

April 1, 2010

Mr. Larry Spigel
Assistant Director
Division of Corporation Finance
Securities and Exchange Commission
Washington, D.C. 20549

RE: ESCO Technologies Inc.
File No. 1-10596
Form 10-K for the Fiscal Year Ended September 30, 2009
Filed November 30, 2009

Dear Mr. Spigel:

The attachment to this letter sets forth the response of ESCO Technologies Inc. (the "Company") to the comment letter of the Division of Corporation Finance of the Securities and Exchange Commission (the "Commission") dated March 4, 2010, with respect to the above referenced filing. We have duplicated the comments set forth in the comment letter in the attachment and have provided our response.

The Company hereby acknowledges that:

- the Company is responsible for the adequacy and accuracy of the disclosure in the filings;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filings; and
- the Company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

If you have any questions or if you require additional information, please do not hesitate to contact me at 314-213-7246.

Sincerely,

/s/ Gary E. Muenster
Gary E. Muenster
Executive Vice President
and Chief Financial Officer
ESCO Technologies Inc.
9900A Clayton Road
St. Louis, MO 63124

Exhibit 13. Quantitative and Qualitative Disclosures about Market Risk (comment #1):

In light of the magnitude of your historic foreign currency translation adjustments, it is unclear to us whether you have material foreign currency market risk. Please advise and if appropriate include the disclosures required by Item 305 of Regulation S-K in future filings.

Response

The Company is exposed to foreign currency exchange rate risk inherent in its sales commitments, anticipated sales, and anticipated purchases denominated in currencies other than the U.S. dollar. The significant majority of our foreign currency transactions are entered into and settled in the respective foreign locations' local functional currency. When this is not the case, the Company hedges certain foreign currency commitments by purchasing foreign currency forward contracts. The estimated fair value of open forward contracts at September 30, 2009 was approximately \$1 million. The Company does not have material foreign currency market risk (e.g. net foreign currency transaction gain/loss was less than 2% of net earnings for fiscal years 2009, 2008 and 2007) and therefore, we have not provided the disclosures required by Item 305 of Regulation S-K.

Exhibit 13. Quantitative and Qualitative Disclosures about Market Risk (comment #2):

Similarly, we note that only about half of your long term debt, which carries interest at LIBOR, is hedged by interest rate swaps that are designated as cash flow hedges. Include in future filings quantified disclosure of interest rate risk as required by Item 305 of Regulation S-K. Otherwise, please explain to us how you determined that your interest rate risk exposure was immaterial.

Response

The Company is exposed to market risk related to (1) various interest rate swaps the Company has entered into in order to hedge some of its exposure to variability in future LIBOR-based interest payments on its variable debt and (2) changes in interest rates with respect to the Company's variable debt that is not hedged by these instruments.

Disclosure regarding the Company's market risk exposure relating to the swap agreements can be found in Item 7A of the Company's Form 10-K for the fiscal year ended September 30, 2009.

As of September 30, 2009, approximately 45% of the Company's variable debt was not hedged by interest rate swaps. The Company has determined that the market risk relating to interest rates with respect to its variable debt that is not hedged is not material. Based on a sensitivity analysis as of September 30, 2009, we estimated that if market interest rates averaged one percentage point higher, the effect would have been less than 2% of net earnings for the fiscal year ended September 30, 2009. In future filings, we will include quantified disclosure of interest rate risk as required by Item 305 of Regulation S-K.

Proxy Statement Incorporated by Reference into Part III of Form 10-K

Compensation Discussion and Analysis (comment #3):

We note that you only classify one person, Alyson S. Barclay, as an executive officer of the registrant, other than your principal executive officer and principal financial officer. Please note that the definition of executive officer in Rule 3b-7 is fairly expansive and is intended to be read broadly. In this regard, we note that the definition includes "any vice president of the registrant in charge of a principal business unit, division or function (such as sales, administration, or finance)." Please provide us with your legal analysis as to why no other executive is categorized as an executive officer.

Response

We believe our designation of executive officers is consistent with the definition of executive officers under Rule 3b-7 and that no other individuals within the Company performed functions that would warrant their designation as executive officers. Aside from the Chief Financial Officer and the General Counsel, who has historically been designated as an executive officer based on the General Counsel's significant input and oversight of contractual and legal matters, the Company has five other Vice Presidents, which include the Vice President of Tax who reports to the Chief Financial Officer, the Vice President of Human Resources, the Vice President of Planning and Development whose responsibilities are primarily devoted to acquisitions, the Vice President and Treasurer who reports to the Chief Financial Officer and a Vice President who has responsibility for various special financial projects assigned by the CEO as well as oversight responsibility for the Company's smallest subsidiary, TekPackaging LLC, with revenues of less than \$20 million a year. These other Vice Presidents possess great expertise in their respective fields, but are not considered executive officers based on the narrow scope of their responsibilities, which do not extend beyond their specialties, and their lack of policy-making responsibilities or authority.

In addition to the Company's corporate staff, the Company also analyzed the roles and responsibilities of the senior officers at each of its larger subsidiaries, and determined that none of these individuals should be classified as executive officers. This conclusion was reached based on the significant oversight and involvement in the subsidiaries' operations by the CEO and CFO of the Company. Unlike many other organizations, the Company's CEO and CFO have historically actively participated in all significant decisions occurring at the Company's larger subsidiaries, and in fact many internal policies require CEO and/or CFO approval of significant subsidiary events, such as pricing proposed on material bids, significant capital expenditures, significant real property leases, all real property purchases, new product development investments above a specified threshold, and the hiring, termination or salary adjustment of senior subsidiary personnel. In addition to this heavy involvement in subsidiary affairs, the CEO and CFO have found it necessary to more closely manage the three subsidiaries acquired in the last two to five years including Doble Engineering Company, Aclara RF Systems Inc. and Aclara Software Inc. due to the need to ensure that these businesses were effectively integrated into the Company. Over the last eighteen months, leadership changes occurring at three of the four Company's subsidiaries included in the Utility Solutions Group, the Company's largest business segment, required the Company's CEO to serve at times as each of the subsidiaries' president and/or increase his involvement in the day-to-day management of these subsidiaries. These historical management practices, the need to more closely manage newly acquired businesses and recent senior personnel changes have prompted a much more hands-on management approach by the CEO and CFO of the Company and its subsidiaries, and explain and support the Company's conclusion that senior subsidiary officers do not yet have the requisite authority or responsibilities for policy-making functions since these responsibilities continue to be maintained by the CEO, the CFO and the General Counsel, the designated executive officers.

In an effort to ensure the correct designation of the Company's executive officers, the Nominating and Corporate Governance Committee of the Company's Board of Directors, in February 2008, reviewed the designation, and determined that these officers and only these officers are properly designated as the Company's executive officers. This conclusion was based on the extent of oversight and involvement that the executive officers had in all significant decisions within the Company and its subsidiaries.

In light of the factors stated above, the Company believes at this time that its designation of executive officers meets the SEC's criteria. In the future, the Company will regularly review the SEC's criteria in light of changing roles and responsibilities of senior Company personnel to ensure the Company's classification of executive officers continues to be correct.

Cash Bonus (comment #4):

You disclose that one criterion under the Performance Compensation Plan was a Cash Flow Target. Please advise whether this measure is a GAAP financial measure. If not, disclose in future filings how any non-GAAP financial measure is calculated from the company's audited financial statements. Refer to Instruction 5 to Regulation S-K Item 402(b).

Response

One of the Company's criteria under the Performance Compensation Plan was the achievement of the Cash Flow Target of \$100 million for fiscal year 2009. This target is defined as cash flow generated from operations at the subsidiary level excluding corporate cash activity [debt and interest payments, acquisitions and divestitures, tax payments, pension contributions, stock option exercises and corporate general and administrative expenses]. This measure is considered a non-GAAP financial measure. In future filings, the Company will disclose how any such target that is a non-GAAP financial measure is calculated from the Company's audited financial statements.

Cash Bonus (comment #5):

When disclosing performance targets under your cash incentive plans, please also disclose any threshold, target and maximum levels for each performance goal. In addition, disclose how the payout amounts are determined across the payout range. In this regard, you disclose that the possible payouts range from a multiplier of .20 to 2.0 times the target cash bonus, but you do not disclose the performance levels that would result in these payout amounts. Furthermore, it is not clear why achieving 90% of the EPS target amount resulted in a bonus paid at a .52 multiplier or why achieving 110% of the cash flow target resulted in a bonus paid at a 2.0 multiplier. Please expand your discussion in future filings.

Response

In future filings, we will comply with your comment requesting further information regarding our cash incentive plans including the disclosure of any threshold, target and maximum levels for each performance goal and how the payout amounts are determined across the payout range.

Cash Bonus (comment #6):

In future filings, please provide further discussion and analysis regarding how the Committee arrived at the actual amounts paid under your cash incentive plans. For example, we note from disclosure in the Summary Compensation Table on page 15 that Mr. Richey was paid a \$369,000 bonus pursuant to the Performance Compensation Plan; however, you do not provide a clear explanation in your compensation discussion and analysis of how the Compensation Committee arrived at this amount. Further, we note that 30% of the PCP was based on the achievement of individual performance criteria, but you do not provide a robust discussion of these individual performance objectives or how each executive officer achieved them. We also note that the Committee authorized a one-time discretionary increase adjustment to the PCP payments to the executive officers other than the CEO, but you do not disclose the amount of this discretionary increase or why your CEO did not also participate in the award.

Response

In future filings, we will comply with your comment requesting further discussion and analysis regarding how the Committee arrived at the actual amounts paid under our cash incentive plans.

With respect to the executive officers' individual performance objectives, the Company does not believe that they are material, and believes that their disclosure is therefore unnecessary. Each executive officer individually determines his or her objectives. The objectives are focused on key, short-term strategic factors such as operational matters, legal issues, acquisitions, divestitures, cost savings or other issues of importance. There are no weights assigned to the specific individual objectives. The Committee uses its subjective judgment in the evaluation of each executive officer's achievement of the objectives on an overall basis at the end of the fiscal year. In exercising its judgment, the Committee takes into account the business and economic environment at the time the objectives were established and any relevant circumstances which may have changed during the ensuing year.

In the event that the Committee were again to authorize a discretionary increase adjustment to the PCP payments to executive officers, we will disclose the amount of such adjustments and the reason why any executive officer did not participate in the award if such were the case (for FY 2009, the CEO elected to not participate in the discretionary award).

Compensation Consultant and Market Checking (comment #7):

It appears that the Committee uses the data from compensation surveys for benchmarking purposes. If so, you must identify the companies used. In future filings, for purposes of Item 402(b)(2)(xiv) of Regulation S-K, please identify the benchmarked companies. For further guidance, please refer to Question 118.05 in our Regulation S-K Compliance and Disclosure Interpretations, available on our website at www.sec.gov/divisions/corpfin/guidance/regs-kinterp.htm.

Response

As stated in the proxy statement section referred to (pages 9 and 10), the Committee's compensation consultant, Towers Perrin, provided a report in September 2008 which the Committee and management used for benchmarking purposes with regard to FY 2009 executive compensation. This report included compensation data from two separate groups of companies. One group consisted of the six peer companies identified in our FY 2008 annual report to stockholders as the "2007 Peer Group", comprising the following: Itron, Inc., Badger Meter, Inc., Roper Industries Inc., Tektronix Inc., Pall Corporation and Clarcor, Inc. For many years, the Committee has utilized the data from the peer group for compensation benchmark purposes, and, because of the small size of the peer group and periodic changes in its composition, has also utilized data from a second, larger group of companies. For FY 2009, the consultant compiled this data from the second group in a composite survey based on two separate surveys of general manufacturing companies, adjusted to the Company's relative size. These were commercially available surveys, one prepared by Towers Perrin, and the other by Watson Wyatt. The Company did not select or have any role in the selection of these surveys or the companies included therein. There were between 144 and 272 companies included in the composite survey, depending on the executive officer position. For this reason, we do not believe that it is feasible or useful to identify these benchmarked companies in future filings.

Summary Compensation Table, page 15 of the Proxy Statement (comment #8):

In your response letter, please explain why you report the entire amount awarded to the named executive officers under the Performance Compensation Plan in the Bonus column of the Summary Compensation Table. In this regard, it appears that the majority of this award should have been classified as an incentive plan award and reported in the Non-Equity Incentive Plan Compensation column, whereas the additional one-time discretionary increase amount should have been reported in the Bonus column. Further, we note that you do not report the PCP awards in your Grants of Plan-Based Awards table on page 16. If you will revise your disclosure in future filings to comply with this comment, please confirm this in your response. For further information, refer to Item 402(a)(6)(iii) of Regulation S-K and Question 119.02 of Regulation S-K's Compliance and Disclosure Interpretations, located on our website at <http://www.sec.gov/divisions/corpfin/guidance/regs-kinterp.htm>.

Response

We agree that the majority of the PCP payments should have been included in the "Non Equity Incentive Plan Compensation" column of the Summary Compensation Table, and that only the one-time discretionary increase amounts should have been reported in the "Bonus" column. We also agree that the PCP awards should have been reported in the "Grants Of Plan-Based Awards" table. We will revise our disclosure in future filings to comply with this comment.