

SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

SCHEDULE 13G

Under the Securities Exchange Act of 1934

(Amendment No. 5)\*

Zemex Corp.

-----  
(Name of Issuer)

Common Stock

-----  
(Title of Class of Securities)

988910105

-----  
(CUSIP NUMBER)

December 31, 1999

-----  
(Date of Event Which Requires Filing of this Statement)

\*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 (the "Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

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CUSIP NO. 988910105 13G

1. NAME OF REPORTING PERSON  
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

Merrill Lynch & Co., Inc.  
(on behalf of Merrill Lynch Asset Management Group ("AMG"))\*\*

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\* Joint Filing

(a) [ ]  
(b) [ ]

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

5. SOLE VOTING POWER

NONE

6. SHARED VOTING POWER

863,610

7. SOLE DISPOSITIVE POWER

NONE

8. SHARED DISPOSITIVE POWER

863,610

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

863,610 (ownership disclaimed pursuant to Section 13d-4 of the 1934 Act)

10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

9.76%

12. TYPE OF REPORTING PERSON\*

HC, CO

\*SEE INSTRUCTION BEFORE FILING OUT!

\*\*SEE EXHIBIT A

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CUSIP NO. 988910105 13G

1. NAME OF REPORTING PERSON

S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

MERRILL LYNCH SPECIAL VALUE FUND

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\* Joint Filing

(a) [ ]

(b) [ ]

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Maryland

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

5. SOLE VOTING POWER

NONE

6. SHARED VOTING POWER

863,610

7. SOLE DISPOSITIVE POWER

NONE

8. SHARED DISPOSITIVE POWER

863,610

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

863,610 (ownership disclaimed pursuant to Section 13d-4 of the 1934 Act)

10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

9.76%

12. TYPE OF REPORTING PERSON\*

HC, CO

\*SEE INSTRUCTION BEFORE FILING OUT!

\*\*SEE EXHIBIT A

14. CHECK THE APPROPRIATE BOX TO DESIGNATE THE RULE PURSUANT TO WHICH THIS SCHEDULE IS FILED:

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

SCHEDULE 13G

ITEM 1 (a) Name of Issuer:  
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Zemex Corp. (the "Company")

ITEM 1 (b) Address of Issuer's Principal Executive Offices:  
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BCE Place, 161 Bay Street  
Suite 3750, PO Box 703  
Toronto, ON M5J 2S1 Canada

ITEM 2 (a) Name of Persons Filing:  
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Merrill Lynch & Co., Inc.  
(on behalf of Merrill Lynch Asset Management Group ("AMG"))

MERRILL LYNCH SPECIAL VALUE FUND

ITEM 2 (b) Address of Principal Business Office or, if none, Residence:  
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Merrill Lynch & Co., Inc.  
(on behalf of Merrill Lynch Asset Management Group ("AMG"))  
World Financial Center, North Tower  
250 Vesey Street  
New York, NY 10381

MERRILL LYNCH SPECIAL VALUE FUND  
800 Scudders Mill Road  
Plainsboro, NJ 08536

ITEM 2 (c) Citizenship:  
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See Item 4 of Cover Pages

ITEM 2 (d) Title of Class of Securities:  
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Common Stock

ITEM 2 (e) CUSIP NUMBER:

See Cover Page

ITEM 3

If this statement is filed pursuant to Rules 13d-1(b), or 13d-2(b) or (c), check whether the person filing is a:

- (a)  Broker or Dealer registered under Section 15 of the Act,
- (b)  Bank as defined in Section 3(a)(6) of the Act,
- (c)  Insurance Company as defined in Section 3(a)(19) of the Act,
- (d)  Investment Company registered under Section 8 of the Investment Company Act of 1940,
- (e)  Investment Adviser in accordance with Rule 13d-1(b)(1)(ii)(E),
- (f)  Employee Benefit Plan or Endowment Fund in accordance with Rule 13d-1(b)(1)(ii)(F),
- (g)  Parent Holding Company or Control Person in accordance with Rule 13d-1(b)(ii)(G); see Item 7,
- (h)  A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813),
- (i)  A church plan that is excluded from the definition of an investment company under Section 3(c)(14) of the Investment Company Act of 1940,
- (j)  Group, in accordance with Rule 13d-1(b)(1)(ii)(J).

ITEM 4 Ownership  
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(a) Amount Beneficially Owned:

See Item 9 of Cover Pages.

(b) Percent of Class:

See Item 11 of Cover Pages

(c) Number of shares as to which such person has:

(i) sole power to vote or to direct the vote:

See Item 5 of Cover Pages

(ii) shared power to vote or to direct the vote:

See Item 6 of the Cover Pages

(iii) sole power to dispose or to direct the disposition of:

See Item 7 of Cover Pages

(iv) shared power to dispose or to direct the disposition of:

See Item 8 of Cover Pages

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ITEM 5 Ownership of Five Percent or Less of a Class.  
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Not Applicable

ITEM 6 Ownership of More than Five Percent on Behalf of Another Person.  
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Merrill Lynch & Co., Inc. ("ML&Co.") is a parent holding company. The Merrill Lynch Asset Management Group ("AMG") is an operating division of ML&Co. consisting of ML&Co.'s indirectly owned asset management subsidiaries. Certain of these subsidiaries hold certain shares of the security which is the subject of this report. (See Item 7).

ITEM 7 Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company or Control Person.  
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Merrill Lynch & Co., Inc. ("ML&Co.") is a parent holding company. The Merrill Lynch Asset Management Group ("AMG") is an operating division of ML&Co. consisting of ML&Co.'s indirectly-owned asset management subsidiaries. The following asset management subsidiaries hold certain shares of the common stock, which is the subject of this 13G filing:

Fund Asset Management, L.P.

ITEM 8 Identification and Classification of Members of the Group.  
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Not Applicable

ITEM 9 Notice of Dissolution of Group.  
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Not Applicable

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ITEM 10 Certification

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By signing below each of the undersigned certifies that, to the best of their knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of such securities and were not acquired and are not held in connection with or as a participant in any transaction having such purpose or effect.

Signature.

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After reasonable inquiry and to the best of my knowledge and belief, each of the undersigned certifies that the information set forth in this statement is true, complete and correct.

Date: February 4, 2000

Merrill Lynch & Co, Inc.  
(on behalf of Merrill Lynch Asset Management Group ("AMG"))

/s/ Jerry Weiss

- -----

Name: Jerry Weiss  
Title: Attorney-In-Fact\*

MERRILL LYNCH SPECIAL VALUE FUND

/s/ Jerry Weiss

- -----

Name: Jerry Weiss  
Title: Attorney-In-Fact\*\*

- -----  
\*Signed pursuant to a power of attorney, dated January 25, 1999, included as Exhibit B to Schedule 13G filed with the Securities and Exchange Commission by Merrill Lynch & Co, Inc. (on behalf of Merrill Lynch Asset Management Group ("AMG")) on January 28, 1999 with respect to Creative Technology, Limited.

\*\*Signed pursuant to a power of attorney dated January 21, 2000, included as Exhibit B to Schedule 13G filed with the Securities and Exchange Commission by Merrill Lynch & Co, Inc. (on behalf of Merrill Lynch Asset Management Group ("AMG")) on February 1, 2000 with respect to APAC Customer Services, Inc.

Zemex Corp.

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EXHIBIT A

Merrill Lynch Asset Management Group of ML&Co. ("AMG") is comprised of The following legal entities: Merrill Lynch Asset Management, L.P. doing business as Merrill Lynch Asset Management ("MLAM"), QA Advisers, LLC ("QA"), Merrill Lynch Quantitative Advisers, Inc. Hotchkis and Wiley divisions thereof; Fund Asset Management, L.P., doing business as Fund Asset Management ("FAM"); Merrill Lynch Asset Management U.K. Limited ("MLAM UK"); Merrill Lynch (Suisse) Investment Management Limited ("MLS"); Mercury Asset Management International Limited ("MAMI"); Mercury Asset Management Ltd; Mercury Asset Management, Ltd.; Mercury Asset Management (Asia Pacific Limited); Mercury Asset Management Asia Limited; Merrill Lynch Mercury Kapitalanlagegesellschaft MBH; Munich London Investment Management, Ltd.; Merrill Lynch Asset Management (Hong Kong)Limited; Merrill Lynch Mercury Asset Management Japan Limited; Atlas Asset Management, Inc.; Merrill Lynch Investment Management Canada, Inc.; DSP Merrill Lynch Asset Management (India) Limited; PT Merrill Lynch Indonesia; Merrill Lynch Phatra Securities Co., Ltd.; Merrill Lynch Global Asset Management, Limited; Mercury Asset Management Channel Islands, Limited; Mercury Asset Management International Channel Islands Limited ("MAMCI"); Grosvenor Venture Managers, Limited; and Mercury Fund Managers, Limited. Each of MLAM, FAM, MLAM UK, MAMCI, QA, MLS, and MAMI is an investment adviser registered under Section 203 of the Investment Advisers Act of 1940, which acts as investment adviser to various investment companies registered under Section 8 of the Investment Company Act of 1940. Each other firm constituting part of AMG is an investment adviser

operating under the laws of a jurisdiction other than the United States. The investment advisers that comprise AMG exercise voting and investment powers over portfolio securities independently from other direct and indirect subsidiaries of ML&Co.