

ACKNOWLEDGEMENT

The Management expresses and places on record its appreciation to the Ministry of Science & Technology, foreign governments, and funding agencies for providing facilities for training and for the financial assistance provided for the research activities. The Chairman and Board of Directors of the Centre thank all its employees for the cooperation and assistance extended by them in the activities of the Centre.



Eng. Anura Wijayapala
Chairman
NERD CENTRE OF SRI LANKA

C O N T E N T S

Title	Page No.
01. Acts, Legislation & Corporate Governance	02
Vision	
Mission	
Objectives	
02. Board of Directors & Organization Structure	03-05
03. Chairman's Message	06-07
04. Top Management and Executive Staff	08-11
05. Human Resources	12-20
06. Performance Highlights of the Year 2013	21-29
07. Welfare & Religious Activities	30
08. Accounting Policies	31-35
09. Financial Positions as at 31.12.2013	36
10. Statement of Financial Performances for the year ended 31.12.2013	37
11. Statement of Equity Change	38
12. Cash Flow Statement for the year ended 31.12.2013	39
13. Notes to the Accounts as at 31.12.2013	40-43
14. Report of the Auditor General on the Financial statement of the National Engineering Research & Development Centre of Sri Lanka for the year ended 31 December 2013	44-55
15. Observations of the Board of Directors for the Report of the Auditor General on the Financial Statements of the National Engineering Research & Development Centre of Sri Lanka for the Year ended 31 December 2013	56-61

01. Acts, Legislation & Corporate Governance

National Engineering Research And Development Centre of Sri Lanka (NERDC) was established in 1974 in accordance with the provisions of the State Industrial Corporations Act No. 49 of 1957 and now it is functioning under the purview of the Ministry of Technology and Research. NERDC is one of the premier Institute established under the aforesaid Act with the primary objective of promoting and facilitating the Development of Domestic Engineering and Technological Research Industry. The Centre is instituted at Industrial Estate, Ekala, Ja-Ela.

V I S I O N

"To be a Centre of Excellence, in Engineering Research and Development Centre in the S E Asia and to be able to make substantial contributions towards the sustainable economic and social development of the people of Sri Lanka through engineering interventions."

M I S S I O N

"To develop, acquire, adapt & transfer engineering technologies that would help in the production and sustainable utilization of human and material resources by engaging in R&D activities that would have a direct impact on the economic development of Sri Lanka and on the improvement of the living standard of the people."

Objectives

- To provide for an institutional mechanism needed for the progressive development of indigenous technology by encouraging, recognizing and developing innovative and creative talent in Sri Lanka.
- To provide facilities to co-ordinate the technological, engineering and research capabilities of various public and private sector industries and institutions in a productive manner through co-operative endeavor.
- To ensure by adoption and adaptation the choice of technologies that would be consistent with the country's resource endowments and national planning objectives.
- To examine direct and indirect mechanism of technology transfer and offer counsel to appropriate government and private institutions in Sri Lanka, when required to do so.
- To promote the optimal exploitation of the country's human and material resources, particularly labor and raw material resources by promoting the growth of suitable technology.
- To design, manufacture, and test prototype machinery, pilot plants as demanded by Industrial, commercial and other end users in an economical manner.
- To provide for continuous monitoring of technological data and documentation relating to engineering designs and research through the co-operation of international and national agencies.
- To offer sustained consultancy services to public and private sector enterprise and undertake research and promote training activities to broaden the base of the country's engineering and industrial design and research capabilities.
- To make provision for purpose connected with engineering, research and development related to matters aforesaid.

02. Board of Directors and Organization Structure

Name	Position	Workplace	Qualifications
Eng. D R Pullaperuma	Chairman Up to 14 th July 2013	NERD Centre of Sri Lanka 2P/17B, Industrial Estate, Ekala, Ja-Ela	BSc Eng, CEng, FIE (SL) FIET, MBA (Utility Management) Ireland
Eng. D A S Wijayapala	Chairman From 15 th July 2013	NERD Centre of Sri Lanka 2P/17B, Industrial Estate	BSc Eng Hons, M Eng, P Eng, FIE(SL), C Eng
Eng. Parakrama Jayasinghe	Member	Director Geotech (Pvt.) Ltd. 13/1, Pepiliyana, Mawatha, Kohuwala, Nugegoda	BSc Eng Hons, University of Peradeniya, FRMIT (Australia), FIE (SL) C Eng, P E
Dr. Rohan Munasinghe	Member	Director/Snr. Lecturer Intellegent Machines Laboratory, University of Moratuwa	PhD (Saga), C Eng, MIEFE
Dr. A M Mubarak	Member Up to 14 th July 2013	Director/CEO Industrial Technology Institute No.363, Baudhaloka Mawatha Colombo 07	BSc (Chemistry) Hons, PhD (Cantab), Fellow of Institute of Chemistry, Fellow of National Academy of Sciences
Mr. G S J Dissanayake	Member Up to 14 th July 2013	Presidential, Coordinator, Director Presidential Secretariat Office, Colombo.	GCGI (UK)
Mr. H A D U G Gunasekara	Member Up to 14 th July 2013	Director/Managing Director Union Chemicals Lanka Plc, 4 th Floor, Sarathi Building, No.50, Hide Park, Corner, Colombo 02	MBA, LLM, LLB, FIE(Sc), FMS(UK), Dip on Polymer Technology, Attorney-at-law
Mr. Asanga Dayaratne	Member Up to 14 th July 2013	Additional Director General Dept. of Management Services Ministry of Finance Planning General Treasury, Colombo 01	MA (Economics) South Korea, BA Hons
Dr. M W Jayaweera	Member From 15 th July 2013	Senior Lecturer – University of Moratuwa	BSc Eng Hons, PhD (Saitama)
Dr. J A Gayan Chamantha	Member From 15 th July 2013	Doctor Wijayakumarathunga Hospital, Seeduwa	MBBS
Eng. K H J Mangala	Member From 15 th July 2013	Lecturer, Dept. of Mechanical Engineering, University of Moratuwa	BSc Eng Hons
Ms. K V C Dilrukshi	Member From 30 th July 2013	Assistant Director Dept. of Public Enterprises	BSc (Accountancy Sp.), Associate Member of the Institute of Chartered Accountant of Sri Lanka

OFFICE ADDRESS

2P/17 B, Industrial Estate
Ekala
Ja-Ela

Postal Code : 11380

CONTACT INFORMATION

Telephone : + 94-011-2236284
+ 94-011-2236384
+ 94-011-2236307
+ 94-011-5354597
+ 94-011-5354601

Fax : + 94-011-2233153

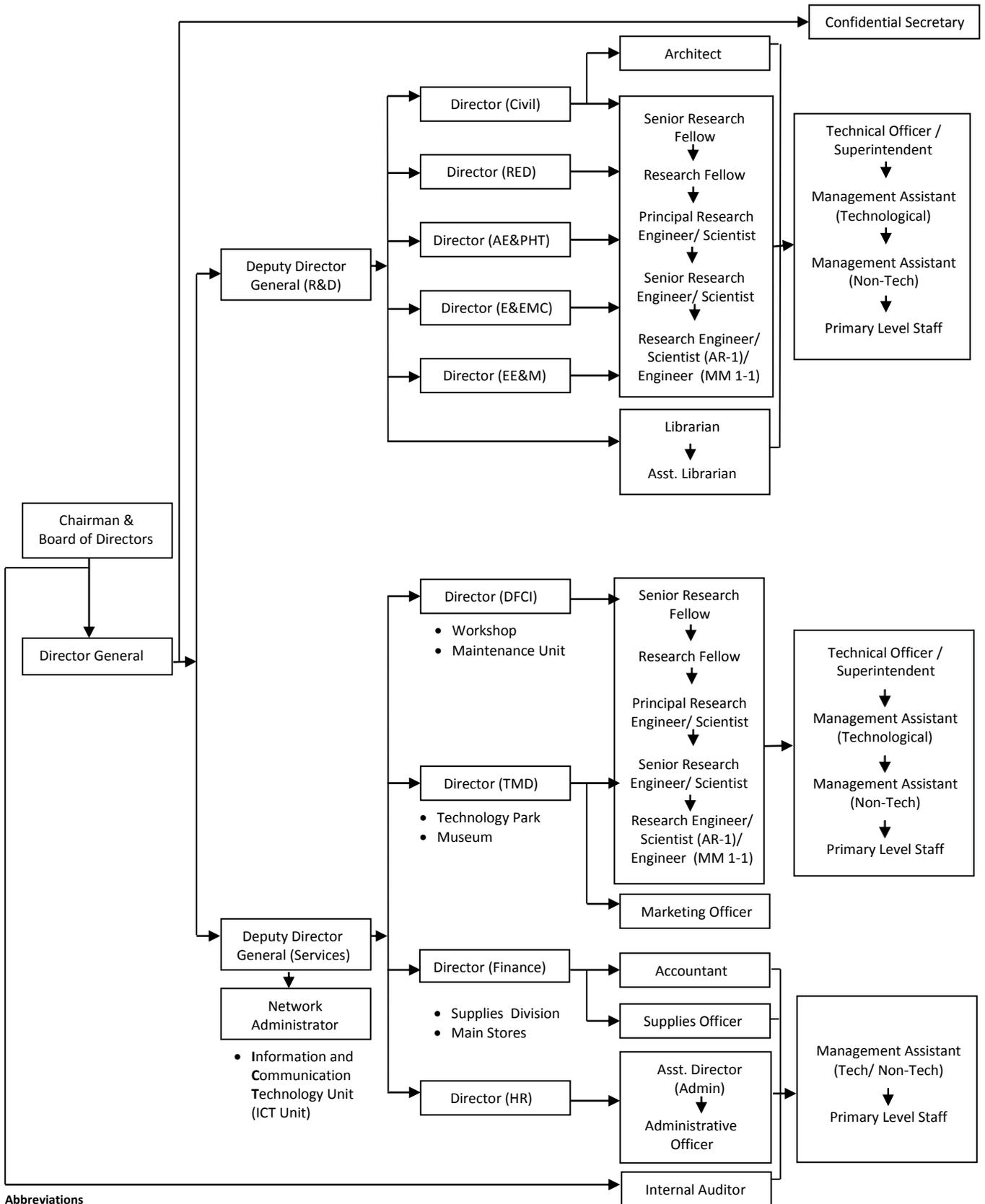
BANKERS

Bank of Ceylon, Ja-Ela
Bank of Ceylon, Corporate Branch
People's Bank, Ja-Ela

AUDITOR

Auditor General

National Engineering Research and Development Centre of Sri Lanka Organization Structure



Abbreviations

- R&D - Research & Development
- RED - Renewable Energy Department
- A&PHT - Agriculture Engineering & Post Harvest Technology Department
- E&EMC - Energy & Environmental Management Centre
- EE&M - Electrical, Electronics & Mechatronics Department
- DF&CI - Design Fabrication & Consultancy for Industries
- TMD - Techno Marketing Department
- HR - Human Resources

03. Chairman's Message

National Engineering Research and Development Centre (NERDC) of Sri Lanka, has involved in the field of research and development projects, pilot projects, providing services to industries, popularization programs and promotion of science education among school children etc. during the year 2013. Accordingly the Centre has contributed to the development of the country along with the government development program and 'Mahinda Chinthanaya' in areas such as energy, housing, environmental, small & medium scale industries.



The outputs, and outcomes of research and development activities executed in the year 2013, have created new products and technologies which have assisted to improve productivity, efficiency of the industrial and agricultural sectors. As per the government development plan and the objectives and goals of the Centre, the NERDC has focused on the R&D projects and technology transfer activities to address the issues pertaining to the field of small and medium industries, construction, agricultural and plantation sectors.

NERDC has a large number of vacancies of Research Engineers at middle level and senior level during the past few years. The salaries offered for senior positions in the approved research cadre being equally low, the vacancies could not be filled through the advertisements placed over the years. However the research allowance as per the DMS Circular is an attempt to encourage the existing staff to carryout research and consultancy work. However even with these bottlenecks, NERDC has provided effective services to the society.

It is time that the policy makers should take a serious note in adopting a policy to remunerate engineers of government research institutions with an attractive salary, so as not paralyze the R&D activities at these institutions, the key to the envisaged knowledge economy.

The shortage of engineering skill is impacting on our ability to be a successful Engineering R&D institution in the country. Hence the Centre has provided its staff more capacity building and skill development programs both local and overseas during 2013 in a bid to retain its staff and to meet future challenges.

The Sri Lankan construction industry tends to follow the performance of the economy very closely. As economic conditions improved in the country so did the building construction activities. Hence NERDC focused its activities on its cost effective building technologies.

Investigation of the actual cost savings of the NERDC cost effective building technology by constructing a model house, development of Gravel, Sand, Clay and Cement Blocks for wall construction (GSCC) using normal cement sand block making machine, Improvement of machine for manufacturing of compressed cement stabilized soil blocks, Introduction of cost effective building technologies for construction of government buildings in collaboration with the finance commission, etc. are the important projects conducted by the NERDC in the field of construction.

During the year 2013, Centre has initiated special program with the assistance from finance commission and all provincial councils to popularize cost effective building technologies through out the country. In parallel with the 'Dayata Kirula' Exhibition, consultancy services have been provided based on the cost effective construction technologies developed by NERDC for construction of 25 Nos. of buildings as library buildings in Anuradhapura district.

Special project has been commenced with Waste Management Authority of Western Provincial Council to produce compost fertilizer using market garbage at Muthurajawela. Development of Temperature Controllable Biomass based Bakery Oven is one of the key projects handled by NERDC during the year 2013 and the Centre expected that output and outcome of the project will save the LP gas and Diesel consumption in bakery industry and promote rice flour bakery products also. .

In focusing to development of required technologies for conventional Aurvedic medicine system and traditional medicine system, the NERDC is involved in research and development activities to introduce new machineries and processes to produce medicines required for industry.

Sri Lanka's first Engineering Museum was declared opened by Hon. Minister Partalie Champika Ranawaka, Minister of Technology and Research. Museum has facilitated to demonstrate our ancient technologies relevant to different areas such irrigation, traditional medicine, agriculture sector, etc.

In 2013, several measures have been taken to popularize, demonstrate and transfer of technologies, focusing on key areas such as addressing energy crisis, housing for people, solid waste management technical issues in the industries etc.

The leadership given by Eng. D.D. Ananda Namal, Director General of the Centre towards developing the institution to be the Premier Engineering Research and Development Organization of the country, is most commendable and it has been a pleasure working with him for enhancing services of the Centre. The efforts, he has taken to develop the Action Plan of the Centre and to continuously monitor the same for its effective implementation is very much appreciated. I also wish to take this opportunity to thank the Higher Management, the Heads of Departments, Research Engineers/Scientist, Technologist, Technician and the Support Staff for the services rendered by them to achieve the objectives of the Centre.



ENG. ANURA WIJAYAPALA
CHARIMAN

04. Top Management and Executive Staff

CHAIRMAN

Eng Ranjith Pullaperuma- MBA (Utility Management-Ireland), BSc Eng, C Eng, FIET(SL)-Up to 14th July 2013
Eng. D A S Wijayapala - BSc Eng Hons, M Eng, PEng, FIE(SL), CEng - From 15th July 2013

DIRECTOR GENERAL

Eng D D Ananda Namal – M Eng (Energy Technology), BSc Eng Hons, C Eng, MIE(SL)

DEPUTY DIRECTOR GENERAL (RESEARCH & DEVELOPMENT)

Eng G K K A De Silva - MSc (Building Technology), BSc Eng Hons, C Eng, MIE (SL)

DEPUTY DIRECTOR GENERAL (SERVICES)

Mr. A H Piyasiri – MSc (Management of Technology), BSc Eng Hons

EXECUTIVE STAFF IN DEPARTMENT WISE

Energy & Environmental Management Centre (E&EMC)

Head, Energy & Environmental Management

Mr J A A D Jayasuriya M Eng, BSc Eng up to 30/09/2013

Research Fellow

Eng K T Jayasinghe M Eng, BSc Eng from 03/06/2013

(Acting Administrative HoD from 01/10/2013)

Principal Research Engineer

Eng K T Jayasinghe M Eng, BSc Eng up to 02/06/2013

Senior Research Scientist

Mrs P M G Pathiraja MSc (Environmental S&T), BSc Special

Research Engineers

Ms N P T Perera MSc, BSc Eng

Mr M D Sahardeen BSc Eng

Mr. R Tushyanthan NDT, AM IMech E (UK), AMIE (SL)

from 01/04/2013

Ms. W W Weerasekera BSc Eng (Hons) from 17/06/2013

Mr. U L D Maduranga BSc Eng (Hons) From 25/11/2013

Mr. G U A C Pradeep BSc Eng (Hons) From 03/06/2013

Up to 02/08/2013

Civil Engineering Department

Director (Technical) Civil Engineering

Eng (Mrs) J A C Chrishanthi BSc Eng, C Eng, MIE(SL)

Principal Research Engineers

Mr. W P R D Weerasinghe NDT, CEI Part I, IESL Part I

Eng W W P K Perera BSc Eng (Hons), M Eng (Struct), C Eng

MIE (SL)

Research Engineer

Mr. K P D D Jayasekera BSc Eng From 25/11/2013

Engineers (from 03/06/2013)

Mrs. K S S Weerasinghe Special Apprentice (Civil Eng.)

Mrs. D M A K Digala NDES (Civil Eng), CEI (UK) Part I

Architecture

Mr. C A U Dalpathado BSc (BE) Hons, MSc(Arch), AIA (SL),

Chartered Architect Up to 28/03/2013

**Renewable Energy
Department
(RED)**

Director (Technical) Renewable Energy

Eng N K Edirisinghe BSc Eng

Mr J A A D Jayasuriya M Eng, BSc Eng
(Actg. Administrative HoD from 01.10.2013)

Research Fellow

Eng W K R Peiris MPhil, MA (Buddhist Stud), BSc Eng
Eng, C Eng, MIE (SL)

Principal Research Engineers

Mr D M Punchibanda BSc Eng

Research Engineers

Ms N P Kumarasinghe BSc Eng Up to 03/08/2013
Ms. K A D M Apekshini BSc Eng From 06/03/2013 up to 01/09/2013
Mr. N W W V Sahan Pathum BSc Eng, MIE (SL) from 03/06/2013
Mr. E B U C Kumara BSc Eng (Hons) from 25/11/2013
Mr. G W K P Gabadage MBA, PG Dip., BSc Eng from 03/06/2013
up to 12/06/2013

**Agriculture
Engineering
&
Post Harvest
Technology
Department
(AE & PHT)**

Director (Technical) Agriculture & Post Harvest Technology

Eng K Y H D Shantha BSc Eng, MSc Eng.

Principal Research Engineer

Mrs Y M M K Ranathunga NDT

Research Engineers

Ms K U C Perera BSc Eng Up to 17/05/2013
Mrs P M Y S Pathiraja BSc Eng
Mr S A P Shalinda Silva BSc Eng
Eng. M A N Sugandi B Tech Degree, AMIE (SL) from 10/07/2013
Mr. Y S J Kumaranayake BSc Eng from 25/11/2013

Engineers

Mr. P A U W K Paranagampola National Diploma in Engineering Science
from 03/06/2013

**Electrical,
Electronics &
Mechatronic
Department
(E/E & M)**

Head Electrical, Electronics & Mechatronic

Eng (Mrs) N G D Edirisinghe M Eng, C Eng, MIE (SL)

Senior Research Engineer

Eng. S Vidyaratne BSc Eng, MSc, AMIE(SL), AM IET
from 10/06/2013

Research Engineers

Mr H P H Kumara MSc Eng, EC(UK) PART I & II
Mr. S M Handagala BSc Eng
Eng. Ms H M C N Herath BSc Eng (Hons), AMIE(SL) from 17/06/2013
Eng. Ms. D R S K Wimalaratne B Tech (Hons), AMIE(SL) from 03/06/2013

Engineers

Mrs. H D C Hettiarachchi NDT from 03/06/2013
Mr. H S Jayawickrama BSc Eng from 03/06/2013

<p style="text-align: center;">Design Fabrication & Consultancy for Industry Department (DF & CI)</p>	<p>Director (Technical) Design Fabrication & Consultancy to Industry Mr. A A S P Jayasinghe BSc Eng(Hons)</p> <p>Principal Research Engineers Eng. H M L U Herath BSc Eng Eng. A R C Salgado BSc Eng Eng. S P Perera EC (UK) Part I & II, NDT</p> <p>Network Administrator Mr. I M Katugampola B Eng From 03/06/2013 up to 26/08/2013</p> <p>Engineers Mr. N A D D A Prasanne NDT from 03/06/2013</p> <p>Superintendent – Maintenance Mr. W H S Ramal Silva NDES</p>
<p style="text-align: center;">Techno Marketing Department (TMD)</p>	<p>Director (Technical) Eng. M A M Fernando PGDip (Energy) IESL Part I & II, CEng, MIE (SL)</p> <p>Principal Research Engineer Mr. D V Wimalasena NDT, Dip in Marketing(SL)</p> <p>Marketing Officer Mr. S Wijesooriya Master of Business Studies (MBS) BSc (Agriculture) Special</p>
<p style="text-align: center;">Technology Park</p>	<p>Superintendent - Technology Park Mr. A A N S Adikari BSc</p>
<p style="text-align: center;">Museum</p>	<p>Superintendent – Museum Mrs. B D P S Ranaweera BSc (Special) from 19/08/2013</p>
<p style="text-align: center;">Human Resources Department</p>	<p>Director (Human Resources) Mrs. J.P.A.D.S.I. Jayasekera MPM, B.Sc, Dip in Personnel Mgmt, Dip. in Advanced English</p> <p>Assistant Director (Administration) Mr. K.G.N. Ratnayake B.Com (Special), National Dip in HRM Up to 30/11/2013</p>
<p style="text-align: center;">Finance Department</p>	<p>Finance Manager Mrs. D V S Perera ICMA Professional Part II, IPFA, ICEA</p> <p>Accountant Mr. J M R S Jayasinghe BSc (Bus Adm) Special ICASL Professional Part I</p>
<p style="text-align: center;">Library</p>	<p>Librarian Mrs. D M T P K Dewagiri MSSc, B.A(Special) Library Science ASIIA</p>
<p style="text-align: center;">Supplies Department</p>	<p>Supplies Officer Mr. R.H.A. Jeewananda BSc (Physical Science)</p>

Total Staff as at 31.12.2013

Top Management	-	03
Engineers/Scientist	-	42
Other Executives	-	08
Junior Managers	-	08
Management Assistants (Technological)	-	14
Management Assistants (Non – Technological)	-	49
Primary Level Staff (PL1& PL3)	-	<u>153</u>
Total Staff	-	<u>277</u>

05. Human Resources

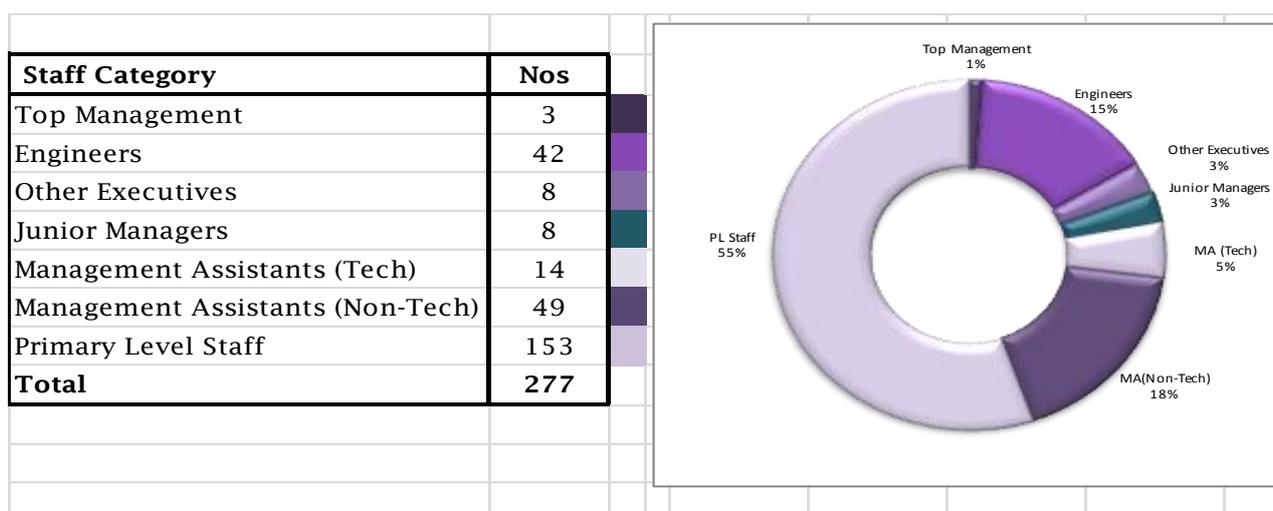


Human Resources (HR) is the most effective tool and life blood of any organization because of its liveliness and its essentiality. In other words without the Human Resource, the other resources cannot be effectively utilized or managed in an organization.

The permanent HR cadre of the Centre constitutes 277 employees and this includes Engineers numbering 45 comprising the Top Management, Other Executives being 08, Junior Managers 08, Management Assistant (Technological) 14, Management Assistants (Non-Technological) 49, PL Staff, the majority being 153.

The summary information on permanent cadre of the Centre is as follows;

Summary Information on Staff Strength



Following new recruitments had been made internally/externally at the Centre during the year 2013.

	Name	Designation	Department	Date of Recruitment
01	Miss B A I K Abeywardana	Technical Assistant	AE&PHT	02/01/2013
02	Mr. HHGHemathilake	Tool Keeper	DF&CI	01/02/2013
03	Mr. R Thushiyandan	Research Engineer	E&EMC	01/04/2013
04	Mr. K T Jayasinghe	Research Fellow	E&EMC	03/06/2013
05	Mr. W A L S Karunawardane.	Engineer	RED	03/06/2013
06	Mrs. H D C Hettiarachchi	Engineer	EE&M	03/06/2013
07	Mrs. D M A K Digala	Engineer	Civil	03/06/2013
08	Mrs. K S S Weerasinghe	Engineer	Civil	03/06/2013
09	Mr. N A D D J Prasanna	Engineer	AE&PHT	03/06/2013
10	Mr. G W K P Gabadage	Senior Research Engineer	RED	03/06/2013
11	Ms. K A D M Apekshini	Research Engineer	RED	03/06/2013
12	Ms. H D N B Premachandra	Research Engineer	E&EMC	03/06/2013
13	Ms. D R S K Wimalaratne	Research Engineer	EE&M	03/06/2013
14	Mr. P A U W K Paranagampola	Engineer	AE&PHT	03/06/2013
15	Mr. N W W V S Pathum	Research Engineer	RED	03/06/2013
16	Mr. I M Katugampala	Network Administrator	DF&CI	03/06/2013

	Name	Designation	Department	Date of Recruitment
17	Mr. E B S T Senadeera	Trainee Management Assistant (Testing) <i>(on Contract basis)</i>	E&EMC	03/06/2013
18	Ms. E A S Priyanwada	Trainee Management Assistant (Testing) <i>(on Contract basis)</i>	E&EMC	03/06/2013
19	Ms. A H Wickramathilake	Trainee Management Assistant (Testing) <i>(on Contract basis)</i>	E&EMC	03/06/2013
20	Ms. S A D N P K Suraweera	Trainee Management Assistant (Testing) <i>(on Contract basis)</i>	EE&M	03/06/2013
21	Mr. G V A C Pradeep	Research Engineer	E&EMC	03/06/2013
22	Mr. S Vidyaratne	Senior Research Engineer	EE&M	10/06/2013
23	Mrs. B A P H Manorima	Architect	Civil	10/06/2013
24	Ms. H M C N Herath	Research Engineer	EE&M	17/06/2013
25	Ms. W M W Weerasekera	Research Engineer	E&EMC	17/06/2013
26	Mr. H M A I Bandara	Draught Person	Civil	25/06/2013
27	Ms. M A N Sugandhi	Research Engineer	AE&PHT	10/07/2013
28	Ms. B D P S Ranaweera	Superintendent (Museum)	Museum	19/08/2013
29	Mr. B U C K Enderaarachchi	Research Engineer	RED	25/11/2013
30	Mr. K P D DJayasekera	Research Engineer	Civil	25/11/2013
31	Mr. U L D Maduranga	Research Engineer	E&EMC	25/11/2013
32	Mr. Y S J Kumararanayake	Research Engineer	AE&PHT	25/11/2013
33	Mr. A M G D Abeyasinghe	Technical Assistant (on contract basis)	RED	02/12/2013
34	Mr. W P R S Senarathne	Technical Assistant	AE&PHT	02/12/2013
35	Ms. T Gajenthini	Management Assistant	T.Park	02/12/2013
36	Ms. I S Galabada	Technical Assistant	E&EMC	11/12/2013

Following Staff Members had retired from the Centre during the year 2013

	Name	Designation	Department	Date of Retirement
01	Mr. H P Ranasinghe	Welder/Fitter	AE&PHT	16/04/2013
02	Mrs. L S I Silva	Draughtsman	Civil	31/07/2013
03	Mr. H A J Fernando	Electrician	EE&M	25/09/2013
04	Mr. K N E Silva	Carpenter	Civil	30/11/2013

Following Staff Members had resigned from the Centre in the year 2013.

No	Name	Designation	Department	Resigned Date
1	Mr. C A U Dalpathadu	Architect	Civil Engineering	28/03/2013
2	Miss. K U C Perera	Research Engineer	AE&PHT	17/05/2013
5	Mrs. N P Kumarasinghe	Research Engineer	RED	03/08/2013
6	Mr. G V A C Pradeep	Research Engineer	E&EMC	02/08/2013
7	Mr. I M Katugampala	Network Administrator	DF&CU	26/08/2013
8	Miss B R Premarathne	Technical Assistant	AE&PHT	30/08/2013
9	Ms. H D N B Premachandra	Research Engineer	E&EMC	01/09/2013
10	Ms. K A D M Apekshini	Research Engineer	RED	01/09/2013
11	Mr. H M A I Bandara	Draught Person	Civil Engineering	12/09/2013
14	Mr. D W A M Amaradasa	Driver	HR-Transport	01/10/2013
15	Miss. D P Edirisinghe	Technical Assistant	Civil Engineering	22/10/2013
16	Mrs. N ThiliniRajapaksha	Technical Assistant	AE&PHT	02/11/2013
17	Miss B A I K Abeywardana	Technical Assistant	E&EMC	02/11/2013
19	Mr. K G N Rathnayake	Asst. Director (Administration)	HR	01/12/2013

5.1 Capacity Building/ Skill Development Programmes

5.1.1 In-house Training Programmes

First Aid Program

One day In-house training program on “Preliminary First Aid for Employees” was conducted with the Assistance of Sri Lanka Red Cross Society at the Techno Marketing Department (TMD) Auditorium of the Centre on 31.07.2013. Twenty five numbers of selected group of employees had participated representing all Departments of the Centre. Training program consisted with both theoretical and practical sessions giving an opportunity for the participant to gain knowledge and skills to react in an accident/incident where the First Aid is needed until the casualties are taken into the hospital nearby.

Employee Educational Program

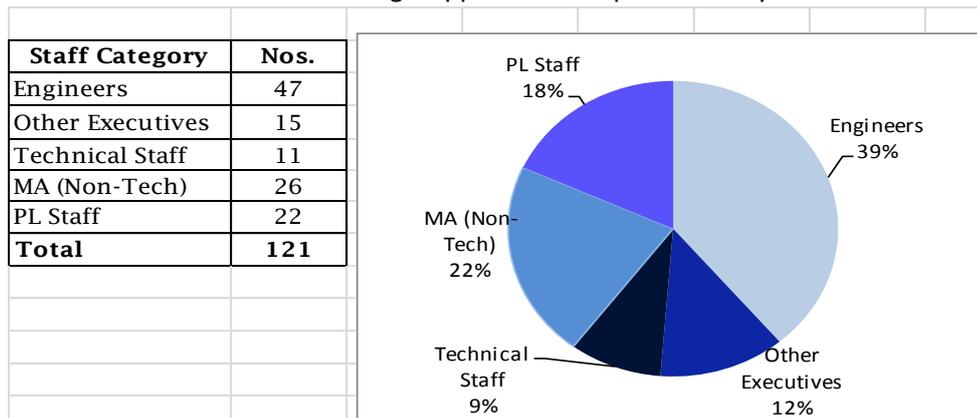
One – Day Employees’ Educational Program was conducted with the assistance of an officer of Ja-Ela Labour Office on 05 September 2013 at TMD Auditorium and around 50 numbers of employees had participated it. The topics that were discussed basically were, “Psychology for Conflict Resolution, Social dialogue on work ethics and positive attitudes. A video presentation on “prevention of HIV/AIDS was also displayed after the theoretical session.

5.1.2 Local Training/ Skill Development Programmes

NERDC always provides training opportunities for its staff to enhance their knowledge and skills in order to equip them with the present day needs and to obtain optimal service out of them.

In the year 2013, Centre had provided one hundred twenty one (121) local training opportunities for its staff members. Total cost spent for local staff training was one million one hundred twenty eight thousand five hundred and seventy Sri Lankan Rupees (SLR1,128,570/-) including the Postgraduate facilities financed by the Centre for its staff. Whilst providing such local training opportunities, NERDC had also given three (03) staff members foreign training opportunities under Scholarships/Fellowship/short term Training Programmes to gain international exposure to develop their knowledge and skills. Such knowledge and skills is bound to inject new working styles and methodologies, which could be applicable to most of our systems and the cost spent over that was two hundred sixty thousand seven hundred and fifty three (260,753/-)Sri Lankan Rupees.

Information on Local Training Opportunities provided by the Centre in 2013



Skilled Development Programmers - 2013

No.	Name	Designation	Department	Programme	Duration	Training Institute	Course Fee
01	Mr. N P T Perera	Research Engineer	E&EMC	Workshop on Effective Proposal Writing	10/01/2013	National Science Foundation	Rs.2,000/-
02	Mr. S A P Shalinda Silva	Research Engineer	AE&PHT	Do	Do	Do	Rs.2,000/-
03	Mr. N P Kumarasinghe	Research Engineer	RED	Do	Do	Do	Rs.2,000/-
04	Mr. S P Perera	Research Engineer	DF&CI	Do	Do	Do	Rs.2,000/-
05	Mr. S Wijesooriya	Marketing Officer	TMD	Do	Do	Do	Rs.2,000/-
06	Mrs. D V S Perera	Finance Manager	Finance	Two Days Workshop on Financial Reporting Compliance with Accounting Standards	16/01/2013& 22/01/2013	Skills Development Fund Ltd.	Rs.4,500/-
07	Mrs. D S C Wanniarachchi	Management Assistant	HR	Telephone Skills and Etiquette Training for Secretaries & Receptionists	18/01/2013	Skills Development Fund Ltd.	Rs.4,500/-
08	Mrs. B A L P Bollegala	Management Assistant	HR	Do	Do	Do	Rs.4,500/-
09	Mr. B R Karunaratne	Management Assistant	HR	Workshop on Transport Management	31/01/2013	Skills Development Fund Ltd.	Rs.4,500/-
10	Mr. A D L S Wimalaweera	Management Assistant	Technology Park	Skills Development for Development Assistants & Management Assistant	22/01/2013	Skills Development Fund Ltd.	Rs.4500/-
11	Mrs. J P A D S I Jayasekara	Director (HR)	HR	Formal Procedure of Handling Personal Files	22/01/2013-23/01/2013	PRAG Institute	Rs.9,500/-
12	Miss. I P B Nisansala	Management Assistant	HR	Do	Do	Do	Rs.9,500/-
13	Mrs. P M G Pathiraja	Senior Research Scientist	E&EMC	Workshop on Patent Drafting	28/01/2013-01/02/2013	National Science Foundation	Rs.12,000/-
14	Miss. K U C Perera	Research Engineer	AE&PHT	Do	Do	Do	Rs.12,000/-
15	Mr. H H SKumara	Management Assistant	Civil Engineering	Developing Management Assistants	15/02/2013	Skills Development Fund Ltd.	Rs.4,500/-
16	Mr. D H E Kalyanasiri	Technical Assistant	Civil Engineering	Certificate course on Contract and Procurement Management Course	17/02/2013-04/10/2013 (30 days) Thursdays	Institute for Construction Training & Development	Rs.50,000/-
17	Mr. A H Piyasiri	DDG (S)	DDG Office	Workshop on Human capital Management for Aspiring HR Professionals	27&28/02/2013	Skills Development Fund Ltd.	Rs.8,000/-
18	Miss.O L C F Perera	Confidential Secretary	DG's Office	Secretarial Practices	21, 28/02/2013 & 07, 14/03/2013	Skills Development Fund Ltd.	Rs.14,500/-
19	Mrs. K H B Laitan	Management Assistant	DG's Office	Do	Do	Do	Rs.14,500/-
20	Mr. D M P N Dharmawardana	Management Assistant	Supplies	Stores Management & Purchasing Procedure	22&23/02/2013	Skills Development Fund Ltd.	Rs.8,000/-

No.	Name	Designation	Department	Programme	Duration	Training Institute	Course Fee
21	Mr. H M L U Herath	Principal Research Engineer	DICI	Safety & Health Workshop	12/03/2013	Office of the District Factory Inspecting Engineer	Free of charge
23	Mr.SumithChandrasiri	Labourer	Civil	Enhancing Skills of Minor Employees	28/02/2013	Skills Development Fund Ltd.	Rs.4500/-
24	Mr.NimalWijeratne	Labourer	E & EMC	Do	Do	Do	Rs.4500/-
25	Mr.H P S PParanamana	Labourer	E & EMC	Do	Do	Do	Rs.4500/-
26	Mr.G A R Silva	Labourer	TMD	Do	Do	Do	Rs.4500/-
27	Mr.R I P Peiris	Labourer	Technology Park	Do	Do	Do	Rs.4500/-
28	Mr. A T M Kumara	Welder	RED	Do	Do	Do	Rs.4500/-
29	Mr. K R Jayashantha	Welder/Fitter	RED	Do	Do	Do	Rs.4500/-
30	Mr. S W Abewardana	Office Aid	HR	Do	Do	Do	Rs.4500/-
31	Mr. W L M J Perera	Labourer	HR	Do	Do	Do	Rs.4500/-
32	Mr. S A P Shalinda Silva	Research Engineer	AE&PHT	Practical Finite Element Analysis Concepts & Applications	15,16,22,23/03/2013 (four days)	University of Peradeniya	Rs.24,000/-
22	Mrs. D V S Perera	Finance Manager	Finance	Workshop of Taxations	23, 24/03/2013	Skills Development Training Institute.	Rs.6500/-
33	Mrs. A G N P K Anhettigama	Accounts Assistant	Finance	Do	Do	Do	Rs.6500/-
34	Miss. J D Darshani	Accounts Assistant (Cashier)	Finance	Do	Do	Do	Rs.6500/-
35	Mr. B P Susantha Kumara	Internal Auditor	Internal Audit	Internal Auditing Programme	02/04/2013	PRAG Services (pvt) Ltd.	Rs.8500/-
36	Miss. N P T Perera	Research Engineer	E & EMC	Professional Approach to Electricity Costing and Tariffs	22/05/2013	Sri Lanka Energy Managers Association	Rs.5600/-
37	Miss J M M I K Jayalath	Technical Assistant	EE&M	Do	Do	Do	Rs.5600/-
38	Eng. D D Ananda Namal	Director General	Management	Productivity Kaizen and 5S Training	06/06/2013	MC Quire RENS & Jones (pvt.) Ltd.	Rs.7250/-
39	Mr R Thushyanthan	Research Engineer	E & EMC	Cleaner Production consultant Developing Training Programme	03-07/06/2013 & 07-11/06/2013 (7 days)	National Cleaner Production Centre	Free of charge
40	Miss I S Dikkumbura	Technical Assistant	E & EMC	Do	Do	Do	Rs.30,000/-
41	Mr.A R C Salgado	Principal Research Engineer	DICI Dept.	5S Application in Productivity and Quality Improvement	25-26/06/2013	Sri Lanka Standards Institution ,	Rs.6720/-
42	Miss N P T Perera	Research Engineer	E & EMC	Do	Do	Do	Rs.6720/-
43	Mr D M P N Dharmawardana	Management Assistant	Supplies	Do	Do	Do	Rs.6720/-
44	Miss J M M I K Jayalath	Technical Assistant	EE&M	Do	Do	Do	Rs.6720/-
45	Miss B R Premaratne	Technical Assistant	AE&PHT	Do	Do	Do	Rs.6720/-
46	Mrs K K S D Pushpasiri	Technical Officer	RED	Do	Do	Do	Rs.6720/-
47	Mrs U A N Fernando	Management Assistant	TMD	5S Application in Productivity and Quality Improvement	03/07/2013 (1/2 day)	Do	Rs. 1680/-
48	Mr M D Devaraja	Management Assistant	RED	Do	Do	Do	Rs. 1680/-

No.	Name	Designation	Department	Programme	Duration	Training Institute	Course Fee
49	Mr. K G N Rathnayake	Asst. Director (Admin)	HR	Super 5S for a Super Efficient Work Place	21/06/2013	BIZ EX Consulting (pvt) Ltd,	Rs.6900/-
50	Mr. A R C Salgado	Research Engineer	DF&CI	Do	Do	Do	Rs.6900/-
51	Eng. G K K A De Silva	Deputy Director General (P)	Management	Seminar on Modern Bridges & Urban Floyovers	27/06/2013	Society of Structural Engineer	Rs.4000/-
52	Mr. W P R D Weerasinghe	Principal Research Engineer	Civil	Do	27/06/2013	Do	Rs.4000/-
53	Mr. D DAnandaNamal	Director General	Management	Balanced Scare card	10/07/2013	MC Quire RENS & Jones pvt, Ltd.	Rs.8120/-
54	Mr. G K K A De Silva	Deputy Director General (R&D)	Management	Do	Do	Do	Rs.8120/-
55	Mr. A H Piyasiri	Deputy Director General (S)	Management	Do	Do	Do	Rs.8120/-
56	Mr. B P S Kumara	Internal Auditor	Internal Audit	Course on VAT & SVAT	16/07/2013	PRAG Services (pvt) Ltd.	Rs.8000/-
57	Mr. R Thushyanthan	Research Engineer	E & EMC	Time and Task Management	13/07/2013	IESL	Rs.6500/-
58	Mr. J A A D Jayasooriya	Research Fellow / Head of Department	E & EMC	Assessor Training for Accreditation of GHG validation / verification bodies	16,17,18/07/2013	Sri Lanka Accreditation Board for Conformity Assessment	Rs. 45,696/-
59	Mrs. D S C Wanniarachchi	Management Assistant	HR	Maintenance of Personal Files	19/07/2013	Skills Development Fund Ltd.	Rs.4500/-
60	Mrs. L K W NilminiPerera	Management Assistant	HR	Do	Do	Do	Rs.4500/-
61	Mr. R Thushyanthan	Research Engineer	E & EMC	Procurement Management	20/07/2013	IESL	Rs.6500/-
62	Eng. D DAnandaNamal	Director General	Management	International Conference on Transition to Efficient Lighting	26/07/2013	IESL	Rs.7500/-
63	Mrs. H D C Hettiarachchi	Engineer	EE&M	Do	26/07/2013	Do	Rs.7500/-
64	Mr. M K S Sathis Kumara	Technical Assistant	EE&M	Do	26/07/2013	Do	Rs.7500/-
65	Ms. W M N Weerasekara	Research Engineer	E & EMC	Do	26/07/2013	Do	Rs.7500/-
66	Ms. H D N B Premachandra	Research Engineer	E & EMC	Do	26/07/2013	Do	Rs.7500/-
67	Mr. K T Jayasinghe	Research Fellow	E & EMC	Annual Session 2013 29 th Annual Meeting	26/07/2013	Sri Lanka Energy Managers Association	Rs.1500/-
68	Mr. K A G Wickramasinghe	Management Assistant	HR	Vehicle Maintenance Course	07/08/2013	PRAG Services (pvt) Ltd.	Rs.8000/-
69	Mr. J M R S Jayasinghe	Accountant	Finance	Annual Stock Verifications & Disposal Procedure	12 & 13/08/2013	Skills Development Fund Ltd.	Rs.8000/-
70	Mrs. D M A K Digala	Engineer	Civil	Preliminary First Aid Training Programme	31/07/2013	Sri Lanka Red Cross Society	Rs.600/-
71	Mr. D D W Dissanayake	Tool Keeper	Civil	Do	Do	Do	Rs. 600/-
72	Mrs. Y M M K Ranatunga	Principal Research Engineer	AE&PHT	Do	Do	Do	Rs.600/-
73	Mr. M L A Peiris	Welder Fitter	AE&PHT	Do	Do	Do	Rs.600/-

No.	Name	Designation	Department	Programme	Duration	Training Institute	Course Fee
74	Mr. W R P M Isuru	Office Aid	Finance	Preliminary First Aid Training Programme	31/07/2013	Sri Lanka Red Cross Society	Rs.600/-
75	Mrs. G V L Vijayanthi	Management Assistant	Internal Audit	Do	Do	Do	Rs.600/-
76	Mr. H N Mahesh Kumara	Office Aid	Technology Park	Do	Do	Do	Rs.600/-
77	Mr. H M L U Herath	Principal Research Engineer	DF&CI	Do	Do	Do	Rs.600/-
78	Mr. G P L D C Jayathilaka	Machinist	DF&CI	Do	Do	Do	Rs.600/-
79	Mrs. K K S D Pushpasiri	Technical Officer	RED	Do	Do	Do	Rs.600/-
80	Mr. M D Devaraja	Management Assistant	RED	Do	Do	Do	Rs.600/-
81	Mr. B C Saman Kumara	Welder /Fitter	RED	Do	Do	Do	Rs.600/-
82	Mrs. R M T Udayani	Management Assistant	Finance	Do	Do	Do	Rs.600/-
83	Mr. H P Sunil Palitha	Welder	AE&PHT	Do	Do	Do	Rs.600/-
84	Mr. H P H Kumara	Research Engineer	EE&M	Do	Do	Do	Rs.600/-
85	Miss. J M M I K Jayalath	Technical Assistant	EE&M	Do	Do	Do	Rs.600/-
86	Mr. D M P N Darmawardane	Management Assistant	Supplies	Do	Do	Do	Rs.600/-
87	Mrs. L K W NilminiPerera	Management Assistant	HR	Do	Do	Do	Rs.600/-
88	Mr. W L M JPerera	Labourer	HR	Do	Do	Do	Rs.600/-
89	Mr. A A D Pilip Anthony	Pipe Fitter	HR	Do	Do	Do	Rs.600/-
90	Mr. S W Abewardhane	Office Aid	HR	Do	Do	Do	Rs.600/-
91	Mr. S A Samantha	Office Aid	D G's Office	Do	Do	Do	Rs.600/-
92	Mr. M A R P Mallawaarachchi	Labourer	Main Stores	Do	Do	Do	Rs.600/-
93	Mr. A L S Wimalaweera	Management Assistant	Technology Park	Do	Do	Do	Rs.600/-
94	Mr. M S Ananda	Management Assistant	Technology Park	Do	Do	Do	Rs.600/-
95	Mr. N A D D J Prasanna	Engineer	DF&CI	Course on Maintenance of Building Air Conditioning Systems	26-28/07/2013	Construction Equipment Training Centre	Rs.14,200/-
96	Mr. M K S Sathis Kumara	Technical Assistant	EE&M	Operation & Maintenance of Generators	27-28/08/2013	Construction Equipment Training Centre	Rs. 5500/-
97	Mrs. P M G Pathiraja	Senior Research Scientist	E & EMC Dept.	Assessor Training for Good Laboratory practice	28-29/07/2013	Sri Lanka Accreditation Board for Conformity Assessment	Rs.45,714.29
98	Mr. S Vidyaratne	Senior Research Engineer	EE&M	Training Programme on Laboratory Quality Management	13-15/08/2013	Sri Lanka Standards Institution	Rs.8,960/-
99	Mr. S Wimalaratne	Research Engineer	Do	Do	Do	Do	Rs.8,960/-

No.	Name	Designation	Department	Programme	Duration	Training Institute	Course Fee
100	Mr. I M Katugampola	Network Administrator	DF&CI	Internal conference in partnership with National IT conference	13-14/08/2013	Computer Society of Sri Lanka,	Rs.16,000/-
101	Mrs. J P A D S I Jayasekara	Director (HR)	HR	Workshop on salary conversions	23/08/2013	Skills Development Fund Ltd.	Rs. 5000/-
102	Mr. A H Piyasiri	Deputy Director General (Services)	Management	Salary Management & Salary Conversation	03/09/2013	PRAG Services (Pvt) Ltd.	Rs.8,000/-
103	Mr. K G N Rathnayaka	Assistant Director Administration	HR	Do	Do	Do	Rs.8,000/-
104	Mr. A R Premawansa	Technical Assistant	Civil Dept.	Maintenance of water Pump & compressor	03-07/09/2013	Construction Equipment Training Centre	Rs.10,000/-
105	Mrs. D V S Perera	Finance Manager	Finance	AwarenessProgramme on Sri Lanka Public Sector Accounting Standards	04-05/09/2013	Association of Public Finance Accountants of Sri Lanka,	Rs.1000/-
106	Mr. J M R S Jayasinghe	Accountant	Finance	Do	Do	Do	Rs.1000/-
107	Mrs. W D C Priyadarshani	Management Assistant	Supplies	Workshop on Professional Development of Management Assistant.	09/09/2013	Skills Development Fund Ltd.	Rs.4500/-
108	Mrs. U A N Fernando	Management Assistant	TMD	Do	Do	Do	Rs.4500/-
109	Mrs. T D RoshiniNilantha	Management Assistant	AE&PHT	Do	Do	Do	Rs.4500/-
110	Mr.S A AjithSamarasinghe	Electrician	EE&M	Electrical Technology workshop	16/09/2013	Centre for habitat Planning & Development	Rs.3,000/-
111	Miss. J D Darshani	Management Assistant (Cashier)	Finance	Cash Protection & Safe Transportation	17/09/2013	PRAG Services (Pvt) Ltd.	Rs.8,000/-
112	MrAnuraWijepala	Chairman	Management	Outward Bound Workshop	27-29/09/2013	Ministry of Technology & Research	Rs. 10,000/-
113	Mr D D A Namal	Director General	Management	Do	Do	Do	Rs. 10,000/-
114	Mr G K K A De Silva	Deputy Director General (P)	Management	Do	Do	Do	Rs. 10,000/-
115	Mr R Tushiyandan	Research Engineer	E&EMC	Training Programme on Adopting Resource Efficient and Cleaner Production	02-03/10/2013	National Cleaner Production Centre	Rs.7500/-
116	Mr J A A D Jayasuriya	Research Fellow/ Head of Dept.	E&EMC	Do	Do	Do	Rs.7500/-
117	Mr. B P Susantha Kumara	Internal Auditor	Internal Audit	"SLFRS" & LKAS Final Accounts	02/10/2013	PRAG Services (Pvt) Ltd.	Rs.8,000/-
118	Mr. H M L U Herath	Principal Research Engineer	DF&CI	Maintenance Performance	04/10/2013	Construction Equipment Training Centre.	Free of charge
119	Mr. G K K A De Silva	Deputy Director General (P)	Management	Annual Rubber Conference	08/10/2013	Ministry of Plantation Industries	Rs.5,000/-
120	Mr. N K Edirisinghe	Director(Technical)	RED	Do	Do	Do	Rs.5,000/-
121	Mr. R Tushiyandan	Research Engineer	E & EMC	Seminar on upper Kotmale Hydropower Project	14/10/2013	IESL	Rs.1000/-

FOREIGN SCHOLARSHIPS/SEMINARS/TRAINING-PROGRAMMES/WORKSHOPS – 2013

	Name & Designation of the Officer	Department	Name of the Programme	Period	Country	Sponsoring Institutions
01	Mr A R C Salgado Principal Research Engineer	DF&CI	International Training Programme on “Design of Sheet Metal Forming Tools”	14/01/2013 - 22/03/2013	India	Government of India under the India Technical Economic Co-operation (ITEC)
02	Mr A A S P Jayasinghe Director (DF&CI)	DF&CI	International Training on "SME Policy Development - Exposure Visit"	31/03/2013 - 06/04/2013	South Korea	Sri Lankan German Development Cooperation
03	Mr. A H Piyasiri Deputy Director General (Services)	DDG(S)	Ninth Meeting of the Technical Committee and Consultative Workshop on Open Innovation Platform	11/11/2013 - 14/11/2013	Malaysia	Asian and Pacific Centre for Transfer of Technology (APCTT)

06. Performance Highlights of the Year 2013

Introduction

As a leading Engineering, Research and Development organization in Country, National Engineering Research and Development Center (NERDC) of Sri-Lanka has involved in research and development projects, pilot projects, providing services to industries, popularization programs, and promotion of science education among school children during the year 2013. Output and outcome of the activities have been contributed to the development of the country's economic match with the government development program and Mahinda Chintanaya in different key areas such as energy, housing, environmental, small and medium scale industries.

During the year 2013, Centre has initiated special program with the assistance from Finance Commission and all provincial councils to popularize cost effective building technologies through out the country. As a first step, the Centre trained key persons in Provincial level. Construction of such buildings has been commercialized with the Western Province.

In parallel with the Dayata Kirula Exhibition, Consultancy services have been provided based on the cost effective construction technologies developed by NERDC for construction of 25 Nos. of buildings as library buildings in Anuradhapura district and recently these buildings were handed over to the schools by His Excellency President Mahinda Rajapasa in Anuradhapura.

Special project has been commenced with Waste Management Authority of Western Provincial Council to produce compost fertilizer using market garbage at Muthurajawela. The NERDC has involved in R&D part of the project that converts dry batch system into continuous type digester system using the existing digesters.

Development of Temperature Controllable Biomass based Bakery Oven is one of the key projects handled by NERDC during the year 2013 and the Centre expected that output and outcome of the project will save the LP gas and Diesel consumption in bakery industry.

In focusing to development of required technologies for conventional aurvedic medicine system and our traditional medicine system, the NERDC has involved in research and development activities to introduce new machineries and processes to produce medicines required for industry.

1st Engineering Museum in Sri Lanka was declared open by Hon. Minister Partalie Champika Ranawaka, Minister of Technology and Research. Museum has facilitated to demonstrate our ancient technologies relevant to different areas such as facilities of irrigation, traditional medicine, agriculture sector, etc.

In 2013, several measures have been taken to popularize, demonstration and transfer of technologies through electronic media and newspaper articles, conducting training programs on developed technologies and participation in national level exhibitions.

The activities carried out by the NERDC in the year 2013 can be summarized in to 6 groups and most important activities are highlighted.

1. Research and Development
2. Pilot projects
3. Consultancy Services
4. Services to industries
5. Energy and environment
6. Popularization activities
7. Services provided for customers
8. Upgrading of science education

1. Research and development activities

The NERDC has involved in research and development activities to develop number of technologies and products focusing on key requirement of the country such as addressing energy crisis, housing for people, solid waste management and technical issues in the industries. Few important research and development projects carried out by the Centre are given below.

Project : Biomass fuelled temperature controllable bakery oven.

Objective : To develop and disseminate technology for temperature controllable biomass fuelled bakery oven for rice flour mixed bakery products.

Advantages :

- Diesel operated and LP Gas Operated bakery oven can be replaced
- Saving of fuel wood compared to traditional system
- Can be moved from place to place
- Temperature controllability
- Promotion of rice flour products to reduce wheat flour imports



Project : Improvement of dry batch type biogas generation

Objective : To convert dry batch type anaerobic digester to continuous type in order to study the performance in digesting vegetable market garbage at Dikkovita Biogas Plant.

Advantages : 20 MT capacity 08 Nos. of batch type digesters have been constructed and it has been found that feeding of garbage is very difficult as lifting of 20 Ft. diameter digester cover is very complicated due to its weight. By converting dry batch system in to continuous type digester system this problem can be avoided.



Project : Implementation of fuel wood chips feeding system in selected tea factories

Objective : Technology transfer of fuel wood chips feeding system and implementation of this technology in selected tea factories for tea drying processes.

Advantages :

- About 25% of firewood can be saved with compared to the conventional wood logs or split wood feeding system.
- Gliricidia can be planted in mass scale as feeding material (fuel) and it will make the system sustainable and provide employment opportunities



Project : Development of wood chipping machine

Objective : Development, fabrication and testing of fuel wood chipping machine to produce wood chips to operate wood chips feeding system developed by NERDC for tea industry

Advantages : Presently available machines operated on using electric saw generates high wastage as dust. The NERDC has developed wood chipping machine operated on sharing action which has high output with less wastage.



Project : Investigate the actual cost saving of the NERDC Cost Effective Technology by constructing a model house.

Objective: To identify actual cost consumption for construction of a house, based on NERDC technologies for the benefit of ordinary house builders.

Advantages: Actual cost saving using with NERDC technologies with compare to the conventional system can be established for benefits of ordinary house builders.



Technologies Used :

Foundation	-	NERDC foundation system
Walls	-	Cement Soil Blocks and Slipform wall
Floor slab	-	2" thick composite floor slab
Door & Window Frames	-	Concrete door and window frames
Roof	-	Prestressed concrete purline with Asbestos sheets

The cost can be saved by 30%-35% using this technology when compared to conventional system.

Project : Development of Gravel, Sand, Clay & Cement Blocks for wall construction (GSCC) using normal cement sand block making machine.

Objective : To develop low cost block for construction of wall . Cement soil block produce using normal block making machine can be made at very low price. Main purpose of the project is to test the parameter of the wall made with GSCC blocks and hence confirm the suitability of the GSCC blocks for wall construction.

Advantages :

- Cost of the block can be reduced with compare to cement sand block
- High/advance technology machines are not required for production of blocks
- Cost of the block can be reduced by 20%.



Project : Prepare a technical package for Rainwater Harvesting System

Objective : To provide technical knowhow for rainwater harvesting technology at domestic level and study the variations of quality of rainwater with time.

Advantages : Technical knowhow is available at domestic level to collect rainwater for ordinary people.



Project : Compact wastewater treatment system for Vehicle Service Stations

Objective : To develop compact type wastewater treatment system to treat the effluent generated at vehicle service stations up to the standard levels and reuse back for the washing process.

Advantages :

- Less space
- Readymade unit
- Treat the effluent up to the existing standards
- Low cost



Project : Flood water barrier for doorways

Objective : To design and fabricate a few types of floodwater barriers for door openings of houses.

Advantages: During the rainy season it has seen some parts of the country get flooded and the damage caused by floodwater to properties of houses is enormous.



Due to this reason, there are requests for flood defense system or solutions from the people who are often affected by floods.

Project : Field testing of fertilizer applicator

Objective : To develop a machine for the applications of fertilizer for coconut plantation with less labour

Advantages : Presently labour availability for fertilizer application to coconut plantation is a critical problem for coconut planters as manually application of fertilizer does not meet the requirement of uniform spread and it consumes high labour. The new machine will provide solutions for these issues.



Project : Development of machinery for manufacturing of medicine required for ayurvedic and traditional medicine system

Objective : To develop machines for improving quality and productivity of making ayurvedic and traditional medicine for ayurvedic and traditional medicine sector.

Advantages : Ayurvedic doctors and traditional doctors medicines are able to manufacture high quality medicines at affordable price.



Project : Improvement of machine for manufacturing of compressed Cement Stabilized Soil Blocks

Objective : To develop machine for manufacturing of compressed cement stabilized soil block to improve the productivity and efficiency of the manufacturing processes

Advantages : Production capacity and quality of products of the presently available machine is not satisfactory. Hence, people are reluctant to use cement soil block for building construction due to high manufacturing cost and poor quality. New machine would provide solution to the above issues.

2. Pilot project

Project : Introduction of cost effective building technologies for construction of government buildings in collaboration with the Finance Commission

Objective : To apply cost effective building technologies for construction of buildings in provincial councils. Initially it has been planned to construct two buildings for each provincial council.



Work completed :

1. Trained key persons in provincial councils
2. Developed 06 Nos. of typical plans and estimates.
3. Construction of two buildings in Western Province has been commenced

Construction of buildings

This building has been constructed in order to popularize the NERDC's technologies in Pollonaruwa

Soil blocks have been manufactured with the assistance of Civil Defense Force and with the available soil in adjacent area.

Building : Nurses Quarters for base Hospital, Pollonaruwa
Floor Area : 11,550 Ft²
Cost : Rs.243 Million
Cost/Sq.Ft. : Rs.2200

Technology used:

Wall	-	Cement Soil Block
Slab	-	NERDC slab system
Column	-	6'x6' Pre-stressed Column
Door and Window frame	-	Precast concrete frame



Construction of foot bridges

The NERDC has introduced new technologies to construct foot bridges at low cost to replace un safe Edanda used for crossing canal and stream. Few foot bridges have been completed as pilot project using prestressed and ferrocement technologies.



Foot bridge with Ferro cement technology



Foot bridge with prestressed concrete

3. Consultancy Services

Project : Construction of School Library buildings for Anuradhapura and Monaragala

The NERDC has provided consultancy services for construction of library buildings in Anuradhapura and Monaragala Districts. 49 Nos. of library buildings have been completed. Following technology has been used.

Foundation	-	NERD Foundation system
Walls	-	Cement Soil Block /Slipform wall system
Concrete	-	Pre-stressed Concrete
Roof and door and window frame	-	Pre-stressed Concrete trusses and precast concrete door and window frame.



4. Services to industry

The Centre has provided services for the industries focusing following areas.

1. Energy and environmental management
2. Design and fabrications of moulds for manufacturing industries.

5. Energy and environmental management

Following consultancy services have been carried out for customers by the Energy and Environmental Management Centre. Basically services are focused to environmental related monitoring and consultancy to control various environmental issues and energy related process monitoring and energy management activities for private as well as public sector organizations.

Activity	Achievement	
	Nos.	Financial (LKR)
Energy auditing in industry	05	792,980
Industrial Process monitoring	34	993,150
Boiler Performance and Flue Gas Analysis	94	2,120,173
Providing Environmental Monitoring as per the Regulation	124	2,843,442
Providing Solutions to Control Environmental Issues for Industries	27	1,125,263

Laboratory Testing

Laboratory testing has been carried out by the NERDC in the following areas.

Activity	Achievement	
	Nos.	Financial (LKR)
Environmental Laboratory testing	905	953,179
Biomass Laboratory testing and the other testing	4	59,542
Material testing and scanning	33	158,750
Civil Engineering Laboratory Testing	19	107,000
Lamp Testing	302	1,426,000
Battery Testing	19	376,000

Training Programs Conducted

The NERDC has carried out training programs on developed technologies as well as training programs on special areas such as wastewater, green productivity, energy and environmental, etc.



Activity	Nos.	Income (LKR)
Training program on cost effective technologies	02	275,000
Training program on cement soil block manufacturing	09	350,000
Training program on door & window frame	01	90,000
Training programs conducted under Divi neguma	05	-

Awareness Programs

During the year 2013, the NERDC conducted 06 Nos. of awareness programs on NERDC developed technologies and 23 Nos. of exhibitions.

Newspaper Articles and Electronics Media Conducted

In-order to popularize and to educate the people on NERD activities, the Centre has used both electronic media and newspapers during the year 2013.

TV programs conducted	-	10 Nos.
Articles	-	08 Nos.

6. Services provide for customers

Opening of the Museum

The first engineering museum in Sri Lanka has been declaredly opened by the Hon. Minister of Technology & Research Partalie Champika Ranawaka on 14th October 2013. Museum has facilities to demonstrate our old technologies such as Bisso Kotuwa, tools used in our traditional medicine systems, etc.



Technology Park Activities

Different activities have been carried out to improve the Science Education of the people during the year 2013, especially in school children.

- Total No. of visitors - 10000
- Total Income - Rs.335,845

7. **Services provide for upgrading science educations.**

Two Day Out Bound Science Program for school children

Out Bound training programs for school children have been arranged in science park with collaboration of National Science Foundation. Two day fulltime program has been designed to upgrade their science knowledge based on general science principles



7. Welfare & Religious Activities

7.1 Welfare Association of NERDC

Welfare Association of the NERDC Centre had organized following activities during the year 2013

- Blood Donation Campaign in commemoration of the late Vidyajyothi Dr. A N S Kulasinghe, one of the founder Chairman of this Centre was held on 24.10.2013.
- Awarding Ceremony was organized on 27.12.2013 to offer prizes for the Children of NERDC staff who had passed year 5 scholarship Examination.



7.2 Religious Associations

Two Religious Societies have been established in the NERDC namely, Buddhist Society and Catholic Society. Several activities and programmes were organized by these two societies with the objective of mental and spiritual well-being of the NERDC staff members. One prominent feature of these two societies is that every employee is a member of either the Buddhist Society or the Catholic Society voluntarily.

Following events/activities had been organized/ held by the two religious societies of the Centre during the year 2013.

7.2.1 Buddhist Society

- APirith Chanting Ceremony was organized on 01.01.2013 to mark the Beginning of the Centre activities in the year 2013.
- Some of the NERDC members of the Buddhist Society have made labour contribution for construction activities of the 'MahamevnaAsapuva' at Polgahawela on 06.03.2013
- A Dharmadeshana (sermon) was delivered by Ven. NawalaDhammanandaThero on 08.04.2013.
- An alms-giving programme was held at Jayawardhena Children's Home at Weligampitiya, Ja-ela on 18.05.2013.
- A Dharmadeshana (sermon) was delivered by Ven. AmbogamaWimalagna Thero on 19.06.2013.
- Buddhist books, worth of Rs. 15,000/- were purchased for the Buddhist Society Library from the International Book Fair held at BMICH, Colombo in September 2013.
- An annual pilgrimage was organized to worship the Most Sacred Tooth Relics in Kandy and to visit other religious temples nearby on 14.12.2013.



7.2.2 Catholic Society

- Annual Christmas Mass was held on 19.12.2013 by Rev. Father Terense Kithsiri Perera, Medellavita Meson.

08. Accounting Policies

1. Basis of preparation

The balance sheet as at 31.12.2013 and the related financial statements have been prepared in accordance with Sri Lanka Public Sector Accounting Standards which apply to the accrual basis of accounting and set out recognition, measurement, presentation and disclosure requirement dealing with transaction and events in general purpose financial statements.

The financial statements are prepared on a going concern basis.

The financial statements are prepared considering the accrual basis of accounting except for cash flow information by using the accrual basis of accounting.

The financial statements are presented separately each material class of similar items. The financial statements are presented results from processing large number of transactions or other events that aggregated in to classes according to their nature of function.

The financial statements are presented by the Centre has not offset the assets and liabilities or income and expenses unless required or permitted by a standard.

2. Changes in accounting policies

The accounting policies adopted are consistent with those of the previous financial year.

3. Comparative information

The accounting policies applied by the Centre are consistent with those used in the previous year. Previous two year's figures and phrases have been re-arranged, wherever necessary, to conform to the current year's presentation.

4. Going Concern

When preparing financial statements, management has made assessment of the liability of the constituents of the Centre to continue as a going concern, taking into account all available information about the future.

5. Allowance for doubtful debts

The Centre reviews at each balance sheet date all receivables to assess whether an allowance should be recorded in the Income Statement. The management uses judgment in estimating such amounts in the light of the duration of, outstanding and any other Factors that indicate uncertainty in recovery.

6. VALUATION OF ASSETS AND THEIR BASES OF MEASUREMENT

6.1 Property, plant and equipment

a) Cost and valuation

Property, plant and equipment is stated at cost or fair value less accumulated depreciation and any accumulated impairment in value.

The carrying values of property plant and equipment are reviewed for impairment when events or changes in circumstances indicate that the carrying value may not be recoverable. All items of property, plant and equipment are initially recorded at cost.

Where items of property, plant and equipment are subsequently revalued, the entire class of such assets is revalued at fair value. When an asset is revalued, any increase in the carrying amount is credited directly to a revaluation reserve, except to the extent that it reverses a revaluation decrease of the same asset previously recognized in the Income Statement, in which case the increase is recognized in the Income Statement. Any revaluation deficit that offsets a previous surplus in the same asset is directly offset

against the surplus in the revaluation reserve and any excess recognized as an expense. Upon disposal, any revaluation reserve relating to the asset sold is transferred to retained earnings. Items of property, plant and equipment are de-recognized upon replacement, disposal or when no future economic benefits are expected from its use. Any gain or loss arising on de-recognition of the asset is included in the Income Statement in the year the asset is de-recognized.

When assets are rehabilitated using the Capital funds individual assets are considered for revaluation at the time of rehabilitation is done.

Funding & Depreciation

Funds for acquisition of Fixed Assets are provided by the General Treasury. In determining the gross carrying amount of assets we have considered, the delivered to site value inclusive of FOB, CIF, clearing, transport & other local charges incurred for bringing to the condition at present. Assets are depreciated at the following rates on straight line method.

Asset	Depreciation
Buildings	2.5
Office Equipment	15
Tools	15
Demonstration Items	15
Computers	33.33
Vehicles	15
Furniture & Fittings	10
Plant & machinery& Lab Equipment	15
Library Books	5
Infrastructures	15

Inventories

Inventories other than produce inventories are valued at the lower of cost and net realizable value after making due allowances for obsolete and slow moving items.

The costs incurred in bringing inventories to its present location and condition, are accounted for as follows:

- Materials
At actual cost on first-in first-out basis.
- b) Work-in- progress
At the cost of direct materials, direct labour and an appropriate proportion of production overheads based on normal operating capacity.
- c) Finished goods
At purchase cost and /or cost of direct materials, direct labour and an appropriate proportion of production overheads based on normal operating capacity.
- g) Consumables and Spares
- At actual cost

Divinaguma National Program

Ministry of Traditional Industries and small Enterprise Development had advance money to purchase material & equipment to be distributed to trained beneficiaries of Divinaguma Program industrial sector.

Trade and other receivables

Trade and other receivables are stated at the amounts they are estimated to realize, net of allowances for bad and doubtful receivables. Allowances have been made for bad and doubtful debts. Bad debts are written off when identified. In calculating fair value cost of capital is taken @ 17%.

Cash and cash equivalents

Cash and cash equivalents in the cash flow statement comprise cash at bank and in hand and short term deposits with a maturity of 3 months or less.

LIABILITIES AND PROVISIONS

Employee Benefit Liabilities

Retirement Benefits

Retirement benefits to employees are provided according to the laid down statutory requirements. Institute's contribution for provident fund and employees' Trust Fund is 15% and 3% respectively. Gratuity provision is made according to the Gratuity Act No.12 of 1983 to employees from year one of service in the Centre. This provision is funded by the Treasury and when required.

Provision is calculated as follows

(last drawn Basic Salary plus cost of living) x $\frac{1}{2}$ x Completed Number of Years.

Provision of Research Awards

Awards to Winning Research Engineers

The Members of BoDs. approved to reimburse some of the funds received through awards to the NERDC, among the applicable Research Engineers, as per the following .

- a) Reimbursement of 60% of the award money among the Researchers involved in award winning Research Projects. Researchers would be identified as those, who were responsible for the submission of the applications for the awards.
- b) Allocated amount is distributed among the team members proportional to the salary as at the date of application closing date.
- c) This will apply to past awards and future awards.
- d) For the past awards, reimbursement will be done only to the Researchers, who are at service of NERDC at present (but for calculation, all the team members will be considered.)
- e) On the comments made by the Members of BoDs., the former Chairman explained that the amount identified for Researchers, who are not presently not employed would be retained along with the 40% of the award money for future activities of NERDC in promoting the research culture.

Grants

Grants are recognized where there is reasonable assurance that the grant will be received and all attaching conditions will be complied with. When the recurrent grant relates to an expense item, it is recognized as income over the period necessary to match the grant on a systematic basis to the costs that it is intended to compensate. Where the Capital grant relates to an asset, it is set up as deferred income. Where the Centre receives non-monetary grants, the asset and that grant are recorded at nominal amounts and are released to the Income Statement over the expected useful life of the relevant asset by equal annual installments. Major portion of grants are received from General Treasury.

Provisions, contingent assets and contingent liabilities

Provisions are made for all obligations existing as at the Balance Sheet date when it is probable that such an obligation will result in an outflow of resources and a reliable estimate can be made of the quantum of the outflow. All contingent liabilities are disclosed as a note to the financial statements.

Creditors

Trade creditors are recognized at the time of receiving goods to the Centre.

INCOME STATEMENT

Revenue recognition

Revenue is recognized to the extent that it is probable that the economic benefits will flow to the Centre, and the revenue and associated costs incurred or to be incurred can be reliably measured. Revenue is measured at the fair value of the consideration received or receivable, net of trade discounts and value added taxes. The following specific criteria are used for recognition of revenue.

a) Sale of develop products

Revenue from the sale of developed products, is recognized when the significant risk and rewards of ownership of the products have passed to the buyer with the Centre retaining neither a continuing managerial involvement to the degree usually associated with ownership, nor an effective control over the products are sold.

b) Rendering of services

Revenue from rendering of services is recognized in the accounting period in which the services are rendered or performed.

c) Construction Revenue

Construction revenue is recognized by reference to the stage of completion, determined by taking into accounts the labour hours incurred to date as a percentage of total estimated labour hours for each contract. Where the contract outcome cannot be measured reliably, revenue is recognized only to the extent of expenses incurred that are recoverable.

d) Turnover based taxes

Turnover based taxes include Value Added Tax, Economic Service Charge, Turnover Tax and Nation Building Tax. Centre Companies in the Centre pay such taxes in accordance with the respective statutes.

Interest income

Interest income is recognized as and when the interest accrues.

Gains and losses on disposal of asset

Net gains and losses of a revenue nature arising from the disposal of property, plant and equipment and other non-current assets, are accounted for in the Income Statement, after deducting from the proceeds on disposal, the carrying amount of such assets and the related selling expenses. Gains and losses arising from activities incidental to the main revenue generating activities and those arising from a Centre of similar transactions which are not material, are aggregated, reported and presented on a net basis.

(e) Other Income

Other income is comprised with net income of Technology transfer projects which are completed, Interest income on call deposits, Liquidity damages, Bond income, Interest on loans, Non refundable deposits, Registration of Suppliers, Sundry income, Damaged Stock disposal income, Gain on disposal of assets and overhead recovery based on accrual concept.

Differed income

Differed income is ascertained from the depreciation of asset purchase out of government funds.

Expenditure

Expenses are recognized in the income statement on the basis of a direct association between the cost incurred and the earning of the specific items of income where appropriate. All expenditure incurred in running of the Centre and depreciation of the property, plant & equipment has been charged to income in calculating the income over expenditure. Management has decided not to charge Labour & overheads to maintenance jobs.

Research & Development

Accounting Policy for Research & Development mainly funded by the Treasury. Income received from outside clients a set off against the expenditure.

When costing the research projects direct material, has been considered.

09. Financial Positions as at 31/12/2013

NATIONAL ENGINEERING RESEARCH & DEVELOPMENT CENTRE OF SRI LANKA				
2P/17 B ,Industrial Estate ,Ekala ,Ja -Ela.				
Financial Position for the year ended 31.12.2013				
				Figures in Rs.
	Notes	2013	Re stated 2012	Re stated 2011
Assets				
Current Assets				
Cash & Cash Equivalent	1	64,272,582.54	16,120,227.81	18,744,620.43
Trade Receivables	2	11,762,085.64	21,252,185.64	4,934,545.48
Inventories	3	10,419,723.36	12,037,248.97	10,663,132.59
Pre payments	4	213,744.02	200,462.85	173,933.14
Other Current Assets	5	68,304,107.17	65,463,949.23	78,235,494.44
Deposit	6	20,121,659.60	47,879,600.98	61,368,555.78
		175,093,902.33	162,953,675.48	174,120,281.86
Non-current Assets				
Property Plant & Equipment	7	427,191,173.11	476,196,337.02	496,481,849.95
Other Intangible Assets	8	178,320.45	160,400.45	136,880.45
		427,369,493.56	476,356,737.47	496,618,730.40
Total Assets		602,463,395.89	639,310,412.95	670,739,012.26
Liabilities				
Current Liabilities				
Trade & Other payables	9	22,776,783.88	26,669,429.03	32,401,745.94
Total Current Liabilities		22,776,783.88	26,669,429.03	32,401,745.94
Non Current Liabilities				
Provision for Gratuity	10	72,788,724.13	67,315,187.85	62,717,094.25
Deferred Income	11	135,600,256.75	167,000,895.17	170,212,660.26
		208,388,980.88	234,316,083.02	232,929,754.51
Total Liabilities		231,165,764.76	260,985,512.05	265,331,500.45
Total Net Assets		371,297,631.13	378,324,900.90	405,407,511.81
Net assets/Equity				
Capital contributed by the government entities	12	214,023,661.96	192,276,714.26	199,093,044.01
Revaluation Reserve	13	355,653,347.74	354,805,770.31	350,225,917.20
Accumulated surpluses/(deficits)	13	(198,379,378.57)	(16,877,583.67)	(143,911,449.40)
Total Net assets/Equity		371,297,631.13	530,204,900.90	405,407,511.81


Eng. Anura Wijayapala
Chairman


Eng. D D Ananda Namal
Director General


D V S Perera
Finance Manager

10. Statement of Financial Performances for the year ended 31/12/2013

<u>Statement of Financial Performances for the Year ended 31.12.2013</u>				
				Figures in Rs.
	Schdule No	2013	Re stated 2012	Re stated 2011
Revenue				
Transfers from the government entities	1	161,058,376.34	147,441,000.00	139,687,000.00
Deffered Income	2	60,354,983.38	55,692,094.84	50,528,530.38
Other Revenue	3	19,238,601.77	19,761,029.16	22,474,763.41
Total Revenue		240,651,961.49	222,894,124.00	212,690,293.79
Expenditure				
Administrative cost	4	174,730,478.34	146,499,144.22	142,001,324.45
Other Expenses	5	16,691,465.75	23,825,787.42	24,283,391.73
Depreciation	6	78,805,847.10	77,345,646.80	72,450,217.17
Financial Cost	7	45,965.20	69,679.83	125,129.06
Total Expenditure		270,273,756.39	247,740,258.27	238,860,062.41
Surplus/(Deficit) for the period		(29,621,794.90)	(24,846,134.27)	(26,169,768.62)

11. Statement of Equity Change

13. Statement of Change in Equity as at 31/12/2013

Figures in Rs.

	Capital Introduced	Government Contributed Capital	Capital from Other sources	Re stated Revaluation surplus	Accumulated Surplus /(Deficit)	Total Net Assets/Equity	Re Stated Balance as at 31.12.2012
Re stated Balance as at 1/1/2011	1,000,000.00	71,071,006.92	119,985,089.87	349,743,581.49	(117,741,680.78)	424,057,997.50	428,313,301.52
Changes in accounting policies							
Restated Balances							
Changes in equity for 2011							
Capital Grant received		82,257,610.40				82,257,610.40	34,308,000.00
Resarch Grant transferd to Comprehensive Income		(10,337,000.00)				(10,337,000.00)	
Capital Grant Transferred to Diffed Income		(64,883,663.18)				(64,883,663.18)	(31,300,437.79)
Total comprehensive Income					(26,169,768.62)	(26,169,768.62)	(6,787,640.03)
Increase in revaluation reserve				482,335.71		482,335.71	(475,226.20)
Balance as at 31/12/2011	1,000,000.00	78,107,954.14	119,985,089.87	350,225,917.20	(143,911,449.40)	405,407,511.81	424,057,997.50
Restated Balances	1,000,000.00	78,107,954.14	119,985,089.87	350,225,917.20	(143,911,449.40)	405,407,511.81	424,057,997.50
Changes in equity for 2012							
Capital Grant received		48,289,000.00				48,289,000.00	82,257,610.00
Research Grant transferred to Comprehensive Income		(2,625,000.00)				(2,625,000.00)	(10,337,000.00)
Capital Grant Transferred to Differed Income		(52,480,329.75)				(52,480,329.75)	(64,883,663.18)
Total comprehensive Income					(24,846,134.27)	(24,846,134.27)	(26,169,768.62)
Increase in revaluation reserve				4,579,853.11		4,579,853.11	482,335.71
Balance as at 31/12/2012	1,000,000.00	71,291,624.39	119,985,089.87	354,805,770.31	(168,757,583.67)	378,324,900.90	405,407,511.41
Previous Year adjustments							
Changes in equity for 2013							
Capital Grant received		61,519,669.00				61,519,669.00	48,289,000.00
Research Grant transferred to Comprehensive Income		(10,818,376.34)				(10,818,376.34)	(2,625,000.00)
Capital Grant Transferred to Differed Income		(28,954,344.96)				(28,954,344.96)	(52,480,329.75)
Total comprehensive Income					(29,621,794.90)	(29,621,794.90)	(24,846,134.27)
Increase in revaluation reserve				847,577.43		847,577.43	4,579,853.11
Balance as at December 31, 2013 c/f	1,000,000.00	93,038,572.09	119,985,089.87	355,653,347.74	(198,379,378.57)	371,297,631.13	378,324,900.50

12. Cash flow Statement for the year ended 31/12/2013

Cash Flow Statement For The Year Ended 31st December 2013

Figures in Rs.

	2013	2012	2011
Net cash flows from operating activities			
Surplus/ (deficit) from ordinary activities	(29,621,794.90)	(24,846,134.27)	(26,169,768.62)
Non- cash movements			
Depreciation	78,805,847.10	77,345,646.80	72,450,217.17
Increase in provision for bad debts	3,223,613.49	(3,636,903.57)	430,200.88
Increase/(decrease) in payables	(3,892,645.15)	(5,732,316.91)	5,694,225.24
Increase /(decrease) in borrowings	(31,400,638.42)	(3,211,765.09)	14,355,132.80
Increase/(decrease) in relating to employee costs	5,473,536.28	4,598,093.60	4,984,076.00
(Gains)/losses on sale of property, plant and equipment	(29,882.20)	(10,070.73)	(51,999.00)
(Increase)/decrease in other current assets	26,522,027.88	24,859,853.92	(23,774,438.79)
Increase in investments due to revaluation	847,577.43	4,579,853.11	482,335.71
(Increase)/decrease in receivables	6,266,486.51	(12,680,736.59)	(656,170.33)
Net cash flows from operating activities	56,194,128.02	61,265,520.27	47,743,811.06
CASH FLOW FROM INVESTMENT ACTIVITIES			
Purchase of plant & equipment	(29,819,842.39)	(57,083,702.86)	(64,906,958.18)
Proceeds from sales of equipment	31,121.40	10,119.72	52,000.00
Net cash flows from investment activities	(29,788,720.99)	(57,073,583.14)	(64,854,958.18)
CASH FLOW FROM FINANCING ACTIVITIES			
Capital grant	61,519,669.00	48,289,000.00	82,257,610.40
Transferred to Research Income	(10,818,376.34)	(2,625,000.00)	(10,337,000.00)
Transferred to differed income	(28,954,344.96)	(52,480,329.75)	(64,883,663.18)
Net cash flow from financing activities	21,746,947.70	(6,816,329.75)	7,036,947.22
Net increase/(decrease) in cash & cash equivalents	48,152,354.73	(2,624,392.62)	(10,074,199.90)
Cash & cash equivalent at beginning of the period	16,120,227.81	18,744,620.43	28,818,820.33
Cash & cash equivalent at end of the period	64,272,582.54	16,120,227.81	18,744,620.43

13. Notes to the accounts as at 31/12/2013

1. Previous Year Adjustments

		2012	2011	2010	Effect to the balance sheet
	Balance b/f	(25,146,829.00)	(26,704,868.62)	(6,724,769.23)	
1.1	Over provision of Incentive 2012	3,000			Incentive provision is reduced by Rs.3,000.00
1.2	Under provision of Incentive	(444,733.09)			Accrued incentive will be increase by Rs. 444,733.09
1.3	APH/PILOT/103/2011 Over provision of expenditure		25,000.00		Accrued charges of year 2011 is reduced
1.4	Creditors settlement of Rs.4,000.00 has been charged to CVL/PILOT/202/2010 in year2011		4,000.00		Trade creditors are reduced by Rs.4,000.00
1.5	Over provision of Salaries			5,806.20	Provision of salary arrears is reduced.
1.6	Deposits receivable prior to 2010 is written off according to BD No 7-2013 of 21/8/2013 under item No 3.6			47,150.00	Deposits receivable is reduced by Rs 47,150.00
1.7	Over provision of damage stock are corrected	15,612.89			Damage stock provision is reduced by Rs .15,612.89
1.8	Over provision of incentive for Research work has been written off	291,175.57			
1.9	2011 Income is accounted as 2010 income-ELE/COM/61/2011and Income of ELE/COM/44/2010 is reduced		506,000.00	(506,000.00)	In year 2010 customer advance account will be increase by Rs.506,000.00 and in year 2011 advance account will be reduced by Rs. 506,000.00
1.10	A loan given for an employee under the easy payment loan scheme under the project No CVL/COM/51/2012	(10,415.73)			
1.12	Clearing charges due to World express is been written back			15,053	Trade creditors are reduced
1.13	Over provision of depreciation		(268,134.86)		Asset balance is increased

2. Deposits kept as securities for Guarantee Bonds

Guarantee is issued to	Bond No	Certificates Pledge as securities	Amount Rs	Bank	Amount Rs
Toyota Lanka (Pvt) Ltd	Bank Guarantee-15/2008	C/33734579-507908	100,000.00		75,000.00

3. Temporary deposits

Funds received as bond Income from NERDC employees who has left the services before completion of the bond is invested in State Institutions Temporary Surplus Trust Fund maintained at Bank of Ceylon on 30 th July 2012 Rs.8,994,089.90 and with dividends & interest it has increase to Rs.10,469,194.57.

Advances received from the customers are secured in the form of temporary call deposits with the bank, until such time it is used for the purpose. Interest earned is shown under other income.

4. Trade & other Receivables

Debtors and other recoverable are stated at the value estimated to be realized net of provisions for bad & doubtful receivables. Debts balances were discounted at 17% .Debts which are collected during 2013 are not considered as bad debts.

Debtor	Debtor Amount	Using Cost of capital 17% or 100%	Provision for Bad debts as at 31/12/2013
Ministry of Health	7,969,333.69	5,821,706.25	2,147,627.44
Pending Work Order	775,082.10	775,082.10	-
Mayor - Municipal Council, Negombo	2,128,637.16	1,554,998.29	573,638.87
Army Headquarters South Wing	1,112,694.45	812,838.37	299,856.08
Ministry of Technology & Research	271,760.15	198,524.47	73,235.68
Department of Agrarian Dev.	147,999.99	147,999.99	-
Unilever Sri Lanka Ltd	67,771.42	67,771.42	-
Teaching Hospital -Kurunegala	43,300.00	31,631.24	11,668.76
Urban Council-Panadura	118,000.00	86,200.60	31,799.40
Lakliya Kantha Govi Sanvidanaya	39,450.00	28,818.76	10,631.24
Provincial General Hospital-Rathnapura	1,375,000.00	1,004,456.13	370,543.87
Wijaya Kumaratunga Hospital Seeduwa	182,720.00	133,479.44	49,240.56
Urban Council-Ambalangoda	802,000.00	585,871.87	216,128.13
Urban Council-Wattegama	290,000.00	211,848.93	78,151.07
National Science Foundation	84,000.00	61,363.14	22,636.86
Municipal Council - Negombo	35,128.58	25,661.90	9,466.68
A E Predeep , 'Sanjeewa Nivasa'	12,000.00	8,766.16	3,233.84
Hiriyala Economic Centre	637,056.40	-	637,056.40
Pelwate Dairy Industries (Pvt) Ltd	371,152.65	-	371,152.65
Industrial Technology Institute	316,342.86	-	316,342.86
Pathadumbara Pradeshiya Saba	221,513.00	-	221,513.00
	17,000,942.45		5,443,923.38

5. Contingent Liabilities

- 5.1 HR Complaint by Mr. K.S.I Fernando, Motor Mechanic -Complain No.HRC/5072/2013.
- 5.2 Labour Complaint at Ja-Ela District Labour Office by Mr. KGN Rathnayake,former Asst. Director (Administration)
Rs 100,000.00 as contingent liabilities for legal provisions from 2013 allocation for the following legal matters (cases) Vs NERDC .
- 5.3 Construction of Museums Building
As the dispute between the Contractor ,Ms S P Muthaiah & Sons and NERDC are still under investigation at the technical committee appointed by the Ministry of Construction, Engineering Services, Housing & Common amenities we are not in a position to decide exact payment due to the contractor. However we can justify minimum balance payment due to the contractor to be not more than Rs 3m.

6. Incentive Payment Disbursement Amount

Board of Directors has approved the implementation of the FC 380 for NERD Centre, at the Board Meeting held on 21 st May 2013 .Board of Directors has approved the change in the method of disbursement as per FC 380 .Changes are as follows and other conditions remain same as year 2012 calculations.

Indirect project staff is the persons who contribute indirectly for the successful completion of the project and will be divided in to three sub categories asManagement

- a) Departmental indirect
- b) Other indirect

DG, DDG(R&D) and DDG(S) are included as management and all the staff excluding clerks of the project executing department are considered as department indirect staff. Other indirect staff includes HR, Finance, Supply stores and TMD staff. Clerical staff of the Technical departments is considered as clerks of HR department or their own department based on the choice of the clerks concerned for the provision of this scheme.

Table 1: Direct and Other Indirect Staff

* 1.Staff of the internal Audit section is considered as in Finance division .

2. Staff of the Library is considered as in HR Department.

Weighting Factors

Other Indirect

Supply/Stores staff	-	2
Non office staff of HR department	-	.75

Departmental Indirect

Directors/HOD	-	1.25
Others	-	1

Amount is calculated proportionally to weight factor and square root of the salary.

Management & Other Indirect

Amount is calculated proportionate to the salary, weight factor.

7. Vehicle Accident during the year

Vehicle No	Date of the Accident	Estimated Cost Rs.	Insurance Agent*	Received Date	Amount Received Rs.	Received by NERDC/Agent
301-3740	06-02-2013	16,800.00	NITF	23.04.2013	16,800.00	Sonalee Motore & Tinker Works
PD-8992	08-02-2013	104,949.60	SLIC	26/4/2013 R No 2013-0499	104,949.60	NERDC
NB-1631	23-02-2013	17,673.60	SLIC	28/10/2013 2013-1372	15,937.60	NERDC

In vehicle No NB-1631 ,claim Rs.2036 has been reduce by SLIC.

*SLIC-Sri Lanka Insurance Corporation

NITF-National Insurance Trust Fund

8. Revaluation of Assets

Following asset were revalued

Asset	Cost Rs	Accu.Depr Rs.	WDV Rs	Re valued date	Revalued amount Rs	Gain/ Deficit	Team
Lorry 42-1966	1,460,538	732137.11	728,401.51	31/5/2013	1,500,000.00	771,598.49	A A S P Jayasinghe- Engineer H P Hemantha Kumarea- Engineer J M R Jayasinhe- Accountant
Water Flow Meter	2,083,950.00	1,659,928.94	424,021.06	31/12/2013	500,000.00	75,978.94	A A S P Jayasinghe- Engineer H P M G Pathiraja- Scientist J M R Jayasinhe- Accountant



Eng. D D Ananda Namal
Director General



Eng. Anura Wijayapala
Chairman



විගණකාධිපති දෙපාර්තමේන්තුව
கணக்காய்வாளர் தலைமை அறிபதி திணைக்களம்
AUDITOR GENERAL'S DEPARTMENT



මගේ අංකය
எனது இல. }
My No. }

LS2/F/NERD/FA/2013

ඔබේ අංකය
உமது இல. }
Your No. }

දිනය
திகதி }
Date }

10 December 2014

Chairman

National Engineering Research and Development Centre of Sri Lanka

Report of the Auditor General on the Financial Statements of the National Engineering Research and Development Centre of Sri Lanka for the year ended 31 December 2013 in terms of Section 14(2)(c) of the Finance Act, No. 38 of 1971.

The audit of financial statements of the National Engineering Research and Development Centre of Sri Lanka comprising the statement of financial position as at 31 December 2013 and the statement of financial performance, statement of changes in equity and cash flow statement for the year then ended and a summary of significant accounting policies and other explanatory notes was carried out under my direction in pursuance of provisions in Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka read in conjunction with Section 13(1) of the Finance Act, No. 38 of 1971 and Sub-section 1 of Section 2 of the State Industrial Corporations Act, No. 49 of 1957 and the Gazette Extraordinary No.124/6 of 14 August 1974. My comments and observations which I consider should be published with the Annual Report of the Centre in terms of Section 14(2)(c) of the Finance Act appear in this report. A detailed report in terms of section 13(7)(a) of the Finance Act was furnished to the Chairman of the of the Centre on 27 June 2014.

1:2 Management's Responsibility for Financial Statements

The management is responsible for the preparation and fair presentation of these financial statements in accordance with Sri Lanka Public Sector Accounting Standards and for such internal control as the management determines is necessary to enable the preparation of financial statements that are free from material misstatements whether due to fraud or error.

අංක 306/72, පොල්දළු පාර, බත්තරමුල්ල, ශ්‍රී ලංකාව. - இல. 306/72, பொல்தூவ வீதி, பத்தரமுல்லை, இலங்கை. - No. 306/72, Polduwa Road, Battaramulla, Sri Lanka

+94-11-2887028-34

+94-11-2887223

oaggov@slt.net.lk

www.auditorgeneral.gov.lk



1:3 Auditor's Responsibility

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with Sri Lanka Auditing Standards, consistent with International Standards of Supreme Audit Institutions (ISSAI 1000-1810). Those Standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatements of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Centre's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Centre's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of financial statements. Sub-sections (3) and (4) of Section 13 of the Finance Act, No. 38 of 1971 give discretionary powers to the Auditor General to determine the scope and extent of the audit.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

2. Financial statements

2:1 Opinion

In my opinion, the financial statements give a true and fair view of the financial position of the National Engineering Research and Development Centre of Sri Lanka as at 31 December 2013 and its financial performance and cash flows for the year then ended in accordance with Sri Lanka Public Sector Accounting Standards.



2:2 Comments on Financial Statements

2:2:1 Accounting Deficiencies

The following observations are made.

- (a) The test reports on 70 samples of electric lamps received by the Centre during the period from the year 2009 to the year 2011 had been issued without recovering the test fees. The test fees amounting to Rs.633,288 receivable in this connection by the Centre had not been brought to account as the income and the test fees receivable (debtors) of the respective years.
- (b) The museum pieces valued at Rs.1,765,179 had been brought to account in the year under review as property, plant and equipment. As such the museum pieces had been understated and the property, plant and equipment had been overstated by that amount.
- (c) Even though the amortization relating to the capital grants amounted to Rs.60,585,395, that had been brought to account as Rs.60,354,983. As such the loss for the year under review had been overstated by a sum of Rs.230,412.

2:2:2 Accounts Receivable and Payable

The following observations are made.

- (a) The debtors balance of Rs.17,000,942 comprising 21 trade and other debtors accounts as at 31 December 2013 included debtors balances amounting to Rs.49,542 between one year and 3 years old and debtors balances amounting to Rs.1,229,722 older than 8 years.
- (b) The trade creditors balances totalling Rs.2,842,276 included unsettled balance of Rs.252,160 older than 5 years and Rs.198,812 not settled for more than 02 years.



2:2:3 Transactions not supported by Adequate Authority

An Incentive Scheme for the payment of incentives from the profits of commercial projects with effect from the year 2012 had been introduced in accordance with the decisions of the Board of Directors dated 22 May 2012 and 22 May 2013 and the approval of the Department of Management Services had not been obtained for that. A sum of Rs.5,029,560 out of the commercial projects profits of the year under review and a sum of Rs.3,340,442 from the preceding year had been spent on the incentives. The amount spent on the incentives in the year under review as compared with the preceding year, had increased by 50 per cent and the Chairman informed the audit that it was due to the profits earned by most of the projects.

2:3 Non-compliance with Laws, Rules, Regulations and Management Decisions

The following non-compliances were observed.

Reference to Laws, Rules, Regulations	Non-compliance
<hr/>	<hr/>
(a) Financial Regulations of the Democratic Socialist Republic of Sri Lanka.	
Financial Regulation 104, 105, 106 and 110	Action in terms of the Financial Regulations had not been taken in connection with damage totalling Rs.239,694 caused to 04 motor vehicles in the preceding year, damage totalling Rs.138,422 caused to 03 motor vehicles in the year under review by accidents and the damage caused by fire amounting to Rs. 277,095 to the assets of the Centre at the “Sahasak Wmeasum” Exhibition held at the Bandaranaike Memorial International Conference Hall.



(b) Section II of the Finance Act, No. 38 of 1971, the Public Enterprises Circular No. PED/25 of 29 June 2004 and the Public Finance Circular No. PF/PE/19 of 27 June 2006.

A sum of Rs.207,000 in fixed deposits and a sum of Rs.66,934,804 in seven day's call deposits in a State Bank had been invested without the approval of the Minister of Finance and the appropriate Minister.

(b) Public Enterprises Circular No. PED/40 of 27 September 2006.

Even though the Public Administration Circulars issued to Government Ministers and Departments cannot be made applicable to Public Corporations and Boards, according to the decisions of the Board of Directors dated 25 September 2013 based on the Public Administration Circular No. 28/2011 of 11 December 2011, the monthly allowance of Rs.15,000 paid to the Sri Lanka Engineering Service, amounting to Rs.600,000 had been paid by the Centre to 40 Engineers. Even though the profits of the Commercial Projects had been utilized for the payment of the allowance for the year 2013, the approval of the Treasury for that had not been obtained while provision for that had not been made in the budget.

(d) Public Finance Circular No. 438(2) of 13 November 2009 and Financial Regulations 756, 757 and 771.

(i) Disposable stocks valued at Rs.1,104,447 had not been disposed of.

(ii) Even though goods/assets should be physically verified and a completed report including the balance according to the Inventory Register, Physical balance excesses, shortages, etc. should be furnished, the report furnished in connection with fixed assets valued at Rs.427,191,173 had been included only to shortages of goods and damaged goods.



3. Financial Review

3:1 Financial Results

According to the financial statements presented, the operations of the Centre for the year ended 31 December 2013 had resulted in a deficit of Rs.29,621,795 as compared with the corresponding deficit of Rs.24,846,134 for the preceding year. As such, the deterioration of the financial results of the year under review by a sum of Rs.4,775,661 had been mainly due to the increase of the administrative expenditure by a sum of Rs.28,231,334.

4. Operating Review

4:1 Performance

The following observations are made.

- (a) According to the information furnished by the Centre, the information on the Research Projects of the Centre for the 05 years from 2009 to 2013 is given below.

Particulars	Years					Total
	2013	2012	2011	2010	2009	
Researches commenced	08	18	16	14	09	65
Researches completed	--	13	15	11	07	46
Researches abandoned	--	01	--	02	06	-9
Unsuccessful Researches	--	01	02	02	01	06
Technology on Researches transferred	--	--	01	--	--	01
Researches used	--	06	06	03	01	16



- (b) Even though the Research Project activities of 15 Researches commenced during the years 2009 to 2013 by utilizing Treasury provisions amounting to Rs.7,019,692 had been finalized, the final reports had not been issued up to date.

4:2 Management Inefficiencies

The following observations are made.

- (a) The Project commenced in the year 2004 with the objective of the generation of electricity by the implementation of an electricity generation system had been abandoned in the year under review due to the inability to achieve the objective. As such the assets purchased and constructed at a cost of Rs.4,740,000 and electricity generators valued at US\$ 86,250 had been idling. The other costs incurred on the Project amounted to Rs.34,165,937 and out of that a sum of Rs.32,913,445 had been spent on repairs to the electricity generator.
- (b) Action had not been taken even in the year under review for the recovery of the Value Added Tax amounting to Rs.29,985,277 and the Withholding Tax amounting to Rs.239,092 recoverable in respect of the period 2005 to 2013 from the Department of Inland Revenue.
- (c) Due to the decrease of the works orders received by the Commercial Project on testing of batteries in the years 2012 and 2013 as compared with the year 2011 as a result of the delays in the issue of test reports, the project income had decreased. In view of the decrease in the testing of batteries, the machinery and equipment valued at Rs.17,773,523 purchased by the Centre in the preceding years for testing of imported batteries had been underutilized.
- (d) Due to the delays in the issue of performance reports on 698 orders for receipts amounting to Rs.7,886,566 relating to the testing of imported electric lamps during the years 2009 to 2012, the income of that project had decreased rapidly in the preceding years. Accordingly, the net income of the years 2012 and 2013 as compared with the year 2011 had decreased by 51 per cent and 83 per cent respectively.



- (e) A sum of Rs.63,518,112 had been held during the period 2002 to 2013 in seven day call deposits at low rates of interest. The management had not taken action to invest the money in deposits which yield higher rates of interest.
- (f) A sum of Rs.203,850 had been spent in the year 2011 for the implementation of the ISO-9001 Systems Certification in the Centre from that year. Even though a period of 03 years had elapsed since then, action had not been taken to obtain the Systems Certification.

4:3 Operating Inefficiencies

The following observations are made.

- (a) The Centre had placed an order on 27 August 2013 for the purchase of a dust sampling machine for Rs.2,313,584 from a private firm. Even though the machine should have been supplied on 26 November 2013, the supply had not been completed even by the end of February 2014.
- (b) Even though the construction of a sewerage systems project for the Negombo Municipal Council at a cost of Rs.10,984,594 had been commenced in the year 2002, the Municipal Council had not taken over the project as the project was not functioning properly. Action had not been taken for the recovery of the sum of Rs.2,128,636 receivable as at 31 December 2013.
- (c) The advances amounting to Rs.4,649,870 received by the Centre from the clients for various projects, included a sum of Rs.1,642,500 obtained from a Government institution in the year 2010 for testing of electric lamps. As the test had not been carried out up to date, that remained without being settled over 04 years. As two projects of Rs.15,000 had not been implemented that amount further remained in the Advance Account.
- (d) Shutter sets hired out to 09 clients during the period 2003 to 2005 had not been handed over to the Centre even by 31 December 2013. Action had not been taken even by the end of the year under review to settle the deposits amounting to Rs.105,500 obtained from the clients by recovering the shutter sets.



- (e) Even though earning an income of Rs.3,000,000 had been planned in the year under review from the supply of consultancy services for construction of buildings and the project commenced with the objective of introducing the low cost constructions by using the technology of the Centre to the State Sector, it had not been possible to achieve the expected targets.

4:4 Idle and Underutilized Assets

The following observations are made.

- (a) Ten items of machinery and equipment valued at Rs.47,606,810 purchased for each of the Divisions of the Centre had been idle or underutilized during periods ranging from one year to 07 years.
- (b) Sixty four items of stocks valued at Rs.2,357,210 in the main stores of the Centre had been idling over periods exceeding 13 years.
- (c) A hydraulics free stressing machine invented by the Technology and Livestocks Division at a cost of Rs.770,792 had been underutilized over a period of 04 years.

4:5 Uneconomic Transactions

A sum of Rs.1,968,270 had been paid in the year under review to a foreign examiner to visit and examine the CNC Milling machine that remained out of order for over two years in the design and Consultancy Services Division. Even though repairs had been done in three instances it had not been able to operate the machine even by the end of the year under review.

4:6 Identified Losses

The Centre had incurred a loss of Rs.205,326 from Three Commercial Projects completed during the year under review.



4:7 Deficiencies in the Contract Administration

Even though the construction work on the Nurses Quarters Building of the Polonnaruwa General Hospital had been commenced on 17 June 2011 on a revised estimate of Rs.24,293,400, the approval of the Technical Evaluation Committee had not been received even by March 2014. The following observations are made in this connection.

- (a) Even though a period of 03 years had elapsed after the award of the contract, an agreement in terms of Guideline 33.6 of the Institute of Construction Training and Development (ICTAD) and Section 8.9 of the Procurement Guideline, had not been entered into up to date.
- (b) A sum of Rs.9,176,421 receivable by the Centre for the bills furnished to the Ministry of Health had not been recovered even by 20 February 2014, the date of audit.
- (c) Even though the value of extra work amounted to Rs.2,984,169, the approval for extra work in terms of the provisions in the Procurement Guide lines had not been obtained.
- (d) Even though the contract should have been commenced on 15 April 2011 and completed in 04 months, it had been completed on 22 February 2013. The receipt of a sum of Rs.2,047,560 receivable as price variance due to the delays in the construction was observed in audit as doubtful.

4:8 Delayed Projects

The following observations are made.

- (a) Even though the project on the manufacture of an equipment for the production of forage pellets for milk cows had been scheduled for commencement on 01 July 2006 and completion on 30 September 2006, the completion of the project had been delayed up to the year 2008. The total cost incurred on the project amounted to Rs.2,144,290 and it was observed that it had not been able to operate the machine for the achievement of the expected results even by the end of the year under review. The loan balance receivable for the machine from the year 2009 amounted to Rs.371,152.



(b) A Memorandum of Understanding had been entered into with the University of Moratuwa on 01 June 2012 for the implementation of the Demining Robot Project and a sum of Rs.1,085,662 had been paid to the University of Moratuwa on 20 August 2012 and 11 January 2013. Even though the project had been scheduled for commencement in June 2012 and completion in July 2013, the Project had not been completed. Any progress of the Project was not observed in audit.

4:9 Abandoned Projects

As 19 researches costing Rs.3,066,060 had been abandoned during the period 2009 to 2013, it was observed in audit that the expenditure incurred on those projects as uneconomic transactions.

4:10 Non-achievement of Expected Results from Project/ Failed Projects

Even though a sum of Rs.55,316,080 had been written off from the accounts as the annual research expenses of 16 projects, the expected results of the researches had not been achieved. It was also observed that the machinery purchased and manufactured for these projects had been idling.

4:11 Personnel Administration

The information on the approved and the actual number and the vacancies and excess in the personnel of the Centre is given below.

Post	Approved	Actual	Vacancies	Excess
-----	-----	-----	-----	-----
Executive Grade	79	51	28	--
Non-Executive Grade	229	223	42	19

Four officers who did not have experience of one year in the relevant field had been recruited on contract basis outside the procedure approved on 31 January 2013 by the Department of Management Services for recruitment of personnel to the posts of Management Assistant non-technical (Test Services) and monthly allowances amounting to Rs.170,626 had been paid from June to December 2013 instead of salaries.



5. Accountability and Good Governance

5:1 Budgetary Control

Significant variances between the estimated expenditure of the year under review and the actual expenditure ranging from 11 per cent to 43 per cent were observed, thus indicating that the budget had not been made use of as an effective instrument financial control.

6. Systems and Controls

Deficiencies in systems and controls observed during the course of audit were brought to the notice of the Chairman of the Centre from time to time. Special attention is needed in respect of the following areas of control.

- (a) Costing and Management of Projects
- (b) Construction Projects Management
- (c) Debtors
- (d) Utilization of Machinery
- (e) Motor Vehicles Control

W.P.C. Wickramaratne
Acting Auditor General

15. Observation of the Members of Board of Directors with regard to the Report of the Auditor General on the Financial Statement of the National Engineering Research and Development Centre of Sri Lanka for the year ended 31st December 2013 in terms of Section 14(2)(c) of the Finance Act, No. 38 of 1971.

2.1 Comments on Financial Statements -----

2.2.1 Accounting Deficiencies -----

- (a) We agree with this. Next year this will be recorded.
- (b) This will be corrected in the next year
- (c) This is accepted and this will be corrected in the next year

2.2.2 Accounts Receivable & Payable -----

- (a) Out of the outstanding balance Rs. 8,056,333.34 is settled by now. Arrangements are being made to collect the balance.

Out of the outstanding balance of Rs. 1,229,722, Rs. 592,666/- has been cleared and Rs.637,056 is due from Hiriyala Economic Centre. Actions are being taken for this.

Out of the outstanding balance of Rs. 49, 742/- between year 1 and 3, a balance of Rs.27,666/- is received. There is a further outstanding balance of Rs. 21,676.15 to be collected.

2.2.3 Transactions not Supported by Adequate Authority -----

What we have done here is implementing the PF circular No. 380 dated 19.01.2000. To implement this circular approval of Management Services department is not necessary. In this circular distribution of benefits are stipulated and it is stated the methodology can be defined by the Centre.

2.3 Non Compliance with Laws, Rules, Regulations and Management Decisions -----

- a) In future according to the Financial Regulations action will be taken for this.
- b) Out of the balance of Rs. 207,000/- , Rs. 7000 is the security deposits by our employees. This money will be refunded at the completion of their employment.

Out of the balance of Rs. 200,000, Rs. 100,000 has been kept as a security to Toyota Lanka to obtain their services. This security bond was given after pledging a fixed deposit as a security to Bank of Ceylon. Balance Rs. 100,000/- will be taken to cash flow.

The advances received from the customers are kept in seven day call deposits until they are utilized.

The amount shown here is the money deposited throughout the year time to time, but at a given time there is only small amount of money in the deposit.

- c) Based on the ministry letter dated 7.10.2013 and on the matter discussed at the Management Committee meeting of the Ministry, Board of Directors has decided to pay Rs. 15,000/- allowance to engineers of the institute as per the said circular. However this payment was done only one month and after that this was stopped.

- (d) (i) Out of a disposable stock balance of Rs.1,015,844.12, Rs. 88,602.88 value of stocks has been disposed. Further we have received the approval from Board to dispose stock value of Rs.990,091.81. For the balance stock value of Rs.25,752.30 arrangement has been made to dispose.

(ii) After performing the verification of inventory items in the report we disclose only the short falls, damaged items and excesses only. Since we are having large no of entries in the inventory, we do not re-write the inventory items in the verification report.

3. Financial Review

3.1 Financial Results

For this increase, Rs. 13.4m resulted from recurrent expenditure due from government and Rs. 18.2 m resulted from depreciation other sources. Compared the recurrent expenditure received year 2012, Rs12m is increased.

4. Operational Review

4.1 Performance

By now 50 Nos. of project reports have been completed and the balance 13 Nos are in progress.

However, even engineers are recruited to the Centre, they left the Centre within a shorter period and this badly affects the progress of the research projects. If any action is not taken to correct this immediately, it will be a severe issue in conducting research projects in NERDC.

4.2 Inefficiencies of the Management

- (a) The objectives of this project were to transfer the technology of biomass gasifier based power generation system to NERDC and to demonstrate it to the entrepreneurs who are interested in investing such projects.

Grid connection of power, generated from this system, was a secondary objective, for which a separate fund from UNDP was received. That objective was successfully achieved and NERDC received the requested funds.

However, due to the technical fault in the engine-generator system, it was not possible to operate the system on continuous basis. Since year 2005 these technical faults were emerged from time to time, but power generation system was operated and power was generated intermittently on experimental basis, as and when these problems were solved.

A direct expenditure of Rs. 1 million has been made, since 2005 for repair and maintenance of this biomass gasifier based power generation system. For purchasing of fuel wood for gasification and power generation, approximately another Rs. 1 million has been made.

As per our records the figure of Rs. 34,165,937.00 as the total expenditure is not correct.

As per our records of the project, the total expenditure made for this project, including raw materials, salary and overheads are Rs. 12,770,550.00. The fund of Rs. 1.5 Million given by UNDP is also included in this estimate. An expenditure of Rs. 8,625,000.00 had been spent to purchase this biomass gasifier based power generation system and for development of infra- structure for that, Rs. 1 Million has been spent.

The expenditure for construction of the building , where this power generation system was installed, was Rs. 3 Million, but this building was constructed not only for installing this power generation system but also to carry out all the R&D activities pertaining to biomass gasification.

- (b) Although, we have given relevant documents to department of Inland Revenue since year 2005, but we have not received a reply from them.
- (c) The number of orders have been reduced, as our main customer; Sri Lanka Standard Institution has introduced and implemented a new scheme of certification method by inspecting the Battery manufacturing factories. At the same time as indicated here, Sri Lanka standard Institution also get the battery testing done by other an institution as well.

At the movement, arrangements are being made to increase the number of orders from SLSI by having discussions with SLSI. At the same time it is supposed to made arrangements to make the customers (Battery manufactures , used industries and battery importers) aware on our facilities.

The equipment purchase for the above sum are ;

1. Power Analyzer
2. Automated Battery Tester
3. Electronic Load
4. Electronic DC load

Among these equipment, only the automated battery tester, is the equipment used only for battery testing. Power Analyzer and Electronic Loads mentioned here, are used for other projects as well.

Further, the battery tester is used to do battery testing for the industries/other customers as per their requirement apart from the testing of batteries under taken by SLSI.

- (d) Agreed. This situation has occurred, as the staff (Engineering/Technical Assistant etc.) allocated for this work , had to engaged in other official work as well due to lack of staff during this period.
- (e) These funds are kept in seven day call deposits to use in day to day operations. Long term deposits are kept at Bank of Ceylon A/C No. 4670 of state Institution temporary surplus fund. The amount shown here is the money deposited throughout the year time to time, but at a given time there is only small amount of money in the deposit.

4.3 Operational Inefficiencies

- (a) Based on the capital purchasing procedure practices in the center, the Global Scientific System (Pvt.) Ltd. has been awarded to supply this particular instrument. But the supplier could not able to supply the instrument; based on the agreed conditions, within the allocated time or within the period of extension. The supplies department has made number of reminders during the particular periods. Finally, NERDC has recovered the amount of Rs. 206,570.00 as bid bond before it expired. Based on the facts, it clearly understood that the failure/mistake is not the NERDC side and totally the supplier side.
- (b) Renovation works of Sewerage treatment plant at Kurana, Nebombo, were completed by the NERDC on 30th August 2010. After those renovation works, the plant had been continually operated for a period of three months by the NERDC. Then the NERDC had make arrangement to hand over the treatment plant to the former commissioner on 2nd August 2011. Then the commissioner has agreed to supply sewerage to the plant within a period of one month, since all the gully bowsers (belongs to the urban council) were under repaired during that time. But, the municipal council had not taken any action to operate the treatment plant.

NERDC had requested again; from the commissioner, to take over the plant by highlighting the difficulties to operate and maintain such type of plant to the Centre as per the NERDC regulations. Then a reminder has sent to the commissioner with a copy to the commissioner local authority, since there were no any replies to the previous letters. However, no any reply/feedback or clarifications made by the Municipal Council to the NERDC requests/letters.

- (c) Out of Customer advance of Rs.4,649,870, received for different projects, Rs.4,075,440.44 has been cleared. Only Rs.504,000 is left from the advance received from testing lamps. Advance which are not settle during four years are cleared now.
- (d) By now, this was cleared.
- (e) Out of this Rs. 2,000,000 income was expected to earn by providing consultancy services for construction of buildings and improving infrastructure facility of the Government sector and private sector. But the requests from those sectors to take our consultancy services were less than that we expected.

Balance Rs. 1,000,000 income was planned to earn by the technology dissemination programme collaborated with finance commission. To implement this programme it was planned to construct 2 buildings in each provinces and finally expected to construct 18 buildings in Sri Lanka by using NERDC Center cost effective technology. Accordingly, respective Letters were sent to Secretaries of each province by requesting to use our technology for their constructions. As per the request of some provinces still we able to provide consultancy service for 6 buildings only. To success of this project it is necessarily needed the provinces Help and the Collaboration.

4.4 Idle and Underutilized Assets

- (a) NERDC has numbers of scientific instruments and machineries which have been used for both industrial services as well as the institutional research works/laboratory testing etc. Out of those, only 10 numbers of machineries are reported as underutilized.

It is normally to be underutilized in some machinery in the research institution, as per the nature of the research. But as per the requirement of research purchasing of these equipment is required even though they are underutilized.

- (b) Out of this the items value of Rs. 1,252,763.00 were utilized for assembling the 11 Nos. of Single wheeled tractors. With the approval of Board of Directors, the arrangements have been made to keep 03 assembled tractors at the Centre and to dispose the other 08 assembled tractors to the Universities and Agriculture schools. The Centre is considering the way of disposing other items, too.
- (c) This machine was fabricated after the research carried out and presently, the performance testing is being carried out.

4.5 Non-Economic Transactions

As this machine involves with complex/ modern technologies, the expertise opinion from parent company was obtained and the repair is being carried out, accordingly.

4.6 Identified Losses

- (a) Agreed.

In the year in review, the larger no. of commercial projects (65) had been completed and three of them were incurred the loss of Rs. 137,849.00. The total value of these three projects was the sum of Rs. 4,732,665.00. One of these loss projects was a construction of a crematorium to the value of Rs. 3,588,665.00. For this, the loss of Rs.137,849 was occurred due to bad weather prevailed during the construction and time taken for construction had been increased. The second project was a solid waste management project carried out during a past year. During the warranty period, as we had to do a repair work, the income was not generated by the project but expenditure was Rs. 60,598.00. The third project was the designing a mould for a rubber mattress. While machining, the relevant C.N.C. machine was out of order. Then, job was completed with the help of outside machine shop until the machine gets repaired. Because of that, the amount of Rs. 6,519.00 was lost. However, the other projects were not made losses.

4.7 Contract management issue

- i. The Standing Technical Committee approved the revised estimate on 25.11.2013. Since, a complete Agreement cannot be reached without this approval, it wasn't happened. However, the Agreement has been signed now.
- ii. It has been agreed that only 90% is paid for interim bills. In addition, 5% is also retained as retention money. Payment for price fluctuation is not paid. Only part payment is made for extra work and works which exceed the BOQ quantities. Quantities can even be changed when checking. This money can be obtained only after the Agreement is signed.

- iii. We have sent a letter dated 18.12.2012 to get the approval for extra works. A soft copy is also submitted on their request. However, the approval is not received yet. Reminders are also sent in this regard.
- iv. NERD Centre is not a construction company. The main aim of NERD Centre is to involve in Engineering Research. NERD Centre involves in construction activities only with the aim of popularizing the technologies developed by NERDC. Many difficulties are to be faced when construction is done with novel technologies.

Among the reasons affected the delay;

- As the complexity of the building is high with new plans, it took longer time.
- Finding of suitable soil from Polonnaruwa Area to manufacture of Cement Soil Blocks is delayed unexpectedly.
- Resignation of Site Engineer assigned for the project and inability to recruit new Engineer due to poor salary.
- Heavy rain and floods affected to Polonnaruwa Area.
- Power cut during dry season.
- Inability to find sand due to rain.
- Delay in awarding sub contracts.

Considering all above facts, the Ministry of Health has approved the Time Extension for Contract Period without any condition.

A statement with the meaning "Price Fluctuation is not paid" is not included in any of these time extension approval letters.

4.8 Delayed Project

- (a) This machine has been manufactured for Pelwatta Dairy Industries (pvt) Ltd. This is an activity of national importance in making solid cattle feed blocks to promote milk industry in Sri Lanka.

As it has been undergone many research work in manufacturing this machine, we had to spend much on research work consuming additional time. However, the worth of the machine Rs. 1,154,152.00 was agreed to be paid by Pelwatta Dairy Industries (Pvt) Ltd, and the advance of Rs. 783,000.00 was paid. Ultimately, the machine developed after several modifications, was successful to produce cattle feed blocks as expected. Many research efforts had to be performed for achieving this task.

However the production capacity of the machine was not commercially viable to carry out the production.

- (b) Development of robot machine has been completed successfully with collaboration of University of Moratuwa and first field trial has been carried out at Army camp Maththegoda. During the field testing following results/issues were obtained and identified.
 - Machine can be operated successfully on ground
 - Scan unit of the machine should be modified as per requirements of the ground.
 - Detector unit of the machine should be changed to match with the anti-personal mines.

Main research finding of the project is that robot can be developed by introducing above two modifications accordingly. The stage one of the development of robot machine is completed.

4.9 Abundant project

In generally all research projects conducted by any research institute are not successes full at every time. Some research projects conducted by NERDC will be discontinued once we understood that expected results are unable to achieve. But findings and learning's from the research project will be important and recorded.

4.10 Not obtaining the expected results from the projects/ unsuccessful projects

Every research projects don't give the successful results as per the nature of the research. However, even the negative results obtained from a research projects are important. Therefore, when the expected results cannot be obtained from the projects and continuation of the same projects are not useful, then the final project report is prepared and the project is terminated.

4.11 Staff Administration

Through, the attempts were made for filling the cadre vacancies created it was unable to recruit the required people and retain them for longer period due to the lower salaries paid. As per the DMS 30 circular and its restructuring process, there seems to be employees surplus in the several categories of employees due to less cadre opportunities available in approved cadre. Therefore, the previously designated some posts have been approved as personal basis.

For carrying out laboratory experiments, the DMS had approved the 05 Nos. of Management Assistants- Non-technical category (testing) posts on 2013.01.31.

In view of making permanent after given one year training in NERDC laboratory (which is the one of the requirements in SOR)

They were recruited as trainee Management Assistants on contract basis for one year. For filling vacancies, application were called through the internal notice and on the organizational web page. From the application received, qualified suitable candidates were selected through a structured interview. After that, the approval was obtained from the Board of Directors to recruit the selected candidates. Hence, this process was carried out purely transparent manner.

At the time of recruitment, the approved all inclusive salary for this particular post was Rs. 22,067.50. As they were recruited as trainee management assistant (testing) on contract basis, it was decided to pay them little lower monthly allowance of Rs. 21,000.00 as monthly salary.

5 Accountability and Good Governance

5.1 Budgetary Control

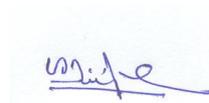
This increase is made out of vehicle maintenance and building maintenance, plant machinery maintenance and overtime. The increase of this expenditure was due to unavoidable reason. Our other expenditure were maintained within the budgetary allocation.

6. Systems and Control

These facts will be forwarded Centres attention and actions will be taken in future.



Eng. D D Ananda Namal
Director General



Eng. Anura Wijayapala
Chairman