the supplemental information. In forming our opinion on the supplemental information in the accompanying schedules, we evaluated whether the supplementary information, including its form and content, is presented in conformity with the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. In our opinion, the supplemental information in the accompanying schedule is fairly stated in all material respects in relation to the financial statements as a whole.

/s/ WEAVER AND TIDWELL, L.L.P.

Houston, Texas
June 28, 2016

Report of Independent Registered Public Accounting Firm

The Plan Administrator
Kirby 401(k) Plan:

We have audited the accompanying statement of net assets available for benefits (modified cash basis) of the Kirby 401(k) Plan (the Plan) as of December 31, 2014 and the related statement of changes in net assets available for benefits (modified cash basis) for the year 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 audit.

We conducted our audit 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 audit provides a reasonable basis for our opinion.

As described in note 2, the financial statements were prepared on a modified cash basis of accounting, which is a comprehensive basis of accounting other than U.S. generally accepted accounting principles.

In our opinion, the financial statements referred to above presents fairly, in all material respects, the net assets available for benefits (modified cash basis) of the Plan as of December 31, 2014, and the changes in net assets available for benefits (modified cash basis) for the year then ended, on the basis of accounting described in note 2.

/s/ KPMG LLP

Houston, Texas
June 29, 2015

KIRBY 401(k) PLAN
Statements of Net Assets Available for Benefits
(Modified Cash Basis)
December 31, 2015 and 2014

	<u>2015</u>	<u>2014</u>
Assets:		
Investments, at fair value	\$ 349,633,203	\$ 370,211,497
Notes receivable from participants	20,187,477	20,259,338
Other receivables	58,841	9,549
Total assets	<u>369,879,521</u>	<u>390,480,384</u>
Liabilities:		
Other liabilities	—	447,753
Total liabilities	<u>—</u>	<u>447,753</u>
Net assets available for benefits before adjustment	369,879,521	390,032,631
Adjustment from fair value to contract value for fully benefit-responsive investment contracts	<u>(287,005)</u>	<u>(742,547)</u>
Net assets available for benefits	<u>\$ 369,592,516</u>	<u>\$ 389,290,084</u>

See accompanying notes to financial statements.

KIRBY 401(k) PLAN
Statements of Changes in Net Assets Available for Benefits
(Modified Cash Basis)
Years Ended December 31, 2015 and 2014

	<u>2015</u>	<u>2014</u>
Additions to net assets attributed to:		
Contributions from participants	\$ 22,724,358	\$ 21,467,420
Contributions from employer, net of forfeitures	13,303,736	12,736,940
Rollover contributions	3,455,595	2,745,847
Dividend and other income	11,272,640	12,553,608
Interest income from participants' notes receivable	828,633	832,272
Net depreciation in fair value of investments	(30,744,799)	(10,780,642)
Total additions, net	<u>20,840,163</u>	<u>39,555,445</u>
Deductions from net assets attributed to:		
Benefits paid to participants	40,363,338	38,820,286
Investment counselor fees and other	174,393	180,363
Total deductions	<u>40,537,731</u>	<u>39,000,649</u>
Net increase (decrease)	(19,697,568)	554,796
Net assets available for benefits, beginning of year	<u>389,290,084</u>	<u>388,735,288</u>
Net assets available for benefits, end of year	<u>\$ 369,592,516</u>	<u>\$ 389,290,084</u>

See accompanying notes to financial statements.

KIRBY 401(k) PLAN
Notes to Financial Statements
(Modified Cash Basis)
December 31, 2015 and 2014

(1) Description of 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. 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.

(b) Administration of the Plan

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. Bank of America, N.A. (Bank of America) is the trustee of the Plan.

(c) Contributions

Each employee is eligible to join the Plan as of the first pay period following completion of three months of service and the attainment of age 18 unless specified otherwise by a collective bargaining agreement. Prior to July 1, 2015, the Plan provided 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 17% of covered compensation subject to the provisions of the Internal Revenue Code of 1986, as amended (the Code). Effective July 1, 2015, the Plan was amended to allow Non-Highly Compensated Employees, as defined by the Internal Revenue Service ("IRS"), to contribute up to 47% of covered compensation. Additional employee pretax contributions to the Plan up to 47% of covered compensation are allowed under certain collective bargaining agreements. Participants age 50 or older during the Plan year may also elect to make a "catch-up" contribution, subject to certain IRS limits (\$6,000 in 2015 and \$5,500 in 2014). 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. Each participant directs his or her contributions and the Company's matching contributions between the investment funds offered by the Plan, including Company common stock.

Vessel based employees of Kirby Offshore Marine, LLC ("KOM") whose employment is covered by collective bargaining agreements receive a non-discretionary employer match and may receive a discretionary employer contribution based on the terms of the applicable collective bargaining agreement.

The Plan allows the employer, at its discretion, to make an additional discretionary employer contribution for eligible employees equal to 5% of the employees covered compensation, as defined by the Plan. Eligible employees are employees of United Holdings, LLC ("United") and employees of KOM assigned the classification of Vessel Employee as determined by the Company. On March 31, 2016, the Company made a discretionary contribution of \$5,042,519 to the Plan for eligible United and KOM employees for the 2015 Plan year. On March 24, 2015, the Company made a discretionary contribution of \$5,041,381 to the Plan for eligible United and KOM employees for the 2014 Plan year.

(Continued)

KIRBY 401(k) PLAN
Notes to Financial Statements
(Modified Cash Basis)
December 31, 2015 and 2014

The Plan allows the use of forfeited amounts to offset future employer matching contributions. Forfeitures from non-vested accounts of \$1,232,862 and \$893,212 were used to reduce the Plan's matching contributions in 2015 and 2014, respectively.

All employees hired or rehired are 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

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 or installment 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 typically bear interest at prime rate plus 1%. Interest rates ranged from 4.25% to 10.25% at December 31, 2015. Loans outstanding at December 31, 2015 mature from January 2, 2016 through July 18, 2028. 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. Active participants who qualify for an in-service withdrawal after attaining 59 ½ years of age may be paid their benefits in a single sum cash payment or rollover as soon as administratively possible.

The Plan requires automatic distribution of participant accounts upon termination without the participant's 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 are paid directly to participants upon termination.

(e) Vesting

Participants are 100% vested in their participant contributions and rollovers, if any. Employer contributions are subject to a six-year vesting schedule. The vesting schedule of employer contributions for employees covered by collective bargaining agreements are specified by that particular agreement. Forfeitures in the amount of \$232,862 and \$104,076 as of December 31, 2015 and 2014, respectively, were available to offset future employer contributions or plan administrative expenses at the discretion of the Company.

(Continued)

KIRBY 401(k) PLAN
Notes to Financial Statements
(Modified Cash Basis)
December 31, 2015 and 2014

(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) 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.

(h) Administrative Expenses

All administrative expenses, unless paid by the Company at its discretion, are paid by the Plan.

(i) Revenue Sharing

The agreement between Bank of America and the Plan includes a revenue sharing arrangement whereby Bank of America receives investment related revenue generated by Plan assets invested in mutual fund holdings sponsored by an affiliate of Bank of America. These deposits are included in dividend and other income in the statement of changes in net assets available for benefits. The funds can be used to pay plan expenses or be allocated to participants. Income from revenue sharing was \$108,278 and \$194,739 as of December 31, 2015 and 2014, respectively.

(2) 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, 2015, \$273,563 of employee contributions had not been remitted to the trust and \$130,981 of employer contributions were remitted to the trust for the 2015 Plan year. As of December 31, 2014, \$282,480 of employee contributions had not been remitted to the trust and \$138,923 of the employer contributions had not been remitted to the trust for the 2014 Plan year. As of December 31, 2015 and 2014, excess deferrals of \$9,871 and \$3,513, respectively, were held by the trust and distributed to participants subsequent to year end. Under U.S. generally accepted accounting principles, these amounts would have been reflected as accounts receivable and accounts payable, respectively.

(Continued)

KIRBY 401(k) PLAN
Notes to Financial Statements
(Modified Cash Basis)
December 31, 2015 and 2014

Certain other receivables and liabilities are recorded in the statements of net assets available for benefits to reflect the accrued income, pending settlements and other transactions.

Certain reclassifications have been made to prior year presentation to conform to current year presentation.

(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 and Income Recognition

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 fair market value based upon quoted market prices of the underlying assets. Purchases and sales of investments are recorded on a trade date basis. Net appreciation (depreciation) in fair value of investments includes realized gains and losses on investments sold during the year as well as net appreciation (depreciation) of the investments held at the end of the year. Interest and dividend income is accrued in the period earned.

The accounting literature requires investment contracts held by a defined contribution plan to be reported at fair value. However, contract value (cost plus accrued interest) is the relevant measurement attribute for that portion of the net assets available for benefits of a defined contribution plan attributable to fully benefit-responsive investment contracts because contract value is the amount that participants would receive if they were to initiate permitted transactions under the terms of the Plan. Therefore, the statement of net assets available for benefits presents the fair value of the investment contracts as well as the adjustment of the fully benefit-responsive investment contracts from fair value to contract value. The statement of changes in net assets available for benefits is prepared on a contract value basis.

The Plan invests in investment contracts through The Invesco Stable Value Retirement Fund which is a common trust fund that primarily invests in guaranteed investment contracts ("GICs") and synthetic GICs and is presented at fair value as of December 31, 2015 and 2014.

(d) Notes Receivable from Participants

Notes receivable from participants represent loans that are recorded at their unpaid principal balance plus any accrued but unpaid interest.

(e) Benefit Payments

Payments to participants are recorded as the benefits are paid.

(Continued)

KIRBY 401(k) PLAN
Notes to Financial Statements
(Modified Cash Basis)
December 31, 2015 and 2014

(f) Issued Accounting Standards Not Yet Adopted

In May 2015, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (ASU) 2015-07, Fair Value Measurement: Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or its equivalent). The ASU removes the requirement to categorize these investments within the fair value hierarchy and also removes the requirement to make certain disclosures. The ASU is effective for fiscal years beginning after December 15, 2015. The Company is evaluating the impact of the adoption of this ASU on the Plan financial statements.

In July 2015, FASB issued ASU No. 2015-12, Plan Accounting: Defined Benefit Pension Plans (Topic 960), Defined Contribution Pension Plans (Topic 962), Health and Welfare Benefit Plans (Topic 965): (Part I) Fully Benefit Responsive Investment Contracts, (Part II) Plan Investment Disclosures, (Part III) Measurement Date Practical Expedient. Part I eliminates the requirements to measure the fair value of fully benefit-responsive investment contracts and provide certain disclosures. Contract value is the only required measure for fully benefit-responsive investment contracts. Part II eliminates the requirements to disclose individual investments that represent 5 percent or more of net assets available for benefits and the net appreciation or depreciation in fair value of investments by general type. Part II also simplifies the level of disaggregation of investments that are measured using fair value. Plans will continue to disaggregate investments that are measured using fair value by general type; however, plans are no longer required to also disaggregate investment by nature, characteristics and risks. Further, the disclosure of information about fair value measurements shall be provided by general type of plan asset. Part III is not applicable to the Plan. The ASU is effective for fiscal years beginning after December 15, 2015. Earlier application of any or all of the three parts is permitted. This ASU should not change total net assets available for benefits; however, it may affect the presentation of the financial statements and the information contained in the disclosures. The Company does not believe that the adoption of this guidance will have a material impact on its financial statements.

(3) Investments and Investment Options

Each participant has the right to direct his or her contributions and the Company’s matching contributions, once remitted, among the investment funds offered by the Plan. Descriptions of the Plan’s investment fund options are included in the summary plan description provided to all eligible employees.

Participants may direct their investment contributions to the following investment funds: Invesco Stable Value Retirement Fund CL1, Blackrock Russell 2000 Fund, Northern Trust Collective Aggregate Bond Index Fund, Northern Trust Collective All Country World ex-US Index Fund TR2, Northern Trust Collective S&P 500 Index Fund L1, American Beacon Small Cap Value Fund, American Bond Fund of America Class R-6, FFI Treasury Fund, Blackrock Global Allocation Fund, ClearBridge Small Cap Growth Fund, Harbor International Fund, Northern Multi-Manager Emerging Markets Equity Fund, Principal Investors Global Institutional Fund, Prudential Jennison Large Cap Growth Fund, T. Rowe Price Equity Income Fund, T. Rowe Price Retirement 2010 Fund, T. Rowe Price Retirement 2015 Fund, T. Rowe Price Retirement 2020 Fund, T. Rowe Price Retirement 2025 Fund, T. Rowe Price Retirement 2030 Fund, T. Rowe Price Retirement 2035 Fund, T. Rowe Price Retirement 2040 Fund, T. Rowe Price Retirement 2045 Fund, T. Rowe Price Retirement 2050 Fund, T. Rowe Price Retirement 2055 Fund and Company common stock.

(Continued)

KIRBY 401(k) PLAN
Notes to Financial Statements
(Modified Cash Basis)
December 31, 2015 and 2014

American Bond Fund of America Class R-6, Blackrock Russell 2000 Fund, Harbor International Fund, Invesco Stable Value Retirement Fund CL1, Northern Trust All Country World ex-US Index Fund TR2, and Principal Investors Global Institutional Fund were added in 2015. American Funds Bond Fund of America Class R-5, Invesco Stable Value Retirement Fund CL3, Northern Trust Collective All Country World ex-US Index Fund, Thornburg International Value Fund, and Voya Global Real Estate Fund were removed in 2015.

Allocation to Company common stock is limited to fifty percent of each participant's portfolio. The limit is applied when participants direct the investment of future contributions and rebalance their entire portfolio.

The following presents investments that represent 5% or more of the Plan's net assets as of December 31:

2015:

Invesco Stable Value Retirement Fund (contract value of \$41,594,858)	\$ 41,881,863
Prudential Jennison Large Cap Growth Fund	43,964,858
Northern Trust Collective S&P 500 Index Fund	42,164,843
T. Rowe Price Equity Income Fund	28,579,704
Harbor International Fund	21,791,064
American Funds Bond Fund of America	19,621,895
American Beacon Small Cap Value Fund	18,731,846
Company common stock	36,827,480

2014:

Invesco Stable Value Retirement Fund (contract value of \$43,679,250)	\$ 44,421,797
Prudential Jennison Large Cap Growth Fund	42,756,990
Northern Trust Collective S&P 500 Index Fund	42,128,603
T. Rowe Price Equity Income Fund	33,590,376
American Funds Bond Fund of America	23,662,367
American Beacon Small Cap Value Fund	21,138,044
Thornburg International Value Fund	19,623,618
Company common stock	56,594,699

(Continued)

KIRBY 401(k) PLAN
Notes to Financial Statements
(Modified Cash Basis)
December 31, 2015 and 2014

The Plan's investments (including realized gains and losses on investments bought and sold, as well as unrealized gains and losses on investments held during the year) appreciated (depreciated) in value as follows for the years ended December 31:

	<u>2015</u>	<u>2014</u>
Common trust funds	\$ (97,993)	\$ 4,278,309
Mutual funds	(10,929,816)	(2,075,547)
Company common stock	(19,716,990)	(12,983,404)
	<u>\$ (30,744,799)</u>	<u>\$ (10,780,642)</u>

(4) Concentration of Investments

The Plan's investment in shares of Company common stock represents 10% and 15% of total assets as of December 31, 2015 and 2014, respectively. The Company is engaged in marine transportation and diesel engine services.

(5) Voting Rights

Each shareholder is entitled to exercise voting rights attributable to the shares of Company common stock allocated to his or her account and is notified by the trustee prior to the time that such rights are to be exercised. The trustee is not permitted to vote any shares for which instructions have not been given by the participant. During 2015 and 2014, the Plan purchased all shares of Company common stock in the open market.

(6) Risk and Uncertainties

The Plan may invest in common trust funds, mutual funds and Company common stock. Investment securities are exposed to various risks, such as interest rate, market, and credit risks. Due to the level of risk associated with certain investment securities, it is probable that changes in the value of investment securities will occur in the near term.

The Plan may invest in securities with contractual cash flows, such as asset backed securities, collateralized mortgage obligations and commercial mortgage backed securities, including securities backed by subprime mortgage loans. The value, liquidity and related income of those securities are sensitive to changes in economic conditions, including real estate value, delinquencies or defaults, or both, and may be adversely affected by shifts in the market's perception of the issuers and changes in interest rates.

(7) Related Party Transactions

One of the Plan investment options includes shares of Company common stock managed by Bank of America. The Company is the plan sponsor and Bank of America is the trustee as defined by the Plan. Therefore, these transactions qualify as party-in-interest transactions. These transactions are covered by an exemption from the "prohibited transaction" provisions of ERISA and the Code.

(Continued)

KIRBY 401(k) PLAN
Notes to Financial Statements
(Modified Cash Basis)
December 31, 2015 and 2014

The Plan has participant loans outstanding, which are secured solely by a portion of the participant's vested account balance, in accordance with the Plan Document.

(8) Federal Income Tax Status

The IRS has determined and informed the Company by a letter dated March 31, 2008, that the Plan and related trust are designed in accordance with applicable sections of the Internal Revenue Code (IRC). In January 2016, the Plan was restated and the Company filed an application for a renewed favorable determination letter. Although the Plan has been amended and restated since receiving the determination letter in 2008, the Plan administrator believes that the Plan is designed and is currently being operated in compliance with the applicable requirements of the IRC and therefore believes that the Plan is qualified and the related trust is tax-exempt.

The Plan is currently open to audit under the statute of limitations by the IRS for the 2012 through 2014 tax years. The Plan has not recognized any assets or liabilities related to uncertain tax positions as of December 31, 2015 and 2014.

(9) Reconciliation of Financial Statements to Form 5500

The following is a reconciliation of net assets available for benefits per the financial statements to the Form 5500:

	December 31	
	2015	2014
Net assets available for benefits per the financial statements	\$ 369,592,516	\$ 389,290,084
Adjustment from contract value to fair value for fully benefit-responsive investment contracts	287,005	742,547
Net assets available for benefits per the Form 5500	<u>\$ 369,879,521</u>	<u>\$ 390,032,631</u>

(Continued)

KIRBY 401(k) PLAN
Notes to Financial Statements
(Modified Cash Basis)
December 31, 2015 and 2014

The following is a reconciliation of net investment income in fair value of investments per the financial statements to the Form 5500:

	Years ended December 31	
	2015	2014
Net investment income in fair value of investments per the financial statements	\$ (19,472,159)	\$ 1,772,966
Interest income from participants' notes receivable	828,633	832,272
Adjustment from contract value to fair value for fully benefit-responsive investment contracts as of end of year	(455,542)	126,762
Net investment income in fair value of investments per the Form 5500	<u>\$ (19,099,068)</u>	<u>\$ 2,732,000</u>

Fully benefit-responsive investment contracts are recorded on the Form 5500 at fair value but are adjusted to contract value for financial statement presentation.

(Continued)

KIRBY 401(k) PLAN
Notes to Financial Statements
(Modified Cash Basis)
December 31, 2015 and 2014

(10) Fair Value Measurements

The accounting guidance for using fair value to measure certain assets and liabilities establishes a three tier value hierarchy, which prioritizes the inputs to valuation techniques used in measuring fair value. These tiers include: Level 1, defined as observable inputs such as quoted in active markets for identical assets or liabilities; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs in which little, if any, market data exists, therefore requiring an entity to develop its own assumptions about the assumptions that market participants would use in pricing the asset or liability.

The following is a description of the valuation methodologies used for Plan's financial instruments and the classification of such instruments within the valuation hierarchy.

Mutual Funds

These instruments are public investment vehicles valued using the net asset value provided by the administrator of the fund. The net asset value price is quoted on an active market and is classified within Level 1 of the valuation hierarchy.

Company Common Stock

Company common stock is valued at the closing price listed by the New York Stock Exchange and is classified within Level 1 of the valuation hierarchy.

Common Trust Funds

These instruments are investment vehicles valued using the net asset value provided by the administrator of the fund. The net asset value is classified within Level 2 of the valuation hierarchy because the net asset value price is quoted on an inactive private market although the underlying investments are traded on an active market. The net asset value is used as a practical expedient to determine fair value. Each collective trust provides for redemptions by the Plan at reported net asset values per share, with little to no advance notice requirement.

The methods described above may produce a fair value calculation that may not be indicative of net asset value or reflective of future fair values. Furthermore, while the Plan's valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

(Continued)

KIRBY 401(k) PLAN
Notes to Financial Statements
(Modified Cash Basis)
December 31, 2015 and 2014

The following table summarizes the Plan's investment assets measured at fair value on a recurring basis at December 31, 2015:

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Fair Value
Mutual funds:				
Fixed income	\$ 19,621,895	\$ -	\$ -	\$ 19,621,895
Balanced	46,093,343	-	-	46,093,343
U.S. equity	114,405,665	-	-	114,405,665
Real estate	4,831,409	-	-	4,831,409
International equity	26,533,059	-	-	26,533,059
Total mutual funds	<u>211,485,371</u>	<u>-</u>	<u>-</u>	<u>211,485,371</u>
Company common stock	<u>36,827,480</u>	<u>-</u>	<u>-</u>	<u>36,827,480</u>
Common trust funds:				
Fixed income	-	52,447,128	-	52,447,128
U.S. equity index	-	42,164,843	-	42,164,843
International equity	-	6,708,381	-	6,708,381
Total common trust funds	<u>-</u>	<u>101,320,352</u>	<u>-</u>	<u>101,320,352</u>
	<u>\$ 248,312,851</u>	<u>\$ 101,320,352</u>	<u>\$ -</u>	<u>\$349,633,203</u>

(Continued)

KIRBY 401(k) PLAN
Notes to Financial Statements
(Modified Cash Basis)
December 31, 2015 and 2014

The following table summarizes the Plan's investment assets measured at fair value on a recurring basis at December 31, 2014:

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Fair Value
Mutual funds:				
Fixed income	\$ 23,662,364	\$ -	\$ -	\$ 23,662,364
Balanced	41,412,948	-	-	41,412,948
U.S. equity	121,614,502	-	-	121,614,502
Real estate	4,000,683	-	-	4,000,683
International equity	23,721,607	-	-	23,721,607
Total mutual funds	<u>214,412,104</u>	<u>-</u>	<u>-</u>	<u>214,412,104</u>
Company common stock	<u>56,594,699</u>	<u>-</u>	<u>-</u>	<u>56,594,699</u>
Common trust funds:				
Fixed income	-	46,090,424	-	46,090,424
U.S. equity index	-	42,128,603	-	42,128,603
International equity	-	10,985,667	-	10,985,667
Total common trust funds	<u>-</u>	<u>99,204,694</u>	<u>-</u>	<u>99,204,694</u>
	<u>\$ 271,006,803</u>	<u>\$ 99,204,694</u>	<u>\$ -</u>	<u>\$370,211,497</u>

(Continued)

KIRBY 401(k) PLAN
Notes to Financial Statements
(Modified Cash Basis)
December 31, 2015 and 2014

(11) Investment Contracts

The Plan invests in the Invesco Stable Value Trust (“Stable Value Trust”) which is a collective trust that has entered into benefit-responsive guaranteed investment contracts and wrapper contracts with various financial institutions. The financial institutions maintain the contributions in investment contracts. The contracts are credited with earnings on the underlying investments and charged for participant withdrawals and administrative expenses.

As described in Note 2, because the guaranteed investment contracts held by the Stable Value Trust are fully benefit-responsive, contract value is the relevant measurement attribute for that portion of the net assets available for benefits attributable to the guaranteed investment contracts. Contract value, as reported to the Plan by the manager of the Stable Value Trust, represents contributions made under the contract, plus earnings, less participant withdrawals and administrative expenses. Participants may ordinarily direct the withdrawal or transfer of all or a portion of their investment at contract value.

There are no reserves against contract value for credit risk of the contract issuers or otherwise. The crediting interest rate is based on a formula agreed upon with the issuers.

The Stable Value Trust has purchased wrapper contracts from the insurance companies. The wrapper contracts amortize the realized and unrealized gains and losses on the underlying fixed income investments, typically over the duration of the investments; through adjustments to the future interest crediting rate (which is the rate earned by participants in the fund for underlying investments). The issuers of the wrapper contracts provide assurance that the adjustments to the interest crediting rate do not result in a future interest crediting rate that is less than zero.

Certain events limit the ability of the Stable Value Trust to transact at contract value with the issuer. These events include termination of the Plan, a material adverse change to the provisions of the Plan, if the Plan elects to withdraw from a wrapper contract in order to switch to a different investment provider, or if the terms of a successor plan (in the event of the spin-off or sale of a division) do not meet the wrapper contract issuer’s underwriting criteria for issuance of a clone wrapper contract. The events, described above that could result in the payment of benefits at market value rather than contract value, are not probable of occurring in the foreseeable future.

The wrapper contracts do not permit the issuers to terminate the contracts unless the Plan loses its qualified status, has incurred material breaches of responsibilities, or material and adverse changes occur to the provisions of the Plan.

The average yield earned by the Stable Value Trust was approximately 1.8% and 1.5% at December 31, 2015 and 2014, respectively, and the average yield based on actual interest rates credit to participants was approximately 1.7% and 1.6% at December 31, 2015 and 2014, respectively.

(Continued)

KIRBY 401(k) PLAN
 EIN 74-1884980, Plan # 004
 Schedule H, Part IV, Line 4i – Schedule of Assets (Held at End of Year)
 (Modified Cash Basis)
 December 31, 2015

Identity of issue, borrower, lessor, or similar party	Description of asset	Current value
Common trust funds:		
Invesco	Invesco Stable Value Retirement Fund	\$ 41,881,863
Blackrock	Blackrock Russell 2000 Fund	2,284,513
Northern Trust	Northern Trust Aggregate Bond Index Fund	8,280,752
Northern Trust	Northern Trust All Country World ex-US Index Fund TR2	6,708,381
Northern Trust	Northern Trust Collective S&P 500 Index Fund	42,164,843
Total common trust funds		<u>101,320,352</u>
Mutual Funds:		
American Beacon	American Beacon Small Cap Value Fund	18,731,846
American Funds	American Funds Bond Fund of America	19,621,895
Blackrock	FFI Treasury Fund	15,747,718
Blackrock	Blackrock Global Allocation Fund	9,589,849
Clearbridge	ClearBridge Small Cap Growth Fund	7,381,539
Harbor	Harbor International Fund	21,791,064
Northern Trust	Northern Multi-Manager Emerging Markets Equity Fund	4,741,995
Principal Investors	Principal Investors Global Institutional Fund	4,831,409
Prudential Jennison	Prudential Jennison Large Cap Growth Fund	43,964,858
T. Rowe Price	T. Rowe Price Equity Income Fund	28,579,704
T. Rowe Price	T. Rowe Price Retirement 2010 Fund	2,565,209
T. Rowe Price	T. Rowe Price Retirement 2015 Fund	3,643,286
T. Rowe Price	T. Rowe Price Retirement 2020 Fund	15,055,572
T. Rowe Price	T. Rowe Price Retirement 2025 Fund	2,888,685
T. Rowe Price	T. Rowe Price Retirement 2030 Fund	4,984,855
T. Rowe Price	T. Rowe Price Retirement 2035 Fund	925,065
T. Rowe Price	T. Rowe Price Retirement 2040 Fund	5,737,079
T. Rowe Price	T. Rowe Price Retirement 2045 Fund	207,008
T. Rowe Price	T. Rowe Price Retirement 2050 Fund	269,004
T. Rowe Price	T. Rowe Price Retirement 2055 Fund	227,731
Total mutual funds		<u>211,485,371</u>
Common stock:		
*Kirby Corporation	Common stock	36,827,480
*Participant loans		
	Interest rates ranging from 4.25% to 10.25% and maturity dates from January 2, 2016 to July 18, 2028	<u>20,187,477</u>
Total assets (held at end of year)		<u>\$ 369,820,680</u>

*Parties in interest to the Plan.

See accompanying report of independent registered public accounting firm.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Plan administrator, which administers the Plan, has duly caused this annual report to be signed on its behalf by the undersigned hereunto duly authorized.

June 28, 2016

Kirby 401(k) Plan

BY: /s/ C. Andrew Smith

C. ANDREW SMITH
Chairman of Kirby Corporation
Administrative Committee

EXHIBIT INDEX

The following documents are filed as part of this report.

Exhibit number	Description
23	Consents of Independent Registered Public Accounting Firms

Consent of Independent Registered Public Accounting Firm

The Plan Administrator
Kirby 401(k) Plan:

We consent to the incorporation by reference in the Registration Statements (Form S-8 No. 333-129333 and No. 33-57625) pertaining to the Kirby 401(k) Plan of our report dated June 28, 2016, with respect to the statement of net assets available for benefits (modified cash basis), the related statement of changes in net assets available for benefits (modified cash basis) and supplemental schedule of assets (held at end of year) (modified cash basis) of the Kirby 401(k) Plan included in this Annual Report (Form 11-K) for the year ended December 31, 2015.

/s/ WEAVER AND TIDWELL, L.L.P.

Houston, Texas
June 28, 2016

Consent of Independent Registered Public Accounting Firm

The Plan Administrator
Kirby 401(k) Plan:

We consent to the incorporation by reference in the registration statements (No. 333-129333 and No. 33-57625) on Form S-8 of Kirby Corporation of our report dated June 29, 2015, with respect to the statement of net assets available for benefits (modified cash basis) of the Kirby 401(k) Plan as of December 31, 2014, and the related statement of changes in net assets available for benefits (modified cash basis) for the year then ended, which report appears in the December 31, 2015 annual report on Form 11-K of the Kirby 401(k) Plan.

/s/ KPMG LLP

Houston, Texas
June 28, 2016
