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THE POLYTECHNIC

ENGINEERING PROJECT NO 612-0201

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FLORIDA A&M UNIVERSITY

THIRD QUARTER
REPORT JULY 1, 1984 -
SEPTEMBER 30, 1984

**UNIVERSITY OF MALAWI - THE POLYTECHNIC
FAMU/USAID POLYTECHNIC PROJECT**

**The Polytechnic
P/Bag 303
Chichiri
BLANTYRE 3**

30th September, 1984

**Heldon W. Cole
Representative
House
P.O. Box 30455
Capital City
LILONGWE 3**

Dear Mr. Cole:

This third quarter Project Progress Report - July 1, 1984 through September 30, 1984 - reflects the activities of the FAMU/USAID Technical Assistance Team at the University of Malawi - The Polytechnic.

As you are aware, June through September is a period in which all regular scheduled University Academic activities cease. During this period Team Members who are normally involved in classroom instruction turn their attention more toward planning and evaluation. During the same period, the Industrial Counselor's normal activities are continued plus the addition of the Industrial Attachment Program Activities - visiting firms with students on Industrial Attachment. Team activities in this report then, will be centered around those items mentioned herewith.

I am pleased to report that all elements of FAMU/USAID Polytechnic Project are progressing in a timely manner.

If additional information - on any aspect of this project - is desired, please feel free to request same.

Sincerely

Vernal Taylor
**VERNAL L. TAYLOR
CHIEF OF PARTY & INDUSTRIAL COUNSELOR**

VLT/ss

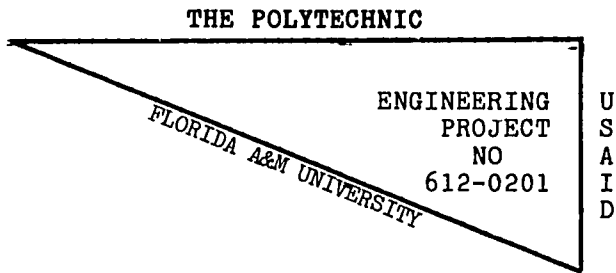
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THIRD QUARTER REPORT

JULY 1, 1984 - SEPTEMBER 30, 1984

CONTRACT NO AFR 021 C 00 3014 00

UNIVERSITY OF MALAWI ENGINEERING PROGRAM



COLLEGE OF ENGINEERING SCIENCE & TECHNOLOGY

FLORIDA A&M UNIVERSITY

THE UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

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 - STUDENTS DESCRIPTION OF INDUSTRIAL ATTACHMENT ASSIGNMENT
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- (B) FORM # 118, INDUSTRIAL ATTACHMENT VISITATIONS.....

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I INTRODUCTION

Florida Agricultural and Mechanical University (FAMU) Technical Assistance Team has been assigned to the University of Malawi's Polytechnic to carry out an engineering project contract - agreement between FAMU and the United States Agency for International Development (USAID).

The objectives of the Technical Assistance services are to provide specialized expertise in engineering through classroom instruction and to assist the Principal and Department Chairmen of the Polytechnic in developing, reviewing assessing and, as necessary, modifying the Institute's existing curriculum.

The purpose of the Project is to improve and expand the institutional capability of the Polytechnic Institute to produce Malawian Engineering Manpower for Government, Industry and Private Sectors.

This is the Third Quarter Report, and it principally covers the period July 1st through September 30th, 1984.

II HIGHLIGHTS

Dr. Ernest E. Erickson, Professor of electrical engineering at the University of Central Florida arrived in Blantyre on 15th August, 1984, to join the Technical Assistance Team. He was accompanied by his wife, Mrs Frances T Erickson. The two had visited Blantyre before - in 1981. They have friends here; and from all indications they are very much at home.

Professor Erickson is a replacement for Dr. Barrett Hazeltine, - Professor of electrical engineering at Brown University.

Mr. Stephen Payne - Professor of computer technology and systems at Florida A&M University arrived in Blantyre 15th August, 1984, and remained through 22nd August, 1984. Mr. Payne came to conduct a second training program on word-processing, student tracking system and general programming to the Malawi faculty and project personnel. Mr. Payne also, installed an enhanced version of the student tracking system, new software for a faculty data base and a new field accounts record system.

Presently all student records are being computerized. The system is quite advanced and will eliminate the need for much paper work and physical storage space. Among those trained by Mr. Payne, was the Secretary for the **FAMU/USAID Project** - Miss Seeta Sharma, The Vice Principal's Secretary, Ms. Florence Gonani, and Ms. Margaret Chibambo, Teacher at

the Polytechnic , Department of Business Studies.

Mr. David Garms, Program Officer, USAID/Malawi, has recently been appointed Project Officer for the Polytechnic engineering expansion Project. Mr. Garms has held several productive meetings with Chief of Party, Team Members, Polytechnic Officials, and the University Estate Development Officer.

Dr. Ajit S. Gill, Technical Assistance Team Member and Professor of civil engineering has been appointed by the University of Malawi to serve on a thesis committee for the Polytechnic's first candidate for the master's degree in engineering. The committee consists of Dr. Gill and the department head for civil engineering.

Florida Agricultural and Mechanical University has agreed to a contract amendment that provides it with the responsibility for procurement of engineering laboratories equipment, science laboratory equipment, and for the library facilities. The Science Building, and Library constructions are USAID financed. The science building's foundation has been laid, and therefore the construction is well on it's way. Construction on the Library should begin around the early part of 1985. Funds allocated for procurement amount to \$720,000.00.

Back On The Job - Professor Ajit Gill - While on a five day

official leave from the Polytechnic with his wife and his two visiting sons - was involved in a single car accident that caused both he and Mrs Gill to be hospitalized for more than a month. The accident occurred near Chipata, Zambia; the Gills were admitted to that city's hospital for three days; from which they were flown to Johannesburg South Africa for specialist, treatment. The accident occurred during the three month academic break between terms; therefore, there were no interruptions in specific assignment. Dr. Gill's medical report revealed that he would be recovered by the beginning of the academic year, and that he would be able to carry on his responsibilities. We are happy that Dr. Gill is back, and on the job.

III TECHNICAL ASSISTANCE TEAM ACTIVITIES

Normally, this section of the report carries a review of the Team's activities on a quarterly basis. Dr. Ajit Gill will not have an activity review because of his confinement to hospital. Professor Hazeltine departed from the Polytechnic on first of August, 1984, therefore he will not have an activity review in this report: Dr. Erickson reported for his assignment on August 15, 1984 - most of his time has been devoted to orientation, getting settled in his home, and studying the work that was done by Professor Hazeltine - in electrical engineering - over the past year.

June through September is the period in which all regular University Academic Activities ceases. From the 14th June through first of August, Technical Assistance Team Members held regular sessions for the purpose of reviewing progress made during the past academic year, - curriculum and instructional innovations. The team also made an evaluation and critical analysis of the curriculum in term of content, proportionality of subject matter, and the sequence of offerings. This is an on going process that will require inputs and data collections from several sources prior to the presentation of any recommendations. During the 1983 - 84 academic year, - when given opportunities, - team members worked with their respective department heads and faculties as they sat out to make innovations in the present curricula.

The activities of Professor C. J. Rigby - Mechanical engineer and that of Mr. Vernal L. Taylor - Industrial Counselor for the period, follow:

Professor C. J. Rigby - Mechanical Engineer, Progress Report
Period July 1 - September 30 - The Polytechnic was on academic break during nearly all of this reporting period. Most of my activities were involved in commissioning apparatus in laboratory T2. I submitted a Mechanical Engineering Technical Assistance Project plan on 17th July. The sections A through D on this plan will be addressed in the corresponding sections A - D in this and the following progress reports. I was absent from the Polytechnic during my two week R & R leave which began on July 18th.

- A. Teach mechanical engineering courses both classroom and laboratory. I have been assigned to teach two courses for the 84 - 85 academic year: D6/SM - Solid Mechanics and D6/PE - Process Engineering. These are final year mechanical engineering courses that were taught last academic year for the first time by an expatriate Professor who's contract is now terminated. The syllabus for each of these two courses need major revisions.

Furthermore, the External Examiner/Consultant in Mechanical Engineering pointed out in his report that there is little

or no foundation for these two major final subjects. My own research has uncovered that the students have: very little or no background in vector analysis, no tensor analysis, no exposure to the fundamental equations of viscous fluids, no exposure to stress/strain in three dimensions, little heat transfer and no diffusions theory. All of these topics and more must be developed in two restructured self-contained courses for D6/PE and D6/SM. This will be a very challenging academic year: for the students because of their lack of subject background and for me because these are not among the several courses I have listed in previous Progress Reports and to the Department Chairman, that I am prepared to teach. However I believe this will be a rewarding academic year with the proper student/teacher motivation to learn and teach.

Develop Laboratory Experiments - After some initial setbacks much progress was made in developing laboratory experiments. The fulltime assistance that I was relying on from my counterpart and the two technicians during the academic break did not fully materialize.

My assigned counterpart also is a counterpart to the Industrial Counselor who kept him busy with other assignments. The counterpart also had to take his deserved holiday. The technicians informed me they were going on annual leave (two weeks and 5 weeks respectfully). In

response to my need for fulltime assistance in repairs, calibration and installation of laboratory equipment the Chief of Party approved the hiring of Mr. Kachepa (a recent Polytechnic/ Mechanical Engineer Graduate) to assist me for seven weeks (beginning August 14, 1984).

Work attempted and progress made on the apparatus in laboratory T2 during this reporting period include:

1. Single stage centrifugal pump, PLINT - performed maintenance and trouble shooting of the suction gauge which needs repairing or replacement.
2. Mini - Engine Test Rig, PLINT - performed maintenance, calibration and repair: tuned up engine, replaced hydro - dynamometer tubing to improve stability of system, calibrated the torque meter, reinstalled the air flow meter to remove air bubbles, and rewelded the exhaust pipe to prevent leakage. The engine can now be stabilized and controlled over the required range of engine speed and all required instruments are in good working order. Ran experiments to determine engine performance characteristics and verified it's readiness to be used by students.
3. Heat Pump and Air Cooler, PLINT - installed apparatus and made operational runs to check out system in both heating and cooling mode. All components seemed to be working but the thermocouple readings were erratic.

Spent several days trouble - shooting this unit only to discover that several of the thermocouple wires were reversed in polarity inside the compressor unit. Corrected the wiring and calibrated the thermocouples. Ran performance test and verified that unit is now ready for student use.

Note: Since this unit had never been operated in Malawi before, the wiring error must have been made in the factory.

4. CUSSONS SINGLE STAGE AIR COMPRESSOR

Several problems were discovered and investigated concerning this unit. First the analog speedometer used to indicate compressor speed was not working. After trouble shooting we discovered that the signal conditioning circuiting in the instrument panel was malfunctioning and the analogue meter itself gave inconsistent readings. We had no wiring diagram to allow us to correct this problem. A work around procedure was devised that consisted of feeding the signal from the tach sensor directly to a digital tach meter.

A second problem was that a water flow meter (sharp edged circular orifice) that was illustrated in the handbook provided was not intact received with the

unit. Since measurement of water flow rate is essential to performing a heat balance with the unit, we devised a crude alternate procedure of determining flow rate.

Another problem noted was that due to the low heat exchange rate several lines need to be insulated and in particular the incoming water line should be shielded from the sun. Finally, please note that the manual provided with this unit was very sketching with poor engineering diagrams, very brief procedures and no performance data to compare our data to. I wrote cusson's concerning these difficulties and received a reply on September 28th, 1984. They sent the requested wiring diagram and some advice on trouble shooting the tachometer but stated that a water flow meter was not ordered. In short their response was only partly satisfactory.

Using the work round mentioned, this unit could be used by students but the results might be only marginal. More effort and some funds are needed to make this a good stand alone apparatus as intended.

5. Air Flow Bench - This unit checked out well. We obtained satisfactory results on the flow visualizations, boundary layer and drag force experiments.

6. Thick cylinder apparatus - all components seemed to function properly with this apparatus except some of the strain gauge readings did not correspond to expected. At the time of this writing we are not certain if the problem lies with the strain gauge wiring or our use of the theory.

7. THIN CYLINDER APPARATUS - Our first task was to get the technicians to reseal the relief valve in order to maintain line pressure. After operation runs were made we discovered that two of the strain gauge could not be balanced properly. This unit can be used with partial success.

8. Thermal conductivity apparatus - installed the apparatus to water and electrical supply lines. Made operational runs which indicated that the experiment was ready for use by students.

9. Steam motor test set - Received a reply on July 26, 1984, to enquiries concerning the two burned out thermostats which occurred during laboratory sessions held in March. Plint, the manufacturer, admitted similar problems had occurred recently and sent a new wiring diagram to relocate the replacement thermostats remote from the boiler. More work will be performed on

this unit as soon as we receive the replacement thermostats.

10. Laminar - Turbulent Pipe Flow Apparatus - I have obtained approval from the Registrar and placed a work order to the Maintenance Department to permanently install this unit. We have received no word to date on when they will perform this task.
11. Process Trainer - placed an order for two replacement detector thermistors on 14th of August with FAMU/USAID funds. No reply to date.

B. Provide - In service Training to Mechanical Engineering teaching assistants.

As mentioned in part A, my counterpart has been very busy with other assignments especially since he was then the only Malawian lecturer in the mechanical engineering department. He has, however, worked with me a couple of days on one of the laboratory experiments. A second Malawian lecturer Mr. Chawawa, was hired, and he appears anxious to learn. He snares the office with me and from our conversations I believe he would be a good candidate for counterparting. I will pursue this matter further.

C. Assist in developing a relevant curriculum basic to obtaining the B.Sc. and M.A. degrees in Mechanical Engineering.

Our approach to this aspect of my assignment is to make systematic contacts with industry to determine their needs for engineers, access the present curriculum, and make recommendations with these inputs incorporated. This approach has been initiated by our Team. In September, I accompanied the Chief of Party and Industrial Counselor on visits to several companies. The most useful visits were to the sugar processing plant is Dwangwa, and the ADMARC tung oil processing plant is Mzuzu. The latter especially requested aid from the Polytechnic in developing their tung oil process, and we discussed consultant aid and student attachment.

The two senior courses that I have been assigned to teach are new and they have not been supported with adequate prerequisite courses. I am presently rewriting the course syllabic to remedy this situation. In the long run a comprehensive and systematic approach must be taken that takes the inputs from the Industrial Counselor's industrial surveys to determine the desired graduate skill profile.

- D. Recommend practical changes in the current curriculum for diploma candidates. As mentioned above, this aspect of assignment is progressing in a systematic manner that is to be based on data collected from several sources.

To this end I attended meetings in September, chaired by the department chairman and my counterpart. They seem to be aware now that this curriculum development effort must be approached more systematically.

MECHANICAL ENGINEERING TECHNICAL ASSISTANCE PROJECT PLAN

BY C. J. RIGBY

RESPONSIBILITIES	OUTPUTS	INDICATES & MEANS OF VERIFYING	MAJOR ASSUMPTION
<p>A. Teach mechanical engineering (ME) courses both classroom and laboratory and develop laboratory experiments. Prepare equipment list for department.</p>	<ol style="list-style-type: none"> 1. Students completing courses. 2. Students participating in laboratory sessions. 3. Existing and future apparatus are incorporated into M.E. coursework. 4. Updated equipment list is transmitted to department head. 	<ol style="list-style-type: none"> 1. Records of Student exams and classroom attendance. 2. Laboratory reports and project paper. 3. New or updated laboratory sheets and compiled M.E. laboratory manual. 4. Letter of transmittal for M.E. equipment list. 	<ol style="list-style-type: none"> 1. Polytechnic will make relevant records available 2. I am assigned to teach ME courses generally relevant to my professional/academic experience: thermodynamics, fluid/mechanics, dynamics, controls experiments, instrumentation, aerospace engineering, system analysis and design. 3. Students meet the minimum required background for courses. 4. Required instructional materials are received in time. 5. Administration and department heads provide the customary support of supplies, informations and classroom and office space. 6. COP and team members provide agreed upon support of supplies, information and exchange of ideas. 7. Support of a technician and secretary are required.

RESPONSIBILITIES	OUTPUTS	INDICATES & MEANS OF VERIFYING	MAJOR ASSUMPTION
<p>B. Provide in-service training to M.E. teaching assistant to upgrade their skill.</p>	<ol style="list-style-type: none"> 1. A counterpart is selected. 2. Joint project objectives are agreed upon. 3. The project is scheduled and carried out. 4. Progress is evaluated periodically. 	<ol style="list-style-type: none"> 1. Relevant correspondence 2. Copy of the project progress report. 3. Final project paper and presentation. 	<ol style="list-style-type: none"> 1. One or more teaching assistant is made available for in-service training. 2. There is a willingness and co-operation on the part of the administration and department head to support our project. 3. There is a desire and effort on the part of the teaching assistant to improve his skills.
<p>C. Assist in developing a relevant curriculum basic to obtaining the B.Sc. and M.A. degrees in mechanical engineering.</p>	<ol style="list-style-type: none"> 1. Evaluation of current D4-D6 curriculum and course syllabus. 2. Participation in working group meetings on curriculum improvement. 3. Determination of industrial/GOM engineering needs and constraints on curriculum imposed by limited resources or administration. 4. Proposals for new and/or improved courses syllabi and recommended curriculum changes 	<ol style="list-style-type: none"> 1. Copies of courses syllabi and other relevant documents in my file. 2. Minutes of working group meetings. 3. Copies of proposals and progress reports. 	<ol style="list-style-type: none"> 1. I am invited or allowed to participate in curriculum development working group meetings. 2. Relevant documents discussing goals of Polytechnic became available. 3. Relevant background information became available. 4. Results of Industrial surveys became available. 5. Principal, Vice Principal and department heads and staff are willing and open to changes to improve the current curriculum, specialize to B.Sc degree for an M.A. degree in in M.E.

RESPONSIBILITIES	OUTPUTS	INDICATIONS & MAJOR OF VERIFYING	MAJOR ASSUMPTIONS
<p>D. Recommend practical changes in the curriculum for diploma candidates.</p>	<ol style="list-style-type: none"> 1. Evaluation of current D1-D3 curriculum and course syllabi. 2. Same as item 2 above 3. Same as item 3 above 4. Same as item 4 above 	<ol style="list-style-type: none"> 1. Same as item 1 above 2. Same as item 2 above 3. Same as item 3 above 	<ol style="list-style-type: none"> 1. Same as item 1 above 2. Same as item 2 above 3. Same as item 3 above 4. Same as item 4 above 5. Principal, Vice principal department heads and staff are willing and open to changes to improve the current diploma curriculum.

Mr. Vernal L. Taylor - Industrial Counselor - June through September is the period in which engineering students get practical experiences in industry. Approximately 100 students were placed mostly in the Central and Southern Region of the Country. Assigned counterparts played major rolls in the placement and visitation of students during this period. While counterparts are full time teachers during the regular academic terms, they are available between June and September to devote adequate time to Industrial Counseling. Here after, prior to placing student for practical experiences, some counseling will be given each student. There also will be various forms to be filled out by each student. During Industrial visits and at the conclusion, three (3) more forms will have to be collected from the student and his supervisor. While the various forms are designed to collect meaningful data, the analysis of same puts a tremendous amount of addition workload on the Chief of Party and Industrial Counselor. So much so, until it is being recommended that consideration be given to the possibility of hiring an assistant to the Industrial Counselor. See Appendix A, form # 101 for scope of Industrial Counselor's work.

Mr. Stephen Payne's visit to Polytechnic was very productive. In addition to training personnels, he refined the computerized - student - record - keeping - system which

completed a job assignment for the Counselor. Data collected from one of the three forms distributed to students on industrial attachment provides up dated information required by the tracking system annually see Appendix , forms # 102, 103, and 110.

Prior to the beginning date of industrial visitations, the Industrial Counselor and his counterparts held several meetings for the purpose of familiarization and orientation. Counterparts worked very cooperatively and effectively in carrying out assignments. They are a very strong and dedicated team with a lot of good ideas, and with a willingness to learn and work. It was a pleasure working with them. We will continue - through out the year - to meet, evaluate, and make plans for the future.

IV RECOMMENDATIONS

Need for Industrial Counselor's Assistant

An unforeseen situation has arisen that warrents attention and consideration - There is a pressing need for an assistant to the Industrial Counselor; either on a part time basis or full time.

Thus far, all aspects of Counselor's job have gone according to plan. Survey forms, and several other forms have been sent out to collect information that must be compiled and analyzed - There are many other job aspects of the position

that must be developed. As indicated in Appendix A, form # 101.

The problem stems from the fact that this is a developmental stage, which calls for a lot of ground work, and at the same time routine work must be carried on. Once the department is established correctly, management of same becomes easy. When this department is fully developed, there is a possibility that other academic segment of the Polytechnic that are concerned with Industrial Attachment could be incorporated under the same umbrella. A figure between \$300.00 to \$500.00 per month would be sufficient to attract a fulltime qualified Malawian or a part time American. In Kwacha this would amount to approximately K425.00 to K700.00 per month, over the period of approximately 20 month. Taking the highest estimate - \$500.00, this would amount to a total of \$10,000.00.

Travel and Perdiem for Counterparts

Another unforeseen situation also has been discovered that needs immediate attention - That is, no contract funds have been categorized for travel and per diem for counterparts, yet these individuals are expected to visit industries; and to attend engineering and industrial meetings along with their counterpart, or as a representative for his department.

During the industrial interm period, counterparts travel to all parts of the country to visit students and firms. Sometimes it requires several nights to be spent away from home. There is a need for these individuals to travel and to visit firms before, and after the Industrial Attachment period. See Appendix B, form # 118, for Industrial Attachment student's visitations.

Based on experiences gained over the past year, I recommend that the sum of \$5000.00 be categorized for travel and per diem for Industrial Counselor's counterparts for the duration of the project.

More Funds for Consultancy

Less critical, but highly desired is a need to have adequate funds categorized such that additional specialists in the various engineering areas can be brought to the Polytechnic to work with present Team Members in those undeveloped areas of Laboratory experiments that lacks some degree of standardization. The most appropriate time for this type of service would be after procurement of engineering laboratory equipment. Time required for such service should vary from three to six weeks per visit. Thus far consultants have only served the Industrial Counselor's need. It is desired that each of Team Member utilize this service. It is also desired that representative of the American Society for Engineering Education (ASEE) pay the

project a visit. Hopefully such a visit would stimulate some additional interest in University Linkages - between Malawi and the United states.

V CONCERNS

While Florida A&M University does not expect any special parental treatment from AID/Washington or AID/Malawi when critical decisions must be made, concerning it's project; - it does expect that decisions to disapprove requests, or recommendations will have been derived from studies that reflect their sincere efforts to be helpful; particularly where a favorable decision would provide enhancement to both the employees, and contractor's overall efficiency in operation.

So far, we have found a lot to be desired where unfavorable decisions were made on the basics of supporting documentations. We have experienced two such decisions within the last eight months - poorly prepared documents upon which important decisions were made. In each case USAID/Malawi has expressed concern for saving money, rather than seeking out means by which a solution to the problem could be had. It has failed to provide necessary data to substantiate beliefs that cost would increase or decrease; yet the contractor did the necessary research that showed savings would be realized. Only after our fairly long period of persistent argument for approval, did

USAID/Malawi finally reversed it's decision on the first case; and of course, we were granted permission to complete the computer programming Project

Surely, we are disappointed over AID/Malawi's latest decision that denied the lump-sum payment for purchase of private own vehicles; just as we were over the first denial, but not as much over the decisions themselves as we are over the documentations upon which they were based. In the recent case, we feel that AID/Malawi owed the contractor at least the courtesy of an investigation for the purpose of determining:

- (a) Have other contractors made use of the plan?
- (b) Who were granted the lump sum privilege?
- (c) Why were they granted the option?
- (d) Advantages of the plan
- (e) Disadvantages of plan
- (f) Cost of the lump-sum plan verses shipping out (POV) from the U.S.A.

Instead, the document is heavily flavored with "I" which explicitly indicates that USAID/Malawi has no knowledge of the plan, nor is it willing to do the necessary research to become familiar with same. Excerpts from the document that make heavy use of "I" follows:

1. "So far as I am aware this is the first time this particular issue has been raised"
2. "I have no knowledge of how"
3. "I see no reason to change it"
4. "I see no justification for enlarging upon a benefit which may further increase the cost of the contract."
5. "I believe the heart of the problem lies in the procedures."
6. "I believe the most practical approach to this problem."
7. "Circumstances as I understand them."
8. "I do not at this time favor the promulgation of any additional benefit that would increase the costs of these contracts."

I am sure that the author of the document knows that export and import problems for Malawi have been intensified over the past year and a half; yet, he chose to compare any difficult that Florida A&M University has experienced during this period with that of the University of Florida's, whose project begun approximately five years ago. The fact that a statistical report has labeled Malawi as having one of the highest car accident rate in the world, should have warrent some special concern - on the part of AID/Malawi - for the contractor's employees safety.

The steering wheel on cars, and the side of the road on which cars are driven are just the opposite of those in America. Furthermore, the Author is fully aware of the fact that Florida A&M University has never used the Port of Beira for shipping. Why then, has he made such an accusation? We only know of four reports - concerning Florida Agricultural and Mechanical's Project - that were released by USAID/Malawi, and neither has been prepared without false, and or conflicting statements. AID/Malawi explained that it had informed AID/Washington of the mistakes, but FAMU did not receive a copy of the corrective statements that was sent. Therefore, we are disturbed and concerned about this discontinuity.

If no other contractors have been granted the lump-sum option, then, we regret our position that is expressed here. However, if such a plan has been granted to others, we will still feel USAID/Malawi is insensitive to our needs.

Hereafter, we hope that those who advise, and prepare documents for USAID Mission Representative, will do so in a manner that will impact positively on FAMU/USAID relation, and our overall efforts in Malawi. The FAMU/USAID Project is a joint effort.

For continued successful operation, Florida A&M University only needs those same benefits, recognition, and attention that other contractors enjoy.

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VI FIELD EXPENDITURES

FIELD ACCOUNT BY CODE

CHECK #	DATE	VENDOR	ITEM	PURPOSE	AMOUNT K
* BUDGET CODE 1					
123644	24/07/84	SECRETARY	SALARY	OVER TIME	15.00
123645	24/07/84	SECRETARY	SALARY		187.00
123656	13/08/84	MRS GILL	TABULATING FORMS	FOR TRAI & JOB ANALY SURV FORM	300.00
123660	24/08/84	SECRETARY	SALARY		211.00
123661	24/08/84	MR. PIUS KACHEPA	SALARY	WORKING IN THE LABORATORY	157.50
123674	24/09/84	SECRETARY		SALARY	211.00
123678	27/09/84	MR PIUS KACHEPA	SALARY	WORKING IN THE LABORATORY	350.00
123679	27/09/84	MR PIUS KACHEPA	SALARY	WORKING IN THE LABORATORY	87.50
** SUBTOTAL **					1519.00

FIELD ACCOUNT BY CODE

CHECK #	DATE	VENDOR	ITEM	PURPOSE	AMOUNT K
* BUDGET CODE 5					
123636	11/07/84	HATACHMAN	PETTY CASH	PETTY CASH FOR WATCHMAN	100.00
123637	12/07/84	BLANTYRE WATER BOARD	UTILITIES/WATER	HOUSEHOLD	116.06
123638	12/07/84	ESCOM	UTILITIES/ELECTRI	HOUSEHOLD	279.66
123639	12/07/84	GASKELLS LTD	TYPEWRITER EDITOR 4C	SERVICE CONTRACT QUARTERLY	35.00
123640	12/07/84	MALAWI POST OFFICE	TELEPHONE	COMMUNICATION	537.35
123643	17/07/84	PPS	STATIONARY	OFFICE SUPPLIES	41.04
123647	24/07/84	BLANTYRE WATER BOARD	UTILITIES/WATER	HOUSEHOLD	173.80
123648	30/07/84	PACKAGING INDUSTRIES	SHIPPING SURFACE	FOR HAZELTINES	16.80
123649	25/07/84	ESCOM	UTILITIES/ELECTR	HOUSEHOLD	425.77
123652	31/07/84	AIR MALAWI	AIRPORT TAX	FOR HAZELTINES	20.00
123653	08/08/84	VERNAL TAYLOR	PETTY CASH	FOR STAMPS ETC	100.00
123654	09/08/84	MALAWI POST OFFICE	TELEPHONE	PAYMENT FOR A DIRECT LINE	48.00
123655	10/08/84	MALAWI POST OFFICE	TELEPHONE	COMMUNICATION	488.00
123662	25/08/84	J S KANABAR	BATTERY FOR TORCH	FOR WATCHMAN BATTERY FOR TORCH	6.18
123663	27/08/84	PETTY CASH	FOR COUNTERPART	VISIT INDUSTRIAL ATTACHMENT	112.05
123664	29/08/84	ESCOM	ELECTRICITY/UTILITIE	HOUSEHOLD	206.26
123665	29/08/84	BLANTYRE WATER BOARD	UTILITIES/WATER	HOUSEHOLD	100.20
123666	29/08/84	MALAWI POST OFFICE	TELEPHONE	COMMUNICATION	954.00
123671	19/09/84	PETTY CASH		FOR FUEL	100.00
123672	18/09/84	PETTY CASH		FOR WATCHMAN	120.00
** SUBTOTAL **					3980.17

FIELD ACCOUNT BY CODE

CHECK #	DATE	VENDOR	ITEM	PURPOSE	AMOUNT K
* BUDGET CODE 7					
123659	21/08/84	DR. ERNEST ERICKSON	REIMBURSEMENT	TRAVEL EXPENSES	179.92
123667	03/09/84	AMI RENNIE PRESS	DR. ERNEST ERICKSON	REIMBURSEMENT	34.50
123673	19/09/84	MS. WALCOTT	60 LITRES PETROL	REIMBURSEMENT	78.60
123677	25/09/84	MR C J RIGBY	FEEDBACK	REIMBURSEMENT	80.79
** SUBTOTAL **					373.81

FIELD ACCOUNT BY CODE

CHECK #	DATE	VENDOR	ITEM	PURPOSE	AMOUNT K
* BUDGET CODE 8					
123635	03/07/84	V L TAYLOR	PER DIEM		83.84
123668	05/09/84	MR. C J RIGBY	PER DIEM	FOR INDUSTRIAL ATTACHMENT TRAV	342.00
123669	05/09/84	MR. V L TAYLOR	PER DIEM	FOR INDUSTRIAL ATTACHMENT TRAV	342.00
123670	05/09/84	MR STANLY TONOGO	DRIVER PER DIEM	FOR INDUSTRIAL ATTACHMENT TRAV	114.50
** SUBTOTAL **					882.34
** TOTAL **					11883.33

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VIII ACCOUNTING

	A	B	C	D	E	F	G	H	I
DATE	BAL. FORWARD (KWACHA)	DEPOSIT (US. \$)	EXCHANGE RATE (US. TO K)	GAIN IN (KWACHA)	TOTAL (A+B+D) (KWACHA)	LESS PAYMENT (KWACHA)	BAL (KWACHA)	EXPI CODE	CHEQUE NO.
03/07/84	4769.75	-	-	-	4769.75	83.84	4685.91	8	123635
11/07/84	4685.91	-	-	-	4685.91	100.00	4585.91	5	123636
12/07/84	4585.91	-	-	-	4585.91	116.06	4469.85	5	123637
12/07/84	4469.85	-	-	-	4469.85	279.66	4190.19	5	123638
12/07/84	4190.19	-	-	-	4190.19	35.00	4155.19	5	123639
12/07/84	4155.19	-	-	-	4155.19	537.35	3617.84	5	123640
13/07/84	3617.84	-	-	-	3617.84	1797.50	1820.34	3	123641
17/07/84	1820.34	2484.87	.7123	1003.64	5304.85	35.33	5273.52		Bank Charges
17/07/84	5273.52	1133.33	.7089	465.38	6872.23	16.43	6855.80		Bank Charges
17/07/84	6855.80			127.50	6983.30				
17/07/84	6983.30	-	-	-	6983.30	2952.00	4031.30	3	123642
17/07/84	4031.30	-	-	-	4031.30	41.04	3990.26	5	123643
24/07/84	3990.26	-	-	-	3990.26	15.00	3975.26	1	123644
24/07/84	3975.26	-	-	-	3975.26	187.00	3788.26	1	123645

Donald Taylor

CODE

- | | |
|----------------------------|-----------------------------------|
| 1. Salaries | 5. Other Direct Cost |
| 2. Consultants | 6. Equipment, Vehicle
Material |
| 3. Travel & Transportation | 7. Reimbursement |
| 4. Allowance | |

	A	B	C	D	E	F	G	H	I
DATE	BAL. FORWARD (KWACHA)	DEPOSIT (US. \$)	EXCHANGE RATE (US. TO K)	GAIN IN (KWACHA)	TOTAL (A+B+D) (KWACHA)	LESS PAYMENT (KWACHA)	BAL (KWACHA)	EXPI CODE	CHEQUE NO.
24/07/84	3788.26	-	-	-	3788.26	173.80	3614.46	5	123647
30/07/84	3614.46	-	-	-	3614.46	16.80	3597.66	5	123648
25/07/84	3597.66	-	-	-	3597.66	425.77	3171.89	5	123649
31/07/84	3171.89	-	-	-	3171.89	53.50	3118.39	3	123650
26/07/84	3118.39	-	-	-	3118.39	53.50	3064.89	3	123651
31/07/84	3064.89	-	-	-	3064.89	20.00	3044.89	5	123652
08/08/84	3044.89	-	-	-	3044.89	100.00	2944.89	5	123653
09/08/84	2944.89	-	-	-	2944.89	48.00	2896.89	5	123654
10/08/84	2896.89	-	-	-	2896.89	488.00	2408.89	5	123655
13/08/84	2408.89	-	-	-	2408.89	300.00	2108.89	1	123656
17/08/84	2108.89	-	-	-	2108.89	271.51	1837.38	3	123658
20/08/84	1837.38	1793.09	7057	747.77	4378.24	25.43	4352.81		Bank Charges
21/08/84	4352.81	-	-	-	4352.81	179.92	4172.89	8	123659
24/08/84	4172.89	-	-	-	4172.89	211.00	3961.89	1	123660

Vernal Taylor

CODE

- | | |
|----------------------------|-----------------------------------|
| 1. Salaries | 5. Other Direct Cost |
| 2. Consultants | 6. Equipment, Vehicle
Material |
| 3. Travel & Transportation | 7. Reimbursement |
| 4. Allowance | |

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	A	B	C	D	E	F	G	H	I
DATE	BAL. FORWARD (KWACHA)	DEPOSIT (US. \$)	EXCHANGE RATE (US. TO K)	GAIN IN (KWACHA)	TOTAL (A+B+D) (KWACHA)	LESS PAYMENT (KWACHA)	BAL (KWACHA)	EXPI CODE	CHEQUE NO.
24/08/84	3961.89	-	-	-	3961.89	157.50	3804.39	1	123661
25/08/84	3804.39	-	-	-	3804.39	6.18	3798.21	5	123662
27/08/84	3798.21	-	-	-	3798.21	200.00	3598.21	8	123663
29/08/84	3598.21	-	-	-	3598.21	206.26	3391.95	5	123664
29/08/84	3391.95	-	-	-	3391.95	100.20	3291.75	5	123665
09/08/84	3291.75	-	-	-	3291.75	954.00	2337.75	5	123666
03/09/84	2337.75	-	-	-	2337.75	34.50	2303.25	7	123667
05/09/84	2303.25	-	-	-	2303.25	342.00	1961.25	8	123668
05/09/84	1961.25	-	-	-	1961.25	342.00	1619.25	8	123669
05/09/84	1619.25	-	-	-	1619.25	114.50	1504.75	8	123670
19/09/84	1504.75	-	-	-	1504.75	100.00	1404.75	5	123671
18/09/84	1404.75	-	-	-	1404.75	120.00	1284.75	5	123672
19/09/84	1284.75	-	-	-	1284.75	78.60	1206.15	7	123673
24/09/84	1206.15	-	-	-	1206.15	211.00	995.15	1	123674

Vernal Hoyle

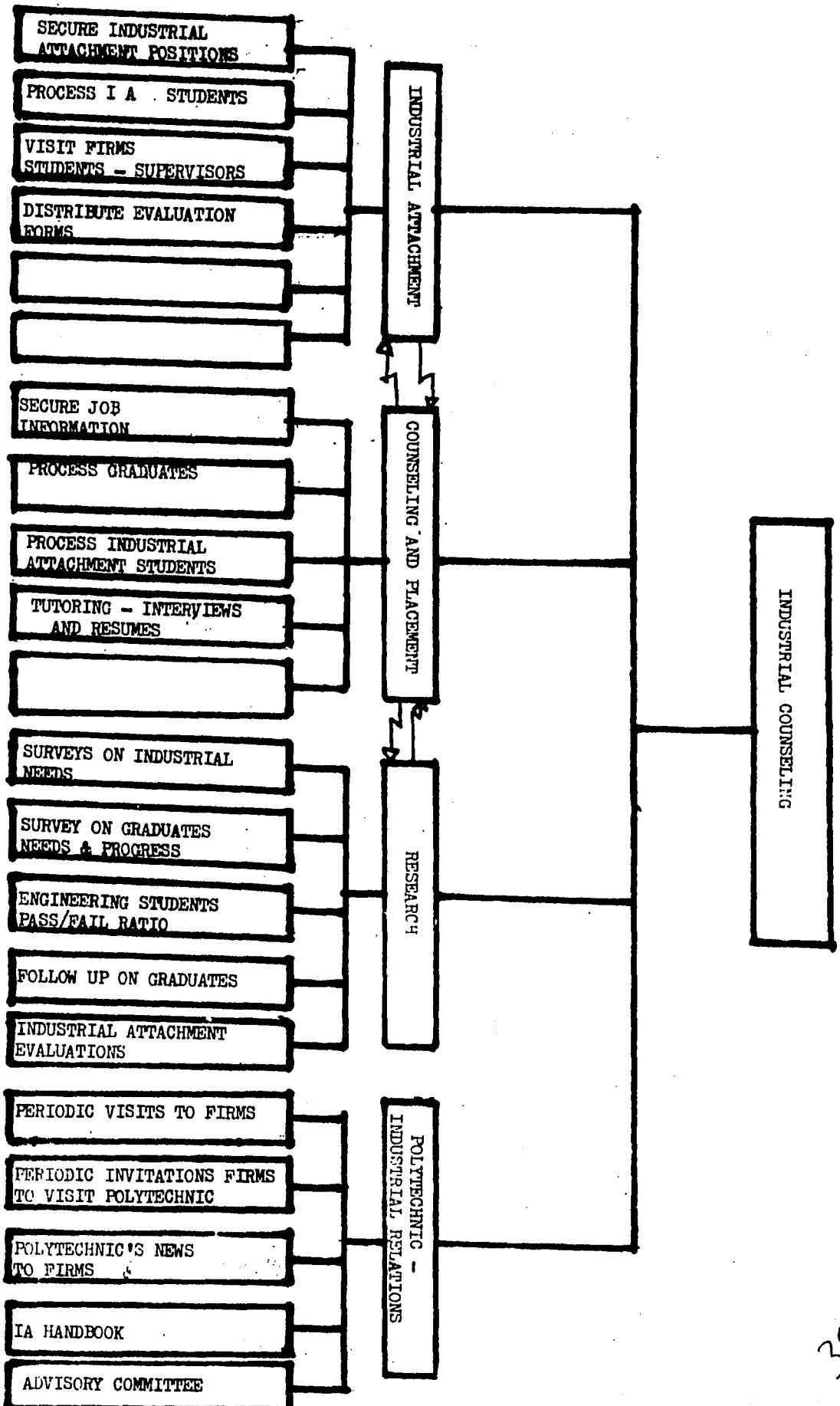
CODE

- | | |
|----------------------------|--------------------------------|
| 1. Salaries | 5. Other Direct Cost |
| 2. Consultants | 6. Equipment, Vehicle Material |
| 3. Travel & Transportation | 7. Reimbursement |
| 4. Allowance | |

APPENDIX A.

- (a) SCOPE OF INDUSTRIAL COUNSELOR'S WORK
- (b) STUDENTS AND EMPLOYERS EVALUATION
- (c) STUDENTS DESCRIPTION OF INDUSTRIAL ATTACHMENT ASSIGNMENT
- (d) INDUSTRIAL ATTACHMENT APPRAISAL FORM

IA - INDUSTRIAL ATTACHMENT



UNIVERSITY OF MALAWI - THE POLYTECHNIC
Office of Industrial Counselor
Chichiri, Blantyre 3, Malawi

DESCRIPTION OF DUTIES
(continued)

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STUDENT EVALUATION

The student will complete this portion of the evaluation and submit it to his immediate supervisor with enclosed pre-addressed envelope. The supervisor will then complete evaluation on the reverse side.

WORK PERIOD _____ 19 _____ to _____ 19 _____

FACULTY COUNSELOR _____

NAME _____
Last First Middle

COLLEGE _____ Class of _____ Division _____ Major _____

EMPLOYING FIRM _____

DEPARTMENT _____

SUPERVISOR'S NAME _____ TITLE _____

BASE PAY _____ Per (hr./wk.) Normal Working Hrs. _____ to _____

HOURS PER WEEK _____ OVERTIME: Yes _____ NO _____

DESCRIPTION OF DUTIES (List and describe briefly each job assigned to you. If you had more than one supervisor, please give the name of the supervisor for each job)

EVALUATION OF WORK EXPERIENCE
Positive Aspects:

Negative Aspects:

IN WHAT MANNER DID THIS
ASSIGNMENT CONTRIBUTE TO
YOUR PROFESSIONAL DEVELOPMENT

Please complete the bottom section on the sheet after your supervisor has rendered his/her evaluation of your performance.

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EMPLOYER EVALUATION - To be filled out by supervisor

Each evaluating supervisor or official is strongly urged to evaluate the student's performance in concert with the student. This joint evaluation is of paramount importance in the student's professional and personal development, so please be candid. Your evaluation will be used by the Faculty Counselor in the guidance and Counseling of the student. Please return this document to the University in the accompanying preaddressed envelope.

Please evaluate the student objectively, comparing him or her with other students of comparable academic level and training; with other employees serving in similarly classified positions; and with individual standard of performance. Should additional space be necessary for your comments, please feel free to attach a separate sheet to the form.

1. Briefly describe the position and responsibilities assigned to the student.
2. What are the student's major strengths and asset
3. What are the student's major professional and development needs?

Please comment briefly on the following:
QUALITY OF WORK

ATTITUDE

JUDGEMENT

INTERNATIONAL RELATIONSHIPS

DEPENDABILITY

ADDITIONAL COMMENTS

Overall Performance
Outstanding Very Good Average Marginal Unsatisf

Based upon the above evaluation, this student is ___ is not ___ invited to return for the next work period.

Supervisor's signature Date

To be completed by student prior to mailing.
I agree ___ disagree ___ with my supervisor's evaluation.

Student's signature Date
If you do not concur with your supervisor's evaluation. Please comment as to your reasons:___

UNIVERSITY OF MALAWI - THE POLYTECHNIC

Office of the Industrial Counselor

Student Description of Industrial Assignments

The information requested below will be made available to the Malawi community, to provide an additional source of information relating to Industrial Attachment jobs. It will be most useful if your answers are frank, complete, and responsible.

Please Print Clearly or Circle appropriate neatly. Date _____

Name _____ College _____ &Major _____ Yr _____ Div _____

Company _____ Location _____

Employer's Activity _____

Your department or work area _____

Job Title _____

Wage rate: K _____ Week or K _____ Month. Any overtime yes no

What is the normal work week? _____ Hours.

What are the major fringe benefits? _____

Number of I A quarters with this company 1 2 3 4 5 6 7 8

1. Describe in some detail your Co-op assignment (s) with this firm _____

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2. In what way was this job related to your major? _____

3. In what way was this position meaningful to your personal development (i.e. in your relationship with others, accepting responsibilities...)

4. In what way was this position meaningful to your professional development?

5. What do you consider the best features of this job? _____

6. What do you consider the worst features of this job? _____

7. To what extent did your supervisor(s) affect your evaluation of this assignment?

8. Were there any special qualifications or requirements for this job? (i.e. citizenship, security clearance, transportation, physical, etc.)

9. Does this organization offer potential for after graduation employment?

10. What is the likelihood that, if offered, you would accept a permanent position with this employer?

Not Likely Uncertain Likely Very Likely

Explain (if necessary) _____

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11. What training was available?

formal training program
on-the-job training
orientation

apprenticeship
other (explain) _____

12. Do you intend to return to your present co-op job?
yes no undecided

please explain _____

Remarks: (if any)

INDUSTRIAL ATTACHMENT APPRAISAL FORM

- 1. NAME OF STUDENT:
- 2. COMPANY'S NAME:
- 3. DISCIPLINE: CIVIL, MECH, ELECT.

STUDENT RESPONSE:

- 4. NATURE OF WORK ENGAGED IN
-
-
- 5. STUDENT'S ATTITUDE TOWARDS WORK ENGAGED IN
-
-
-
- 6. IMPROVEMENTS SOUGHT:
-
-

EMPLOYER'S COMMENTS:

- 7. NATURE OF WORK STUDENT ENGAGED IN
-
- 8. STUDENTS ATTITUDE TOWARDS WORK
-
- 9. GENERAL COMMENTS
-

VISITING LECTURERS COMMENTS

- 10. SUITABILITY OF WORK INVOLVED FOR TRAINING PURPOSES.

(I)	(II)	(III)	(IV)
Poor	Could be better	Adequate	Very good

- 11. GENERAL COMMENTS AND OBSERVATIONS OF STUDENT PERFORMANCE e.t.c.

SIGNED:

DATE :

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APPENDIX B

INDUSTRIAL ATTACHMENT - VISITATIONS

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INDUSTRIAL ATTACHMENT - STUDENT'S VISITATIONS

Form 118

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FIRM	PHONE	CONTACT PERSON	STUDENT	DEPT. C, E, M, U	CLASS	INDUSTRIAL VISITS		
						JOB LOCATION	CNC	DATE
Brown & Clapperton, Box 1582, Blantyre.	634 677	J.E. Bell	Chenje, S.M.N.		D2 M			
			Chapotera, G.H.D.		D2 M			
			Ngoma, T.C.O.		D4 M			
			Moses, D.		D4 E			
			Chinamale, W.		D4 M			
B & C Lilongwe								
ESCOM., Box 2047, Blantyre.	636 000	Personnel/Manager	Menyani, H.		D2 E			
		Training Officer	Banda, R.K.E.		L2 E			
			Chiligo, P.S.E.		D2 E			
			Chunda, J.		D2 E			
			Kamwela, R.A.		D2 E			
			Kamwendo, K.S.Y.		D2 E			
			Kasinje, W.J.		D2 E			
			Huwa, D.G.		D5 E			
			Dambuleni, A.C.		D4 E			
			Muyila, G.M.		D4 E			
			Maganga, W.B.		D4 E			
			Khofi, G.P.		D4 E			
			Kuntambila, A.		D5 E			

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FIRM	PHONE	CONTACT PERSON	STUDENT	DEPT. C, E, M, U	CLASS	INDUSTRIAL VISITS		
						JOB LOCATION	CNC	DATE
Survey Department, Box 349, Blantyre.	633 722	J.W. Green	Ngoma, I.		D4 C			
United Transport (MW), Box 176, Blantyre.	631 055	S.D. Chikafa	Chipala, G.D.		D2 M			
			Lupiya, F.		D2 M			
			Gondwe, W.C.W.		D4 M			
Sterling Products Int., P/Bag 301, Chichiri, Bt. 3.	630 133	Plant Manager	Hussein, J.R.		D2 M			
Gilcon, Box 314, Lilongwe.	730 688	Personnel Manager	Makhumula-Nkhoma, P.		D5 C			
Scott Wilson Kirkpatrick & Parteners, Box 314, Lilongwe.	620 211	W. Scott	Mwase, D.		D2 C			
			Mthinda, H.M.		D5 C			
			Nyirongo, D.K.K.		D5 C			
Blantyre Water Board, Box 30369, Chichiri, Bt. 3.	650 133	Personnel Manager	Kachale, S.B.M.		D2 M			
			Mtegha, T.C.		D5 C			
David Whitehead & Sons, Box 30070, Chichiri, Bt. 3.	630 544	Personnel Manager	Gonani, J.M.		D4 E			
			Kachoka, F.		D4 E			
Lever Brothers (MW) Ltd., Box 5151, Limbe.	651 000	N.W. Jones	Thupa, D.		D5 E			
			Chikafa, J.S.		D5 M			
Timber Products (MW) Ltd., Box 5050, Limbe.	650 599	Personnel Manager	Kampesi, J.		D2 M			

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FIRMS	PHONE	CONTACT PERSON	STUDENT	DEPT. C, E, M, U	CLASS	INDUSTRIAL VISITS		
						JOB LOCATION	CNC	DATE
W & C French, Box 478, Blantyre.		Mr. Somanje	Honde, H.L.J.		D4 C			
			Mzandu, D.L.N.		D2 C			
M.H.C., Box 414, Blantyre.	650 822	Personnel Manager	Gondwe, K.J.		D2 C			
			Nkhokwe, J.L.		D2 C			
			Shawa, D.L.L.		D2 C			
			Tualibu, C.R.M.		D2 E			
			Salamba, S.W.		D2 E			
			Chisi, W.S.M.		D2 M			
			Chakhala, H.T.		D2 C			
Leyland Motors, Box 581, Bt.	630 477	Service Manager	Mukayenda, M.B.		D2 M			
			M'dala, J.A.K.		D5 M			
Malawi Railways, Box 5492, Limbe.	652 244	Training Officer	Mwale, M.M.T.		D2 M			
			Mtentaonga, D.B.B.		D2 M			
			Mtambo, M.M.		D2 M			
			Zawanda, R.W.		D2 M			
Dept. of Posts, Box 580, Blantyre.	635 000	Mr. Makawa	Fukiza		D4 C			
			Mwakasungula, R.A.G.		D2 E			
			Mwakayoka, L.R.		D2 E			
			Phangaphanga, M.H.A.		D2 E			
			Mwanjasi, M.M.D.		D4 E			

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FIRMS	PHONE	CONTACT PERSON	STUDENT	DEPT. C, E, M, U	CLASS	INDUSTRIAL VISITS		
						JOB LOCATION	CNC	DATE
Intertec cont., (C. Africa) Ltd., Box 409, Blantyre.	636 825	Mr. Kapakasa	Kaipa, W.J.		D2 C			
Roberts Cons. Co., (M) Ltd., Box 30389, LL. 3.	765 244	Mr. Carrick	Kafoteka, S.I.		D5 C			
L.S. Brunette & Partners, Box 30013, LL. 3.	720 786	Personnel Manager	Mphonde-Band, J.A.		D5 C			
Stewarts & Llyods, Box 579, Blantyre.	635 033	Personnel Manager	Chilongozi,		D4 M			
Air Malawi Ltd., Box 84, Blantyre.	633 177	R.G. Koloviko Eng.Manager	Kayange, J.A.		D2 M			
			Lungu, P.W.J.		D2 M			
			Phiri, O.D.		D2 M			
M.B.C., Box 30133, Chichiri, Blantyre 3.	631 422	M.J. Msowoya	Macjessie, A.C.		D2 E			
			Makawa, D.		D2 E			
			Chekani, J.C.O.		D2 E			
			Chipofya, J.M.		D4 E			
Palmer & Bruessow, Box 318, Blantyre.		Personnel Manager	Chunda, D.		D2 C			

FIRMS	PHONE	CONTACT PERSON	STUDENT	DEPT. C, E, M, U	CLASS	INDUSTRIAL VISITS		
						JOB LOCATION	CNC	DATE
Dept. of Lands Valuation & Water, P/B 311, LL. 3.	732 688	Kayembe, S.A.	Chiweza, G.		D3 C			
			Chizalembe, M.M.		D4 C			
Dwangwa Sugar Corporation, Box 46, Dwangwa	295 266	R.R.D. Kaliati	Liwewe, M.U.		D2 M			
			Nyirenda, J.D.M.		D4 M			
Ministry of Works & Supplies, P/B 316, Lilongwe.	733 188	B.F. Banda LL (The Controller of plant & Vehicle, BT.) Principal (Civil Eng.)	Mwale, D.K.		D2 C			
			Mbewe, G.W.S.		D2 M			
			Mkumba, N.J.		D2 M			
			Moyo, A.M.W.		D2 M			
			Phiri, M.O.		D2 M			
			Gausi, G.C.D. (Bt.)		D2 C			
			Kamdambo, F. (LL)		D2 C			
			Kumwenda, M.		D4 M			
			Kadzakumanja		D5 M			
Pipe Extruders, Box 30041, LL. 3.	765 388	General Manager	Mwenelupembe, G.E.		D4 M			
Oilcom., Blantyre Depot.		Chief Engineer, Mr. Nkhata	Solomba, C.		D5 M			

FIRM	PHONE	CONTACT PERSON	STUDENT	DEPT. C, E, M, U	CLASS	INDUSTRIAL VISITS		
						JOB LOCATION	CNC	DATE
City of Blantyre, Town Hall, Box 67, Blantyre.	634 311	Deputy Town Clerk	Chirwa, M.Z.		D4 C			
			Mkandawire, T.S.W.		D2 C			
			Kandonje, G.		D2 C			
ADMARC.,	651 244	Training Manager Mr. Eutawo	Kululanga, G.		D3 C			
M.C.I. Polytechnic Site.	Poly	Site Agent	Mphande, S.D.K.		D2 C			
			Silungwe, Y.C.		D2 C			
Stirling International Box 2141, BT.		Site Agent	Ntola, J.J.		D2 C			
			Madimbo, W.		D2 C			
			Ziba, B.C.F.		D2 C			
POLYTECHNIC	670 411	Registrar	Kululanga, G.		D3C/E			
			Msusa, C.		D2 C			
Timber Products.	Lilongwe		Njunga, K.		D4 M			

CNC = COUNSELOR'S NAME CODE
 C = CIVIL ENGINEERING
 E = ELECTRICAL ENGINEERING
 M = MECHANICAL ENGINEERING
 U = UNDECIDED