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FINAL REPORT
UNIDO project TE/PAK/08/002 – Laboratory Accreditation service

All labs covered by this project have been visited on site (surveillance and extraordinary visits) according to the contract. Below please find description of each visit, the process of evaluation of corrective actions and decisions of continuation of accreditations and for some labs also extension of scope.

TEST 213 Marine Fishery Department (MFD), Karachi:

Extraordinary visit dates for extension of scope in chemistry: 18 and 19.04.2008. See enclosed reports. All NCs raised during the visit are closed but NC regarding calibration of balances and reference thermometers have to be followed up at the end of 2008. See enclosed letter from NA dated 08.04.2008.

Continuation of accreditation for microbiological tests according to the scope and extension of scope with one chemical test (Histamine) has been taken by NA. New edition of the accreditation document have been issued and sent to the laboratory. The new accreditation document is enclosed this report.

TEST 216 PCSIR, Lahore:

Surveillance visit dates: 17, 18 and 19.04.2008. See enclosed reports. All NCs raised during the visit are closed but NC regarding calibration of balances and reference thermometers has to be followed up at the end of 2008. See enclosed letter from NA dated 08.04.2008.

Decision regarding continuation of accreditation for textile and leather testing as well as microbiological testing according to the scope has been taken by NA. New edition of the accreditation document have been issued and sent to the laboratory (only editorial changes). The new accreditation document is enclosed this report.

TEST 218 PCSIR, Karachi:

Surveillance visit for textile testing and an extraordinary visit for the Chemistry laboratories were conducted on the 21. and 22.04.2008. See enclosed reports. All NCs raised during the visit are closed but NC regarding calibration of balances and reference thermometers has to be followed up at the end of 2008. See enclosed letter from NA dated 08.04.2008.

Decision regarding continuation of accreditation for chemical and textile testing according to the scope has been taken by NA. New edition of the accreditation document have been issued and sent to the laboratory (only editorial changes). The new accreditation document is enclosed this report.

TEST 219 PCSIR Electrical laboratory, Lahore:

Surveillance visit dates: 28 and 29.04.2008. See enclosed reports. All NCs raised during the visit are closed but NC regarding calibration of balances and reference thermometers have to be followed up at the end of 2008. See enclosed letter from NA dated 08.04.2008.

Decision regarding continuation of accreditation for electrical testing according to the scope has been taken. A new, updated edition of the accreditation document has been sent to the laboratory because of some changes in the scope. The new accreditation document is enclosed this report.

TEST 220 Leather Research Centre, PCSIR, Karachi:

Surveillance visit dates: 24 and 25.04.2008. See enclosed reports. All NCs raised during the visit are closed but NC regarding calibration of balances and reference thermometers have to be followed up at the end of 2008. See enclosed letter from NA dated 08.04.2008.

The laboratory has asked us to evaluate if they comply with the latest editions of ISO standard methods (instead of IUP and IUF standard methods). We have done that evaluation and issued a new accreditation document. Decision regarding continuation of accreditation has also been taken by NA. The new edition of the accreditation document has been sent to the laboratory. The new accreditation document is enclosed this report.

TEST 221 National Textile University (NTU), Faisalabad:

Surveillance visit dates (including extension of scope with physical testing): 14. and 15.04.2008. See enclosed reports. All NCs raised during the visit are closed but NC regarding calibration of balances and reference thermometers have to be followed up at the end of 2008. See enclosed letter from NA dated 08.04.2008.

Decision regarding continuation of accreditation for chemical testing of textiles according to the scope as well as extension of scope with physical testing of textiles has been taken by NA. New edition of accreditation document have been issued and sent to the laboratory.

Regarding all laboratories:

All laboratories have got an NC regarding lack of acceptable traceability for temperature and/or balances. NA has given a final deadline for correcting these NCs and all labs have to document that they meet this requirement **within 01.12.2008**. NA will soon send a reminder of this deadline to all the laboratories and also ask each

lab for a **status report regarding this requirement to be sent to NA within 15.11.2008**. See also letter from NA dated 08.04.08 (enclosed).

See also the interim report sent to UNIDO on the 16th of September 2008.

Kjeller, 18.11.2008

Roald K. Nilsen

Technical Director

Norwegian Accreditation (NA)

Appendices:

For each visit

- Lead assessors reports (not for TEST 213)
- Technical assessors reports
- New edition of accreditation documents

Copy of letter from NA dated 08.04.2008

Name of the organisation:	Marine Fishery Department (MFD)
Assessed locations:	Chemical Laboratory

Accr. no. : TEST 213 Appl. no.:	Date of assessment: 18th and 19th April 2008

(The complete report may be repeated. Extract from the report can only be repeated when this is accepted in writing by Norwegian Accreditation)

1. Reporting assessor/expert

Name: **Erik Figenschou** Technical area: **P12**

2. General information

1. time visit	☐	Extraordinary visit	☐	Renewal	☐
Surveillance	☐	Extension of scope	X	Complete assessment	☐

Specification of surveillance activities not mentioned above:

Surveillance with assessment of selected elements	☐
Document review	☐
Technical assessment NS EN ISO/IEC 17025: 2005	X
Technical expert NS-EN ISO/IEC 17025:	☐

Interviews

Name	**Function / technical area**
Mudassar-ul-Hasnain	Technical Manager-II
Shahrukh Siraj	Deputy Technical Manager-II/Assistant Biochemist
Shaukat Hussain	Quality Manager

3. Recommendation

3.1 Recommendation regarding accreditation/renewal:
Not relevant.
3.2 Recommendation regarding change of the responsible for validation, when relevant (valid for flexible scope):
Not relevant.
3.3 Recommendation regarding changes/extension of accreditation scope:
If all nonconformities are corrected within the time limit, the recommendation is that accreditation is granted for chemistry.

4. Changes since the last visit (if any):

5. Extent of assessment

(The numbers are references to the paragraphs in ISO 17025)

4	**Management requirements**
4.1	**Organization** *(evaluation of the competence to the technical management)*
	MFD has a description in the quality system of the technical management in the chemical laboratory. Technical Manager-II Mudassar-ul-Hasnain is responsible for the chemical testing activities. Shahrukh Siraj is Deputy Technical Manager-II. Responsibility and authority is described in the job descriptions. The technical management works satisfactory in practice.
	Non-conformity no
4.2	**Management system** *(availability of authorized documents in the laboratory. Is it possible for the personnel to find the documents in the in the management system?)*
	The quality system is described in a quality manual and a technical manual for each laboratory. The documents are available for the staff in the laboratory.
	Non-conformity no
4.3	**Document control** *(are controlled documents and templates in use in the laboratory? Are the last versions in use? Does scrap of paper exist?)*
	All the documents examined under the assessment were under document control, and valid. See also report from lead assessor.
	Non-conformity no
4.4	**Review of requests, tenders and contracts** *(request about services and changes. Information about limitation in the methods)*
	Not examined.
	Non-conformity no
4.5	**Subcontracting of tests and calibrations** *(have the client accepted use of subcontractors?)*
	Not examined.
	Non-conformity no
4.6	**Purchasing services and suppliers** *(labelling of chemicals, regents and consumer goods included initial inspection)*
	MFD has a journal where all chemicals and reagents were recorded. The records included batch No, date for purchase and self life. The bottles were labeled to satisfaction.
	Non-conformity no
4.9-4.11	**Control of nonconforming testing and/or calibration work/corrective actions** *(have relevant non-conformities been registered? Have good technical cause analysis been performed? Have consequence analysis been performed? Are the evaluation in connection with corrective actions technical satisfactory?)*
	See the report from the lead assessor.
	Non-conformity no
4.13	**Control of records** *(registrations, handling of raw data, changes of raw data, traceability of documentation, archives. For vertical audit, specify the sample number/ journal number/ technical area, parameter and object)*
	MFD has a comprehensive system for technical registration. A thorough vertical audit was performed and all relevant data from the preparation of the sample

	through the analysis was recorded and found satisfactory.
	Non-conformity no
5	**Technical requirements**
5.2	**Personnel**
5.2.1	**Training** *(are the CVs clear and updated? Training and qualification of personnel, new employed and after a long absence)*
	CV and the job description for the personnel reviewed were found satisfactory. All the members of the staff had carried out a training program. The program included the different tasks in the analysis of histamine (for instance sample preparation, extraction and HPLC analyses). The approvement was given for the different tasks. The basis for the approvement was a sample with known result.
	Non-conformity no
5.2.2	**Maintenance of competence** *(including testing experience)*
	Practical demonstrations and discussions with the staff and management showed the personal were competent. All the members of the staff perform the tasks they are approved to do regularly and thereby maintain their testing experience.
	Non-conformity no
5.2.4	**Job descriptions**
	There exist job descriptions for the different technical functions, which contains the tasks, responsibility and authority. The staff has CVs which contains adequate information of formal education, training and employment history.
	Non-conformity no
5.3	**Accommodation and environmental conditions**
	The premises are suitable for the chemical activity. The laboratories were orderly and clean. MFD has a written system for monitoring the environment conditions. The system is implemented and temperature was recorded daily in all the laboratories. Access to the laboratory was restricted.
	Non-conformity no
5.4	**Test and calibration methods and method validation**
	Non-conformity no
5.4.1	**General** *(evaluation if the laboratory has appropriate methods and procedures)*
	The method description is sufficient according to the competence of the staff. The method demonstration involved all the staff at the chemical laboratory. Under the practical demonstrating the staff showed that they were competent to perform the procedure.
	Non-conformity no
5.4.2	**Selection of methods** *(information on type of methods used for testing/calibration. If the latest valid edition of standard methods are used. Routines to ensure that the client orders correct analysis)*

	The laboratory has applied for one method; Histamine in fish. The standard method used is an AOAC method from 2005.
	Non-conformity no
5.4.3/ 5.4.4	**Laboratory-developed methods/ Non-standard methods** *(updated plans for introduction of laboratory developed methods/ are use of non-standard methods agreed on with the client?)*
	Not relevant
	Non-conformity no
5.4.5	**Validation of methods** *(procedures for validation, conduct and reporting of validation. Are modifications, if any, in the standard method validated and documented? Are modifications identifiable in the method description?)*
	MFD has a short description of validation of methods, but the description does not clearly state what sort of parameters a validation/verification for standard methods shall include **(Remark)**. MFD had performed some validation experiments, but they had not a systematic presentation of the experiments and the results in a validation report. Conclusions were also missing. See Essential NC No 1
	Non-conformity no 1
5.4.6	**Estimation of uncertainty of measurement** *(If the uncertainty is based on metrological and statistically basis: Have all relevant contributions been taken into consideration? Are the calculations documented in a controlled document?* *If the uncertainty is calculated in experimental data: Does the reported uncertainty represent the total uncertainty and measurement range ? Are the important contributions to the uncertainty reported? Are the calculations documented in a controlled document. If no requirement to calculate uncertainty (e.g. microbiology, NDT): are the important contribution to uncertainty identified?*
	MFD has a description of how to estimate measurement uncertainty. The system was based on calculation of an uncertainty budget. The uncertainty was not verified by reproducibility studies and PT participation for the method measurement range, so it is not possible to state if the estimate is correct or not. **Remark:** The description does not include that uncertainty shall be verified by reproducibility studies or PT participation. See Essential NC No 2
	Non-conformity no 2
5.4.7	**Control of data** *(calculations, LIMS, excel, data transfer, use, registration, maintenance and validation)*
	The amount of histamine was determined by integration of peak area, but the printout of the chromatograms did not show the integrations lines **(remark).**
	Non-conformity no
5.5	**Equipment** *(maintenance of equipment, logbooks, instrument register, labelling of equipment)*
	The list of equipment was satisfactory. Each piece of equipment is given a unique number and all the equipment reviewed was given such a number.

	Equipments as pH meter and HPLC had equipment log books which are used regularly. The equipments were well maintained and in good condition. The laboratory used a lot of Class B volumetric glassware. The accuracy of the Class B glassware was not controlled. However they had checked the repeatability. When we compared the average from these studies with the expected value, we found up to 10% deviation. See essential NC No 3. The digital pipettes were controlled once a month and the results were recorded. MFD has an USP system at the chromatography laboratory. The temperatures in the fridge and freezers were controlled daily and recorded.
	Non-conformity no 3
5.6	**Measurement traceability** *(how does the laboratory achieve traceability on the methods? Calibration and control of equipment, use of reference materials/standards, calibration certificate/standards, calibration program)*
	MFD has established measurement traceability for histamine from PT participation. In addition they use a reference material as a control sample. MFD has reference thermometers which is calibrated by an UKAS accredited calibration laboratory. Traceability of balances: See the report from lead assessor and NC 5.
	Non-conformity no

5.6.3	**Reference standards and reference materials** *(reference standards, reference materials, intermediate checks, transport and storage)*
	See 5.6
	Non-conformity no
5.7	**Sampling** *(if relevant)*
	Not relevant.
	Non-conformity no
5.8	**Handling of test and calibration items** *(does the laboratory make registrations if it is any irregular by receiving the samples? Identification of objects /samples, make anonymousness of test objects, storage and disposal)*
	MFDs description of sample handling is satisfactory. The samples are delivered in the sample preparation room. Each sample is given a unique number and labeled before it is transferred to the freezer. When the samples are worked up, they are labeled properly.
	Non-conformity no
5.9	**Assuring the quality of test and calibration** *results (How does the laboratory assure the quality of the results such as proficiency testing, CRM, RM, control chart etc? Do programmes exist for the full scope applied for? Is the participation sufficient? Are the results satisfactory? Has the laboratory implemented a procedure for evaluation of its own results? Have the laboratory records from trend analysis and systematic errors?)*
	MFD controlled the pH meter by using a buffer solution. This is acceptable since the solutions they are measuring have large ion strength. The results are plotted in a control chard.

	MFD analysed a control sample each time samples were analysed. The control material is a fish pate and the whole work up procedure is covered. But MFD had no statistical treatment of the control results and the criteria for evaluating the results is not described. MFD has participated in one PT program, and will participate in two other PTs later this year. The result was satisfactory. But trend analysis for PT is not described. See essential NC No 4
	Non-conformity no 4
5.10	**Reporting the results** *(is the report precise and clear? Are the units of measure correct? Are all information that is required in a test report/calibration certificate registered? Are the results from subcontractors according to the requirements? Is the accreditation mark/reference to accreditation satisfactory? Are non-accredited results/accredited results marked satisfactory? By simplified reporting: Is the report according to the agreement with the client?*
	MFD use the same report template for the chemical analyses as for the microbiological. The template is in compliance with the requirements in the standard.
	Non-conformity no
5.10.5	**Opinions and interpretations** *(if relevant)*
	Not relevant.
	Non-conformity no
NA Dok	**Other requirement documents**
No. 51	**Flexible accreditation** *(if relevant)*
	Not relevant.
	Non-conformity no
14	**Rules for use of Norwegian Accreditation's (NA's) logo and for references to NA's accreditation**
	Not assessed
	Non-conformity no
No. 26a	**Requirements for calibration and control of balances in accredited test laboratories**
	The balances are controlled with control weights. The results are plotted in control chards. MFD has no acceptable traceability for the balances. See NC No 5 from Lead Assessor.
	Non-conformity no
No. 26b	**Calibration of thermometers in connection with accreditation of test laboratories**
	MFDs reference thermometers have a valid calibration from an accredited calibration laboratory. The thermometers in use are controlled versus the reference thermometers more than twice a year and the comparison was documented.
	Non-conformity no

No. 52	**Expression of the uncertainty of measurement in calibration (EA-4/02)**
	Not relevant. *Non-conformity no*

6. Demonstrations	Method identity/parameter/ object:	Demonstrated by/discussed with:
(Specify methods and person. Describe also if the method has been reviewed/ discussed)	Histamine Detection by HPLC Fluorescence Method	The whole staff at the chemistry laboratory was involved in the demonstration
7. Follow up non-conformities from the last visit:	Not relevant	
8. Notes/summary/ conclusion	Accreditation is recommended for histamine analysis in Chemical laboratory if satisfactory corrective actions against the NCs raised during the assessment are sent to NA within agreed time limit.	
9. Next visit *(Are there anything that shall be evaluated seriously during the next visit, or specific personnel that should be present)*	Internal and external quality control. Validation Uncertainty	

The undersigned states that the content in the report is not in conflict with NA's policy and practice.

Date 07.05.2008 ..... *technical assessor*

date 07.05.08 ..... *lead assessor*

The organisation has the right to complaint against the errors in the report. A complaint must be presented at last 3 weeks after the report has been sent from Norwegian Accreditation

NORSK
AKKREDITERING

ACCREDITATION DOCUMENT

TEST 213

Marine Fisheries Department, Microbiology and Chemistry Laboratory
Marine fisheries Departement, Ministry of food Agriculture & Livestock,
Goverment of Pakistan
74000 Karachi

The scope of accreditation is P12 Chemical analysis og P16 Microbiological analysis in accordance with the specifications on the following pages in this document.

The accreditation was first time granted 10.09.2007 and given according to Parliamentary Proposition no. 106 (1989/1990) and the Statutes of Norwegian Accreditation , established by Royal Decree of 7 October 1993
The laboratory complies with the requirementes in NS-EN ISO/IEC 17025 (2005)

The accreditation requires regular surveillance, and is valid until 11.09.2012.
The decision of accreditation made by Norwegian Accreditation implies that the organisation has been found to fulfil the requirements for accreditation within the scope.
The organitation itself is responsible for the results of performed measurements.

NORWEGIAN ACCREDITATION

Date

Norwegian Accreditation

Accreditation document
Accreditation no. TEST 213

Administrative/geographical unit:
Microbiology and Chemistry Laboratory

Permanent facility

P12 Chemical analysis

Object	Parameter	Reference standard	Identity of internal	Comments
Fish and Other Marine Products	Histamine	AOAC 977.13	MFD/CL/TM/Hm-5.4	Method based on HPLC

Permanent facility

P16 Microbiological analysis

Object	Parameter	Reference standard	Identity of internal	Comments
Water	Heterotropic Plate Count at 22 oC or 37 oC	Standard Methods 9215 B	MFD/TM/ Microbiol-3	Pour plate method. Method accepted by APHA and EPA
Water	Colifom bacteria, fecal coliform bacteria, thermotolerant coliform bacteria	Standard Methods 9222 D	MFD/TM/ Microbiol-4	Membrane filter method. Method accepted by APHA
Fish, fish products and seafood	Total plate count	AOAC official method 966.23; Chapter 17.02.01	MFD/TM/ Microbiol-1	
Fish, fish products and seafood	Coliform bacteria, fecal coliform bacteria and thermotolerante coliform bacteria	AOAC official method 966.24; Chapter 17.02.02	MFD/TM/ Microbiol-2	

Date

Norwegian Accreditation

Name of organisation:	PCSIR Lab Complex,		
Manager of the organisation:	Dr Mohammad Saleem (Director General)		
Accreditation no/ application no:	TEST 216	Date of assessment:	17- 19 April 2008
Sites assessed:	Lahore, Pakistan		

1 The assessment

This report deals with:

Initial ass.		Extraordinary ass.		Renewal	
Surveillance	X	Extension		Full assessment	

Assessment team:

Name	Position
Ms Anne Grændsen	Lead assessor, Technical assessor P16
Mr Robert Stocks	Technical Assessor P12 , P11 and P20

Observers:

Name	Position
Dr Mumtaz Hasan Malik	NTU Labs, Faisalabad (Observed TA/LA)
Dr Tanveer Hussain	NTU Labs, Faisalabad (Observed TA)
Ms Kiran Anwar	PCRWR, Islamabad (Observed TA/LA)
Ms Gul Sinober	PSQCA, Karachi (Observed TA/LA)
Mr Syed QummerZia Gilani	NTU, Faisalabad (Observed TA)
Dr Hafiz Rub Navaz	PCSIR- LRC, Karachi (Observed TA)
Mr Badar Ul Islam	UNIDO

Personnel interviewed:

Name	Position
Mr Javed Iqbal Kahn	Quality manager/Head of ACRC
Mr Ehsan Ul-Haq	Deputy Quality Manager
Mr Sulman Mehmood	ILO technical officer
Dr Quarutulain	Technical manager Microbiology Lab

Participants in the introductory and/or concluding meeting:
See separate list attached to the summary report.

Deadline for submission of corrective actions: 02.06.2008

2 Non-compliances

Categorisation of non-compliances is described in NA Doc 55 and on NA's web-site (www.akkreditert.no).

3 Results from the assessment

Below, the results from the assessment against the accreditation requirements as described in ISO/IEC 17025:2005 (General requirements for calibration and test laboratories) and the requirements defined in the laboratory's own management system, are described.

ISO 17025 – Chapter 4 – Requirements for management

4.1 Organization

There are no major changes in the organisational structure.

The top management and quality management are unchanged.

- Dr Mohammad Saleem is Director General
- Mr Javed Iqbal Khan is Quality Manager.
- Mr Ehsan Ul-Haq is Deputy Quality Manager.

There are no major changes in the communication processes within the organization or the reporting lines given in organization charts. The description of the communication processes are improved since the initial visit. Minutes from meetings shows that meetings are arranged as planned. During the surveillance visit all employees addressed each other in a friendly and polite manner and good cooperative skills were demonstrated.

Lack of qualification requirements in job descriptions were noted as a minor NC during the initial visit. Qualification requirements are now amended.

Minor non-conformity:
Confidentiality declarations for new staff in the Microbiology Laboratory were requested. Nazeer Ahmad's confidentiality declaration could not be found in the confidentiality declaration file.

NC no	--				
Compliance		Not in compliance		X	

4.2 Management system

Since the initial visit the Quality Management System is merged with a second Quality Management System which was worked out for the PNAC accredited laboratories. The structure of the Quality Management System is unchanged and is comprised of:

- Quality and procedures manual
- Technical procedures and work instructions
- Forms, records and external documents

The Quality Policy and the Quality Objectives are reviewed by the management during the Management Review arranged in March 2008.

NC no	--				
Compliance	X	Not in compliance			

4.3 Document control

The laboratory has a master list which identifies all controlled documents belonging to the quality management system. The list was reviewed during the assessment.

Document control routines were checked for the work instruction belonging to a colour cabinet in the textile laboratory. On an operator request the document was revised in January 2008. The document control is considered to be dealt with in a proper way. The obsolete document was filed as described in the quality management system.

No hand corrections of importance were observed in any valid document.

See also technical assessors report, **minor nonconformity** included.

NC no	--				
Compliance		Not in compliance	X		

4.4 Review of contracts

There are no changes in this area. Customers are handled by ILO. This section receives samples together with the request forms or asks the customer to fill in a request form on delivery. In addition a request letter is often submitted with the samples. All samples are registered in a record by the ILO officer. Requests are reviewed by the head of the research centre. Requests are filed both in ILO and in the individual laboratories.

Test report files in the microbiology laboratory were reviewed. Requests and request letters checked were fulfilling the requirements described in the quality management system.

Amended contracts or contracts were subcontractors have been used were not observed.

See also technical assessors report, **minor nonconformity** included.

NC no	--				
Compliance		Not in compliance	X		

4.5 Subcontracting

Not assessed during the surveillance visit. There is no change since last visit.
The laboratory is still not using any subcontractor's and has no plans to do so.

NC no	--				
Compliance	-	Not in compliance	-		

4.6 Purchase of services and supplies

Not assessed by lead assessor during the surveillance visit. There is no change since last visit.

However see technical assessors report, **minor nonconformity** included.

NC no	--				
Compliance	-	Not in compliance	X		

4.7 Service to the customer

Customers are handled by ILO. Feedback forms are sent to the customer together with the test report. Getting feedback forms in return has proved to be difficult. The organization has since last visit encouraged ILO to put some more effort in getting feedback from customers. Number of returned feedback forms have raised due to the increased focus on the subject.

The file with feedback forms was reviewed. The majority of feedback forms contain positive feedback. Negative feedback is immediately dealt with by ILO. Most of the negative feedback is connected to delivery times and fees. When needed negative feedback is dealt with as a complaint. The cooperation between ILO, the quality management team and the technical managers seems to be working well in this area.

Remark:
On monthly basis ILO works out statically analysis of the number of samples received etc. Number of feedbacks from customers and the outcome of the feedback can beneficially be included in the statistical analysis.

NC no	--				
Compliance	X	Not in compliance			

4.8 Complaints

Complaints are identified through feedback forms received and registered by ILO. Since last visit 2 complaints have been received. Both complaints are concerning delivery time of test reports from the microbiology laboratory.

The complaints are registered in the complaint log. The complaints have been dealt with according to the requirements described in the quality management system. Further investigations ascertained that delivery time of the test report was in compliance with delivery time agreed upon.

Complaints are discussed in the Management Reviews.

NC no	--				
Compliance	X	Not in compliance			

4.9 Handling non-conforming work

In general the NC system is well implemented.

The NC files were reviewed. NC's are registered by the Quality Manager. Textile leather and microbiology has separate serial numbers and all together 61 NC's are raised after the initial visit. The proportionality between NC's raised during daily work, internal audits and assessment conducted by the accreditation body is appropriate. Root cause analyses and corrective actions are performed within reasonable time. The Quality Manager reviews the NS's on regular basis, approximately twice a month. All NC's looked into was closed at latest one month after corrective actions was taken

Minor non-conformity:
In some cases the laboratory has not evaluated (or documented the evaluation) which impact the NC has on test reports sent to clients (Example NC No 15ML)

NC no	--				
Compliance		Not in compliance	X		

4.10 Improvement

The laboratory is using following tools in the process of improving the quality system:

- Quality Policy and Quality Objectives
- Audit results and Management Reviews
- Trend analyses of data,
- Corrective/Preventive actions including root cause analysis,
- Training and PT/ILC participation
- Customer feed backs

The subject is given a priority within the organisation. Management and all other employees interviewed by lead assessor and technical assessors demonstrated a great interest in further development and improvement during the assessment

NC no	--				
Compliance	X	Not in compliance			

4.11 Corrective actions

See clause 4.9 in this report.

NC no	--				
Compliance			Not in compliance	X	

4.12 Preventive actions

Preventive actions are recorded on specific forms and logged. Preventive actions are discussed in the Management Reviews. However preventive actions are not high lightened in the minutes from the meetings. See **remark** given in clause 4.15

See also technical assessors report, **minor non-conformity** included

NC no	--				
Compliance			Not in compliance	X	

4.13 Technical registrations

The laboratory demonstrates that handling of raw data is principally taken care of in a good manner. Registrations are in general done by permanent pen, and are properly dated and signed. All records reviewed were tidy and easily readable. Very few corrections were observed. When corrections are done it is performed according to the descriptions in the Quality Manual.

A vertical audit was carried out on a test report with Lab Sample Code 337-08 (microbiological testing of drinking water). Regarding all elements included in the analysis the laboratory demonstrated good traceability to timeframes and operators throughout the system. All calculations and transferences of data were traceable and properly checked. However the serial number on the test report was incorrect. For further information see also the technical assessors' report, **minor non-conformity** included.

NC no	--				
Compliance			*Not in compliance*	X	

4.14 Internal audits

An internal audit plan is prepared by the Quality Manager on annual basis. Audit plans for 2007 and 2008 were reviewed. The plan for 2008 is changed compared to the one used in 2007. The new audit plan reflects that the organization considers the quality management system to be well implemented. The audits is somewhat reduced compared to the previous plan. However the new audit plan still covers all required elements. Important subjects as

QM/QSP, assurance of test results, test performances and QMR's duties are audited two or three times a year. Likewise vertical audits are conducted three times a year.

The Quality Manager is appointing auditors to conduct the different audits. There are no changes in the list of approved auditors.

Audit reports, detailed checklists included, from audits conducted in the textile laboratory and the microbiology laboratory February 2008 were reviewed. Audit reports contained both positive and negative findings. No one has been auditing their own work areas. The Quality system seems to be working quite well. Only a limited number of NCs are raised. Non-conformities raised during the audits are dealt with in the ordinary non-conformity handling system. See clause 4.9 for further information.

NC no	--				
Compliance		X	Not in compliance		

4.15 Management review

The Quality Manual requires annually Management Reviews. However since last visit two Management Reviews are conducted (May 2007 and March 2008). Issues to be discussed during the management reviews are listed in the Quality Manual. Director General is responsible for the meeting assisted by the Quality Management team. Key personnel from the laboratories are attending the meeting. Minutes from the meetings are filed.

Agendas and the minutes from the Management review meetings were reviewed The Management Reviews conducted are planned and organized in a good way. All required subjects have been discussed.

Remark: The minutes from the meetings can still be improved. The laboratory should emphasise to conclude on all subjects discussed. It is important to agree upon if changes are needed or not. Likewise explicit actions plans should be given if changes are needed. Responsibilities and timeframes should be clearly stated.

NC no	--				
Compliance		X	Not in compliance		

ISO 17025 – CHAPTER 5 – TECHNICAL REQUIREMENTS

5.2 Personnel

See technical assessors' reports **minor non-conformity** included

NC no	--				
Compliance			Not in compliance	X	

5.3 Premises and environment

Access to the PCSIR Laboratory Complex is controlled by a guarded entrance. Access to the testing facilities is restricted to authorized personnel.

See also technical assessors' reports **minor non-conformity** included.

NC no	--				
Compliance		Not in compliance	X		

5.4 Methods for testing, calibration and validation

See technical assessors' reports, **minor** and **essential non-conformities** included.

NC no	**08-1 and 08-3**				
Compliance		Not in compliance	X		

5.5 Equipment

See technical assessors' reports, **minor non-conformities** included.

NC no	--				
Compliance		Not in compliance	X		

5.6 Measurement traceability

Essential non-conformity:

Thermometers, instruments with temperature recorders, balances and thermo- hygrometer have been calibrated by an organization (PCSIR Lahore) which is not fulfilling the requirements on measurement traceability:

- The calibration laboratory does not have an unbroken chain of traceability. Traceability is collected from NPSL, Islamabad
- The calibration laboratory at PCSIR and NPSL are not accredited by a MLA signatory accreditation body.
- NPSL is not a BIPM MRA signatory.

See also technical assessors' reports, **minor** and **essential non-conformities** included.

NC no	**08-2 and 08-4**				
Compliance		Not in compliance	X		

5.7 Sampling

Not relevant

NC no	--				
Compliance		-	Not in compliance	-	

5.8 Handling of test and calibration objects

See technical assessors' reports.

NC no	--				
Compliance		X	Not in compliance		

5.9 Assuring the quality of results from testing and calibration

See technical assessors' reports.

NC no	--				
Compliance		X	Not in compliance		

5.10 Reporting results

The 2007 and 2008 file of test reports issued by The Microbiology Laboratory was reviewed. All test reports checked were properly signed by authorized personnel.

Electronic transmission of test results is not in use.

Amended test reports were not observed.

Minor non-conformity:
Use of accreditation marks from two different accreditation bodies is observed. The use of two different accreditation marks on the same test reports is not described in the management system (how and when).

See also technical assessors' reports, **minor non-conformities** included.

NC no	--				
Compliance			Not in compliance	X	

4 Other requirements

NA-Doc 14 Conditions for the use of NA's logo in accreditation marks and for making reference to accreditation

Accreditation marks was observed on test reports and marketing material from the Textile Testing Laboratory. No misuse of the accreditation mark was observed.

Regarding use of accreditation marks from two different accreditation bodies see **minor-nonconformity** described in clause 5.10

NC no	--			
Compliance		Not in compliance	X	

NA-Doc 25/31 Accreditation conditions

PCSIR LLC, Lahore has cooperated well with the accreditation body in the period between the initial visit and the surveillance visit. The organization has forwarded all requested documents within agreed time limits.

NC no	--			
Compliance	X	Not in compliance		

NA-Doc 26 a Requirements for calibration and control of balances for accredited test laboratories

See clause 5.6 for further information

NC no	**08-4**			
Compliance		Not in compliance	X	

NA-Dok 26 b Requirements for calibration and control of thermometers for accredited test laboratories

See clause 5.6 for further information

NC no	**08-4**			
Compliance		Not in compliance	X	

NA-Doc 50 Flexible accreditation (if relevant)

Not relevant

NC no	--			
Compliance	-	Not in compliance	-	

NA-Dok 52 **Calculation of measurement uncertainty in calibration**
Not relevant

NC no	--				
Compliance		-	Not in compliance	-	

5 Implementation of corrective actions for non-compliances noted during the previous assessment

Except for traceability in the calibration area all corrective actions are well implemented.

6 Recommendation regarding accreditation

Accreditation is recommended maintained for the current accreditation scope if satisfactory corrective actions are undertaken within the time limit for all essential NCs.

Minor non-conformities are described in this report will followed up during the next assessment visit. However a declaration stating that minor non-conformities are corrected has to be presented to Norwegian Accreditation.

7 Recommendation regarding suspension

Not relevant

8 Recommendation regarding scope of accreditation

The accreditation document has to be revised due to a minor method change in the textile lab. (Internal identity: TL/TP/012). See clause 3.3 in technical assessors report for further information.

9 Recommendation regarding administrative/ geographical units

Not relevant

10 Any changes since the previous assessment

Staff changes are described in reports from technical assessors.
No other major changes have been identified.

11 Complaints

The organisation has the right to complaint against actual errors in the report. Such complaint shall be forwarded to Norwegian Accreditation within 3 weeks after the report has been sent from NA.

12 Other

No further comments.

The undersigned confirms that this report is not violating NA's policies and practices.

Lahore, 20.04.2008

Lead Assessor

Place/ date:

06.05.08

Technical Director, Norwegian Accreditation

13 Enclosures/ references

Agenda for the assessment
Non-compliances;

Number of very serious non-compliances	0
Number of essential non-compliances	04
Number of minor non-compliances	28

Summary report
Accreditation document
Reports from technical assessors (2)

Name of the organisation:	**PCSIR Lab Complex, Lahore**
Assessed locations:	**Microbiology (P16)**

Accr. no. : **TEST 216** Appl. no.:	Date of assessment: 17 APRIL 07 18 APRIL 07

(The complete report may be repeated. Extract from the report can only be repeated when this is accepted in writing by Norwegian Accreditation)

1. Reporting assessor/expert

Name: **Anne Grændsen** Technical area: **Microbiology (P16)**

2. General information

Initial assessment		Extraordinary visit		Renewal	
Surveillance	X	Extension of scope		Complete assessment	

Specification of surveillance activities not mentioned above:

Surveillance with assessment of selected elements	
Document review	
Technical assessment NS EN ISO/IEC 17025: 2005	X
Technical expert NS-EN ISO/IEC 17025:	
Technical assessment NS EN ISO/IEC 15189:	
Technical expert NS-EN ISO/IEC 15189:	

Interviews

Name	**Function / technical area**
Dr Quartulain Syed	Head of microbiology section / Technical Manager microbiology
Ms Rubina Nellofer	Deputy Technical Manager
Mr Muhammad Nadeem	Operator Microbiology
Mr Nazeer Ahmad	Operator Microbiology

3. Recommendation

3.1 Recommendation regarding accreditation/renewal:

If the laboratory is sending corrective actions to NA within the agreed date, and the corrective actions are evaluated as satisfactory, accreditation of the current scope is

recommended maintained.

3.2 Recommendation regarding change of the responsible for validation, when relevant:

Not relevant

3.3 Recommendation regarding changes/extension of accreditation scope:

Not relevant

4. Changes in the scope applied for accreditation (NA-S5):

Personnel:
Dr Shabat has left her position since last year.
Mr Gul Sheir and Mr Nazeer Ahmad have been employed in 2007.

Methods, equipments and facilities:
No major changes

5. Extent of assessment

	Management requirements
4.1	**Organization**
	Description/evaluation: There are no changes in technical management since the initial visit. *Non-conformity no* --
4.2	**Quality system**
	Description/evaluation: Availability of the quality manual, the technical manuals, working instructions, and different forms for daily recording in the laboratory is satisfactory. All personnel have access to the documents needed. Working instructions for instruments are placed on or nearby the instruments. New staff members showed that they are well aware of information laid down in the Quality Management system. Bench records are still used as a memo to the operators. *Non-conformity no* --
4.3	**Document control**
	Description/evaluation: No changes since the initial visit. All working instructions needed were kept in the laboratories or in the office directly outside the testing area. No uncontrolled copies were observed on walls etc.

	Non-conformity no
4.4	**Review of requests, tenders and contracts**
	Description/evaluation: Requests, tenders and contracts were reviewed when conducting a vertical audit was on sample no 337/08 (drinking water for microbiological examinations. The customers request and the contract issued by ILO were considered to be satisfactory. *Non-conformity no* --
4.5	**Subcontracting of tests and calibrations**
	Description/evaluation: Not assessed during this visit (The laboratory is not using any subcontractors and has no plans to do so.) *Non-conformity no* --
4.6	**Purchasing services and suppliers**
	Description/evaluation: Not assessed during this visit *Non-conformity no* --
4.9-4.11	**Control of non-conformity testing and/or calibration work/corrective actions**
	Description/evaluation: The NC system is considered to be well implemented. Most of the NC's in the microbiological laboratory are raised during daily work. Case handling, root cause analyses, and corrective actions are done in a reasonable time after raising the NC. Reference to the NC number is given in the records connected to non-conformity work. *Non-conformity no* --
4.13	**Control of records**
	Description/evaluation: All registrations are satisfactory recorded in bench records and other forms used in the laboratory. Handling of raw data seems to be taken care of in a good manner. All registrations were easily readable and were properly dated and signed. All files asked for were easily found. A vertical audit was carried out on samples labelled no 337/08 (drinking water for microbiological examinations. In general the laboratory demonstrated good traceability in connection to all elements included in the analysis. **Minor non-conformity:** An incorrect serial No was observed on test report No 337. (The test report was issued as No 338) *Non-conformity no* --

5	**Technical requirements**
5.2	**Personnel**
	Summary/Conclusion: The personnel are qualified and experienced. The laboratory has competence needed. *Non-conformity no* --
5.2.1	**Training**
	Description/evaluation: New staff members have updated training record and CV's (Staff Qualification & experience record Form). Records for the following new staff members were checked in detail: • Mr Nazeer Ahmed • Mr Gul Sheir Mr Gul Sheir is approved to perform all the analyses within the current accreditation scope and maintenance of reference cultures. Demonstrations of the methods proved that proper training has been given. It was not observed any non-compliance between procedures and the practical work during the assessment. The authorisation of new operators is performed by the Quality Manager. The operator authorisation is based on theoretical and practical training, PT-analyses, intra laboratory comparisons, demonstrations.
5.2.2	**Maintenance of competence**
	Description/evaluation: Maintenance of competence is considered to be satisfactory. Methods in the accreditation scope are used on regular basis. In addition the personnel are analysing quality control samples (positive and negative controls), PT samples and intra laboratory comparison samples.
5.2.4	**Job descriptions**
	Description/evaluation: Satisfactory job descriptions are established for new staff members (Mr Nazeer Ahmed and Mr Gul Sheir).
5.3	**Accommodations and environmental conditions**
	Description/evaluation: There are no changes since last visit regarding access to laboratories and organizing of the workflow. Satisfactory measures have been taken to avoid contaminating samples and testing. The main testing activity is performed in laminar flow hood, class one.

	Ozone disinfection is used on weekly basis. The laboratory is also fumigated with form aldehyde on monthly basis. The laboratory has satisfactory procedures for cleaning and disinfection of the working areas. During the method demonstration these were followed properly. The laboratory monitor, control and record environmental parameters. Since last visit the internal control programme is reduced due to historical data. Except for the water supply, reasonable acceptance limits are used. See clause 5.5 for further information, **minor non-conformity** included. Following records were reviewed: • Monthly bacteriological sterility by air testing (exposure plates/TPC/mould and yeasts) • Weekly sterility testing of laminar flow hoods (exposure plates/TPC/mould and yeasts) • Monthly surface screening on benches and incubator walls (swab testing/TPC/mould and yeasts) • Testing of chemical and hygienic quality of distilled water used for culture media production (Frequency depends on the control parameter) • Temperature and RH *Non-conformity no* --
5.4	**Test and calibration methods and method validation**
	Summary/Conclusion: Principally the procedures are considered to be in conformance with the standard methods. The demonstrations verified that the personnel followed the laboratory's procedures. Newly approved analysts demonstrated competence and good practical skills during the assessment. *Non-conformity no* --
5.4.1	**General**
	Summary/Conclusion: The laboratory is using recognised official methods and standard methods (FAO and APHA) which are satisfactory validated. The methods used are appropriate and fit for purpose.
5.4.2	**Selection of methods**
	Description/evaluation: See clause 5.4.1.

5.4.3/ 5.4.4	**Laboratory-developed methods/ Non-standard methods**
	Description/evaluation: The laboratory is not using methods developed in house or any other non-standard methods. Neither has the laboratory plans to use such methods. Recognised standard methods are given priority.
5.4.5	**Validation of methods**
	Description/evaluation: Not assessed during this visit No new methods are validated or verified since the initial assessment. *Non-conformity no* --
5.4.6	**Estimation of uncertainty of measurement**
	Description/evaluation: A procedure for calculating measurement uncertainty for quantitative analysis is established. The procedure is based on the top down method described ISO/TS 19036 which was issued in 2006. Very good internal reproducibility studies have been performed in December 2007. The next study is planned to be organized in June 2008.Results will be followed up during the next visit. *Non-conformity no*
5.4.7	**Control of data**
	Description/evaluation: All manually registrations observed in the records were satisfactory. Further more were corrections properly done. The laboratory does not use LIMS. Calculations in connection with the analytical process are manually operations. *Non-conformity no* --
5.5	**Equipment**
	Description/ valuation: No new instruments are purchased since the initial visit. In general the instruments are satisfactory maintained and monitored. Since last the internal control programme is reduced due to historical data. The new control frequency is appropriate. The following instrument files were reviewed: • Incubators, refrigerator and freezers • Autoclave • Thermometers • Laminar flow hood • Balances • pH-meter • Volumetric equipment (Micro pipettes)

	• In house prepared culture media (Sterility, growth promotion and pH-tests) • Distilled water apparatus A bio-indicator system (NAMSA SCBI) for autoclaves is purchased but not yet put into use. No working instruction is worked out. This will be followed up during next visit. **Remarks:** The laboratory is getting the pH-meter calibrated by the Calibration Laboratory in PCSIR Lab Complex, Lahore. This is not considered to be needed as long as standardised buffers are used for calibration. The trend chart for pipettes seems to have a trend in the control results produced the last year. However, the specific gravity is not taken into account when calculating the volumetric results, and so far is the results within the established action limits. Action limits for balances is not established due to method requirements but due to earlier measurements by a standard weight. Consequently the acceptance limits are narrow and not very appropriate. **Minor non-conformities:** *Temperature requirement autoclave process:* Since last visit the laboratory has established a temperature requirement for the autoclave process connected to culture media production (121°C ± 0,2 °C). The requirement is not applicable with the temperature recorder currently in use. MU in the calibration certificate is 1,1 °C. However, it is internationally accepted to use 121°C ± 2 °C for culture media production. *Temperature record for refrigerator in ILO:* Correction factor and measurement uncertainty given in calibration certificate has not been taken into account for daily readings. *QC programme water supply:* Content of heavy metals are tested on annually basis. No criteria for heavy metals in the water supply are given.
	Non-conformity no --
5.6	**Measurement traceability**
	Summary/conclusion: Traceability for microbiological methods is established by using reference cultures and participation in international PT-schemes. The reference cultures are regularly used for approval of in house made culture media or as controls during analyses. The laboratory is using reference cultures (master cultures) provided by Microbiologics. The reference cultures were equipped with quality certificates

	issued by the producer. Handling and storage of stock cultures and working cultures is considered to be satisfactory. All transfers of reference cultures are properly recorded. See report from lead assessor regarding calibrations of thermometers, equipment fitted out with thermometers, balances and weights, **essential non-conformity** included. *Non-conformity no*
5.6.1	**General**
	Description/evaluation: See clause 5.6
5.6.2	**Specific requirements**
5.6.2.1	**Calibration**
	Description/evaluation: Not relevant
5.6.2.2	**Testing**
	Description/evaluation: See clause 5.5 and 5.6
5.6.3	**Reference standards and reference materials**
	Description/evaluation: See clause 5.6
5.7	**Sampling**
	Description/evaluation: Not relevant. Not applied for. *Non-conformity no* --
5.8	**Handling of test and calibration items**
	Description/evaluation: There are no changes since last visit. The samples received are mainly samples from industrial clients. On receipt the sample acquires a unique identity/sample number by ILO who is then transferring the sample to the laboratory. Sample information (contract) is kept by ILO. The samples also acquire a unique lab id number when received in the microbiological laboratory. This number is used to trace the sample in raw data produced during the analyses. Before, under and after analysis the samples are stored in a proper way in fridges, refrigerators or in room temperature. The temperature in storage equipment in the laboratory is satisfactory monitored. The samples are not disposed until the test results are approved. *Non-conformity no* --

5.9	**Assuring the quality of test and calibration results**
	Description/evaluation: The laboratory is using reference cultures (positive and negative controls) in each run of analysis. The cultures are traceable to an international culture collection (ATCC). - See clause 5.6 for further information. The laboratory participates in PT-schemes for water and food testing provided by: • Norwegian Institute for Food and Environmental analysis • Board of Lab. Accreditation, Department of Science and Cervices, Thailand The PT-schemes cover the accreditation scope. The PT- results produced in 2007 are in general meeting the acceptance criteria given. A few results are outside the acceptance limits. These are followed up in a very good way through the ordinary non-conformity handling system. The PT's planed for 2008 were reviewed and are considered to be satisfactory. In addition the analytical performance is checked by organizing intra laboratory comparisons twice annually. The frequency is reduced since the initial assessment. Spiked samples are used. The target limits are defined on basis of analyses done by the Technical Manager. All approved operators are participating. Conclusions are made by the Technical Manager. All raw data are filed in a proper manner. Trend analysis (e.g. control charts) of results from intra laboratory comparisons and proficiency testing activities are now established. *Non-conformity no* --
5.10	**Reporting the results**
	Description/evaluation: The 2007 and 2008 files of test reports were reviewed. All test reports checked were properly signed by authorized personnel. Minor non-conformities were observed regarding the technical content. Amended test reports were not observed. **Minor non-conformity** Test reports microbiology: • A statement regarding measurement uncertainty is missing • Opinions were observed. These were not marked as "not included in the accredited scope". Regarding use of to different accreditation marks see also report from lead assessor, **minor non-conformity** included. *Non-conformity no* --

5.10.5	**Opinions and interpretations**
	Description/evaluation: Not relevant. *Non-conformity no* --
NA Dok	**Other requirement documents**
No. 51	**Flexible accreditation**
	Description/evaluation: Not relevant. *Non-conformity no* --
No 14	**Rule for use of Norwegian Accreditation's (NA) logo and for references to NA's accreditation**
	Description/evaluation: See report from lead assessor *Non-conformity no* --
No 25/31	**Accreditation conditions**
	Description/evaluation: See report from lead assessor *Non-conformity no* --
No. 26a	**Requirements for calibration and control of weighing machines in accredited testing laboratories**
	Description/evaluation: See report from lead assessor regarding calibrations of balances and weights, **essential non-conformity** included. *Non-conformity no* --
No. 26b	**Calibration of thermometers in connection with accreditation of test laboratories**
	Description/evaluation: See report from lead assessor regarding calibrations of thermometers and equipment fitted out with thermometers, **essential non-conformity** included. *Non-conformity no* --
No 52	**Expression of the uncertainty of measurement in calibration (EA-4/02)**
	Description/evaluation: Not relevant *Non-conformity no* --

Name of the organisation:	**PCSIR, Lahore**
Assessed locations:	**Leather and textile**

Accr. no. : TEST 216 Appl. no.:	Date of assessment: 17-19 April 2008

(The complete report may be repeated. Extract from the report can only be repeated when this is accepted in writing by Norwegian Accreditation)

1. Reporting assessor/expert

Name: **Robert Stocks** Technical area: **P12 and P07/P20**

2. General information

1. time visit		Extraordinary visit		Renewal	
Surveillance	X	Extension of scope		Complete assessment	

Specification of surveillance activities not mentioned above:

Surveillance with assessment of selected elements	
Document review	
Technical assessment NS EN ISO/IEC 17025: 2005	X
Technical expert NS-EN ISO/IEC 17025:	
Technical assessment NS EN ISO/IEC 15189:	
Technical expert NS-EN ISO/IEC 15189:	

Interviews

Name	**Function / technical area**

3. Recommendation

3.1 Recommendation regarding accreditation/renewal:
That the scope be maintained subject to satisfactory clearance of the essential NC's raised

3.2 Recommendation regarding change of the responsible for validation, when relevant:
Not relevant

3.3 Recommendation regarding changes of accreditation scope:
That method TL/TP/012 in the Textiles scope be substituted by ASTMS3776(2002), with a comment that the 1996 and 2002 versions of ASTMD3776 are identical; and that a note that all physical textiles and leather tests are performed to the requirements of ISO139(2005) for conditioning and test atmospheres.

4. Changes since the last visit (if any):

No major changes

5. Extent of assessment

	Management requirements
4.1	**Organization**
	Description/evaluation: Not examined by this assessor. *Non-conformity no* --
4.2	**Quality system**
	Description/evaluation: Not examined by this assessor *Non-conformity no* ---
4.3	**Document control**
	Description/evaluation: Generally all quality system documents are well controlled. However, a wrong page was found in a controlled copy of an internal method. An error on a calibration certificate and missing conclusions indicated that such documents were not being controlled correctly. *Non-conformity no* See D & F and K in attached list of minor NC's.
4.4	**Review of requests, tenders and contracts**
	Description/evaluation: Contract revue was documented eg for job 1498 of Dec 2007, but some improvements to clarity of customer requirements were not documented correctly *Non-conformity no* See T on attached list of Minor NC's
4.5	**Subcontracting of tests and calibrations**
	Description/evaluation: No tests have been subcontracted in the period since the last visit in 2007. *Non-conformity no* --
4.6	**Purchasing services and suppliers**
	Description/evaluation: Generally satisfactory, but no documented certificates could be produced for some critical supplies e.g. multifibre strip for fastness tests. *Non-conformity no* See R in attached list of Minor NC's
4.9-4.12	**Control of nonconforming testing and/or calibration work/corrective actions**
	Description/evaluation: No testing was found to be taking place when conditions were outside specified limits, but see also 5.3.2 below. An opportunity to use available data on fastnesses

	was not currently being exploited. *Non-conformity no* See S on attached list of Minor NC's
4.13	**Control of records**
	Description/evaluation: Good records were seen to being maintained. Two minor NC's were noted regarding signatories and data back-up.
	Non-conformity no See G & Q in attached list of Minor NC's
5	**Technical requirements**
5.2	**Personnel**
	Summary/Conclusion: The operators performing tests were competent and well trained, but it was noted that reconfirmation of competence on the CrVI test on leather had not been done since 2006. *Non-conformity no* See B on attached list of Minor NC's
5.2.1	**Training**
	Description/evaluation: The training system was generally found to be working well.
5.2.2	**Maintenance of competence**
	Description/evaluation: See 5.2 above.
5.2.4	**Job descriptions**
	Description/evaluation: Satisfactory job descriptions were available for the staff witnessed performing tests during the visit.
5.3	**Accommodation and environmental conditions**
	Description/evaluation: The conditioning environment was clearly capable of maintaining conditions, when continuously running. However, frequent power outages are being experienced. No WI detailing the criteria for cessation of work was available during the visit. *Non-conformity no* See L on attached list of Minor NC's
5.4	**Test and calibration methods and method validation**
	Summary/Conclusion: International Standards, supplemented by Internal methods were in use for all tests on the scope witnessed during the visit. *Non-conformity no* --
5.4.1	**General**
	Summary/Conclusion: The significant deviation to use conditions specified in ISO139 for all physical

	tests on textiles and leather is well documented and communicated to customers.
5.4.2	**Selection of methods**
	Description/evaluation: The lab indicates to unsure customers which tests are appropriate to use. A number of instances where the good practices in use were not documented in the supplementary procedures were also found (see NC08-1)
5.4.3/ 5.4.4	**Laboratory-developed methods/ Non-standard methods** *Description/evaluation:* The lab based methods and supplements are generally well documented, and validated for use. However, An instance of minor deviations was observed during the visit. *Non-conformity no* See J on attached list of Minor NC's
5.4.5	**Validation of methods**
	Description/evaluation: The methods generally relied on the known validation of the International Standards in use, supplemented where necessary for IHM's. An exaple of insufficient validation was found during the visit. *Non-conformity no* See P on attached list of Minor NC's
5.4.6	**Estimation of uncertainty of measurement**
	Description/evaluation: The lab has clearly worked hard in the last year on estimates of test uncertainty, which were soundly based. However, some of them needed a deeper analysis of the factors which could contribute to uncertainty *Non-conformity no* See NC 08-3
5.4.7	**Control of data**
	Description/evaluation: Extensive checking of laboratory produced data was performed, and the system appeared to be working well. *Non-conformity no*
5.5	**Equipment**
	Description/ valuation: Generally the equipment was found to be in good working order, and satisfactory for the tests being performed. A number of minor, unrelated examples of NC were noted.
	Non-conformity no See C, H, I, M, N, & O in attached list of Minor NC's
5.6	**Measurement traceability**
	Summary/conclusion: Significant deficiencies in the calibration area were found during the visit, and need liaison with external calibrators to correct. Known issues of traceability within Pakistan will have to be addressed during 2008. One minor NC was noted.

	Non-conformity no See NC 082, and A on the attached list of Minor NC's
5.6.1	**General**
	Description/evaluation: Many of the observations and measurements made during calibration were not reported on calibration certificates.
5.6.2	**Specific requirements**
5.6.2.1	**Calibration**
	Description/evaluation: Some calibrations were being performed by unaccredited laboratories, or ones without sufficient evidence of traceability. These issues have been highlighted by the lead assessor.
5.6.2.2	**Testing**
	Description/evaluation: See sections of 5.6 above.
5.6.3	**Reference standards and reference materials**
	Description/evaluation: The deficiency in use of a reference fabric is included under 5.5.10 above.
5.7	**Sampling**
	Description/evaluation: N/A *Non-conformity no* --
5.8	**Handling of test and calibration items**
	Description/evaluation: The lab is well able to sample and derive specimens from customer supplied materiel. *Non-conformity no* --
5.9	**Assuring the quality of test and calibration results**
	Description/evaluation: The lab has taken part in PT schemes eg Testex22 & 23, AATCC with good conforming results; and performed ILC eg Feb 2008 for CrVI, for tests where there is no recognised PT scheme.
	Non-conformity no --
5.10	**Reporting the results**
	Description/evaluation: Reports examined eg ACRC/AW/2008/260 & 447 gave clear and unambiguous statements of results and correctly identified unaccredited tests. Vertical Auditing revealed that these reports were supported by good records and gave good evidence that the quality system was properly implemented. *Non-conformity no* --

5.10.5	**Opinions and interpretations**
	Description/evaluation: N/A *Non-conformity no* --
	Flexible scope
	Description/evaluation: **N/A**
NA Dok	**Other requirement documents**
No. 51	**Flexible accreditation**
	Description/evaluation: N/A *Non-conformity no* --
No 14	**Rule for use of Norwegian Accreditation's (NA) logo and for references to NA's accreditation**
	Description/evaluation: Not examined by this assessor *Non-conformity no* --
No 25/31	**Accreditation conditions**
	Description/evaluation: Not examined by this assessor *Non-conformity no* --
No. 26a	**Requirements for calibration and control of weighing machines in accredited testing laboratories**
	Description/evaluation: Detailed in NC08-4 by lead assessor *Non-conformity no*
No. 26b	**Calibration of thermometers in connection with accreditation of test laboratories**
	Description/evaluation: Detailed in NC08-4 by lead assessor *Non-conformity no*
No 52	**Expression of the uncertainty of measurement in calibration (EA-4/02)**
	Description/evaluation: N/A *Non-conformity no* --

6. Demonstrations	Method identity/parameter/ object:	Demonstrated by/discussed with:
	CrVI in leather to LL/TM001	A Inayat
	PCPL in leather to LL/TM002	S Rehan Khan
	Tensiles and tears in leather to LL/TM004 & 006	A Inayat
	Mass of textile to TP012	F Azeem
	Martindale Abrasion (ISO12947)	H ur Rehman
	Fastness to laundering (ISO105C06)	H ur Rehman
	Fastness to Perspiration (ISO105E04)	H ur Rehman
7. Follow up non-conformities from the last visit:	The minor NC's checked were found to have been satisfactorily addressed eg wavelength standard for Spectrophotometer, data transfer checks etc.	
8. Notes/summary/ conclusion	The lab continues to develop its quality systems, and has carried out good work on uncertainties and PT during the last year. The staff are competent, and keen to improve their knowledge, abilities and experience. The main NC's are in the calibration area, and considerable efforts are still needed to demonstrate well-controlled, traceable measurements.	
9. Next visit	Calibration	

Description Minor NCs	**Reference to ISO 17025**
A. Leather lab: Check masses only being used every 2 days, instead of 'daily-on-use' for balance LL001	5.6.3.3
B. No documented interval eg one year, for reconfirmation of staff competence to perform CrVI & PCPL tests	5.2.5
C. No verification that volumetric glassware continues to comply with specifications at a periodic frequency eg 1 year	5.5.2
D. Controlled copy of LLC/LL/TM/001 contains page 3 from the wrong method (TM003)	4.3.2.2
E. No documentation that Chemtech are a critical supplier of calibration of Spectrophotometer LL003 meeting the criteria of ISO17025	5.6.2.1.1
F. An error in date of expiry on certificate of 12th June 2007 for Spectrophotometer LL 003 indicates that lab did not examine the calibration certificate for accuracy	4.3.2.1
G. No back-up of electronic data records has been made for GC LL009, which has resulted in such data being currently unavailable as the computer has malfunctioned.	4.13.1.4
H. The Potassium Dichromate Calibration Standard for CrVI determinations is not labelled with a use-by date or otherwise subject to stability control	5.5.8
I. The cutting dyes LL014A & B, LL015A are blunt and damaged, and thus do not produce test specimens meeting the requirements of IUP2 & IUP6	5.5.2
J. On leather tensile tests to LLC/LL/TM004, no slippage marks were made on the specimens, and no records were made of subsidiary measurements eg thickness,	5.4.1/4.13

Description Minor NCs	Reference to ISO 17025
width of dumbbells.	
K. Neither the lab nor calibration cert 2-1013 dated 3rd April 2008 document that the Tensile testing machine meets the specified accuracy requirements (EN10002 or derivatives).	4.3.1
L. There is no documented WI to define criteria for cessation of work, and recommencement of conditioning period, when the T/RH goes out of control (see Appendices of ISO139) eg during power outages.	5.3.2
M. No reference fabric results have been performed on the Martindale Abrasion test (ISO12947-2) since July 2007.	5.5.10
N. Specimens for ISO105E04 are not flat in supporting Petrie dishes, as specified in Standard	5.5.1
O. Although the Perspirometer masses are calibrated, no documented confirmation is available to show that the total force specified in ISO105E04 is met	5.5.2
P. No validation that temperature stability meets requirements of ISO105 for lauderometer bath TL/015, and for spatial temperature distribution of oven TL/019	5.4.5.1
Q. The three operators who perform fatness ratings do not all initial the test results sheets.	4.13.2.1
R. ISO105F10: No documentation to certify that the multifibre strip in use (batch 302) meets specified requirements	4.6.2
S. Extensive data on fastness ratings form ISO105 are not analysed for operator or time trends	4.12.1
T. The contract revue for ILO/094 of 14th Feb 2008 does not show which fabric mass test is required by the customer, nor who in PCSIR has spoken to the customer to clarify tests requirements	4.4.1a

The undersigned states that the content in the report is not in conflict with NA's policy and practice.

20 April 200. Robert Stocks
technical assessor

date.....
lead assessor

6. Demonstrations	Method identity/parameter/ object:	Demonstrated by/discussed with:
	LLC/ML/TM/001: Total plate count in foods	Mr Gul Sheir
	LLC/ML/TM/002: Total coliforms, fecal coliforms and E. coli in foods	Mr Gul Sheir
7. Follow up non-conformities from the last visit:	Except for traceability in the calibration area all corrective actions are well implemented for all NC's raised during the initial visit.	
8. Notes/summary/ conclusion	The laboratory has personnel with appropriate technical competence and the personnel takes great interest in further development and improvement of the quality system. The laboratories are well equipped The workflow is well organized and the facilities are fit for purpose.	
9. Next visit	• Bio-indicator system (NAMSA SCBI) for autoclaves • PT-results and trend analysis • Measurement uncertainty & reproducibility studies	

23.04.2008 *Anne Grændsen*
Technical assessor

The undersigned states that the content in the report is not in conflict with NA's policy and practice.

06.05.08
Lead assessor

Name of the organisation:	**PCSIR, Lahore**
Assessed locations:	**Leather and textile**

Accr. no. : TEST 216 Appl. no.:	Date of assessment: 17-19 April 2008

(The complete report may be repeated. Extract from the report can only be repeated when this is accepted in writing by Norwegian Accreditation)

1. Reporting assessor/expert

Name: **Robert Stocks** Technical area: **P12 and P07/P20**

2. General information

1. time visit [ ]	Extraordinary visit [ ]	Renewal [ ]
Surveillance [X]	Extension of scope [ ]	Complete assessment [ ]

Specification of surveillance activities not mentioned above:

Surveillance with assessment of selected elements	[ ]
Document review	[ ]
Technical assessment NS EN ISO/IEC 17025: 2005	[X]
Technical expert NS-EN ISO/IEC 17025:	[ ]
Technical assessment NS EN ISO/IEC 15189:	[ ]
Technical expert NS-EN ISO/IEC 15189:	[ ]

Interviews

Name	**Function / technical area**

3. Recommendation

3.1 Recommendation regarding accreditation/renewal:
That the scope be maintained subject to satisfactory clearance of the essential NC's raised

3.2 Recommendation regarding change of the responsible for validation, when relevant:
Not relevant

3.3 Recommendation regarding changes of accreditation scope:
That method TL/TP/012 in the Textiles scope be substituted by ASTMS3776(2002), with a comment that the 1996 and 2002 versions of ASTMD3776 are identical; and that a note that all physical textiles and leather tests are performed to the requirements of ISO139(2005) for conditioning and test atmospheres.

4. Changes since the last visit (if any):

No major changes

5. Extent of assessment

	Management requirements
4.1	**Organization**
	Description/evaluation: Not examined by this assessor. *Non-conformity no* --
4.2	**Quality system**
	Description/evaluation: Not examined by this assessor *Non-conformity no* --
4.3	**Document control**
	Description/evaluation: Generally all quality system documents are well controlled. However, a wrong page was found in a controlled copy of an internal method. An error on a calibration certificate and missing conclusions indicated that such documents were not being controlled correctly. *Non-conformity no* See D & F and K in attached list of minor NC's.
4.4	**Review of requests, tenders and contracts**
	Description/evaluation: Contract revue was documented eg for job 1498 of Dec 2007, but some improvements to clarity of customer requirements were not documented correctly *Non-conformity no* See T on attached list of Minor NC's
4.5	**Subcontracting of tests and calibrations**
	Description/evaluation: No tests have been subcontracted in the period since the last visit in 2007. *Non-conformity no* --
4.6	**Purchasing services and suppliers**
	Description/evaluation: Generally satisfactory, but no documented certificates could be produced for some critical supplies e.g. multifibre strip for fastness tests. *Non-conformity no* See R in attached list of Minor NC's
4.9-4.12	**Control of nonconforming testing and/or calibration work/corrective actions**
	Description/evaluation: No testing was found to be taking place when conditions were outside specified limits, but see also 5.3.2 below. An opportunity to use available data on fastnesses

	was not currently being exploited. *Non-conformity no* See S on attached list of Minor NC's
4.13	**Control of records**
	Description/evaluation: Good records were seen to being maintained. Two minor NC's were noted regarding signatories and data back-up.
	Non-conformity no See G & Q in attached list of Minor NC's
5	**Technical requirements**
5.2	**Personnel**
	Summary/Conclusion: The operators performing tests were competent and well trained, but it was noted that reconfirmation of competence on the CrVI test on leather had not been done since 2006. *Non-conformity no* See B on attached list of Minor NC's
5.2.1	**Training**
	Description/evaluation: The training system was generally found to be working well.
5.2.2	**Maintenance of competence**
	Description/evaluation: See 5.2 above.
5.2.4	**Job descriptions**
	Description/evaluation: Satisfactory job descriptions were available for the staff witnessed performing tests during the visit.
5.3	**Accommodation and environmental conditions**
	Description/evaluation: The conditioning environment was clearly capable of maintaining conditions, when continuously running. However, frequent power outages are being experienced. No WI detailing the criteria for cessation of work was available during the visit. *Non-conformity no* See L on attached list of Minor NC's
5.4	**Test and calibration methods and method validation**
	Summary/Conclusion: International Standards, supplemented by Internal methods were in use for all tests on the scope witnessed during the visit. *Non-conformity no* --
5.4.1	**General**
	Summary/Conclusion: The significant deviation to use conditions specified in ISO139 for all physical

	tests on textiles and leather is well documented and communicated to customers.
5.4.2	**Selection of methods**
	Description/evaluation: The lab indicates to unsure customers which tests are appropriate to use. A number of instances where the good practices in use were not documented in the supplementary procedures were also found (see NC08-1)
5.4.3/ 5.4.4	**Laboratory-developed methods/ Non-standard methods** *Description/evaluation:* The lab based methods and supplements are generally well documented, and validated for use. However, An instance of minor deviations was observed during the visit. *Non-conformity no* See J on attached list of Minor NC's
5.4.5	**Validation of methods**
	Description/evaluation: The methods generally relied on the known validation of the International Standards in use, supplemented where necessary for IHM's. An exaple of insufficient validation was found during the visit. *Non-conformity no* See P on attached list of Minor NC's
5.4.6	**Estimation of uncertainty of measurement**
	Description/evaluation: The lab has clearly worked hard in the last year on estimates of test uncertainty, which were soundly based. However, some of them needed a deeper analysis of the factors which could contribute to uncertainty *Non-conformity no* See NC 08-3
5.4.7	**Control of data**
	Description/evaluation: Extensive checking of laboratory produced data was performed, and the system appeared to be working well. *Non-conformity no*
5.5	**Equipment**
	Description/ valuation: Generally the equipment was found to be in good working order, and satisfactory for the tests being performed. A number of minor, unrelated examples of NC were noted.
	Non-conformity no See C, H, I, M, N, & O in attached list of Minor NC's
5.6	**Measurement traceability**
	Summary/conclusion: Significant deficiencies in the calibration area were found during the visit, and need liaison with external calibrators to correct. Known issues of traceability within Pakistan will have to be addressed during 2008. One minor NC was noted.

	Non-conformity no See NC 082, and A on the attached list of Minor NC's
5.6.1	**General**
	Description/evaluation: Many of the observations and measurements made during calibration were not reported on calibration certificates.
5.6.2	**Specific requirements**
5.6.2.1	**Calibration**
	Description/evaluation: Some calibrations were being performed by unaccredited laboratories, or ones without sufficient evidence of traceability. These issues have been highlighted by the lead assessor.
5.6.2.2	**Testing**
	Description/evaluation: See sections of 5.6 above.
5.6.3	**Reference standards and reference materials**
	Description/evaluation: The deficiency in use of a reference fabric is included under 5.5.10 above.
5.7	**Sampling**
	Description/evaluation: N/A *Non-conformity no* --
5.8	**Handling of test and calibration items**
	Description/evaluation: The lab is well able to sample and derive specimens from customer supplied materiel. *Non-conformity no* --
5.9	**Assuring the quality of test and calibration results**
	Description/evaluation: The lab has taken part in PT schemes eg Testex22 & 23, AATCC with good conforming results; and performed ILC eg Feb 2008 for CrVI, for tests where there is no recognised PT scheme.
	Non-conformity no --
5.10	**Reporting the results**
	Description/evaluation: Reports examined eg ACRC/AW/2008/260 & 447 gave clear and unambiguous statements of results and correctly identified unaccredited tests. Vertical Auditing revealed that these reports were supported by good records and gave good evidence that the quality system was properly implemented. *Non-conformity no* --

5.10.5	**Opinions and interpretations**
	Description/evaluation: N/A *Non-conformity no* --
	Flexible scope
	Description/evaluation: **N/A**
NA Dok	**Other requirement documents**
No. 51	**Flexible accreditation**
	Description/evaluation: N/A *Non-conformity no* --
No 14	**Rule for use of Norwegian Accreditation's (NA) logo and for references to NA's accreditation**
	Description/evaluation: Not examined by this assessor *Non-conformity no* --
No 25/31	**Accreditation conditions**
	Description/evaluation: Not examined by this assessor *Non-conformity no* --
No. 26a	**Requirements for calibration and control of weighing machines in accredited testing laboratories**
	Description/evaluation: Detailed in NC08-4 by lead assessor *Non-conformity no*
No. 26b	**Calibration of thermometers in connection with accreditation of test laboratories**
	Description/evaluation: Detailed in NC08-4 by lead assessor *Non-conformity no*
No 52	**Expression of the uncertainty of measurement in calibration (EA-4/02)**
	Description/evaluation: N/A *Non-conformity no* --

6. Demonstrations	Method identity/parameter/ object:	Demonstrated by/discussed with:
	CrVI in leather to LL/TM001	A Inayat
	PCPL in leather to LL/TM002	S Rehan Khan
	Tensiles and tears in leather to LL/TM004 & 006	A Inayat
	Mass of textile to TP012	F Azeem
	Martindale Abrasion (ISO12947)	H ur Rehman
	Fastness to laundering (ISO105C06)	H ur Rehman
	Fastness to Perspiration (ISO105E04)	H ur Rehman
7. Follow up non-conformities from the last visit:	The minor NC's checked were found to have been satisfactorily addressed eg wavelength standard for Spectrophotometer, data transfer checks etc.	
8. Notes/summary/ conclusion	The lab continues to develop its quality systems, and has carried out good work on uncertainties and PT during the last year. The staff are competent, and keen to improve their knowledge, abilities and experience. The main NC's are in the calibration area, and considerable efforts are still needed to demonstrate well-controlled, traceable measurements.	
9. Next visit	Calibration	

Description Minor NCs	**Reference to ISO 17025**
A. Leather lab: Check masses only being used every 2 days, instead of 'daily-on-use' for balance LL001	5.6.3.3
B. No documented interval eg one year, for reconfirmation of staff competence to perform CrVI & PCPL tests	5.2.5
C. No verification that volumetric glassware continues to comply with specifications at a periodic frequency eg 1 year	5.5.2
D. Controlled copy of LLC/LL/TM/001 contains page 3 from the wrong method (TM003)	4.3.2.2
E. No documentation that Chemtech are a critical supplier of calibration of Spectrophotometer LL003 meeting the criteria of ISO17025	5.6.2.1.1
F. An error in date of expiry on certificate of 12th June 2007 for Spectrophotometer LL 003 indicates that lab did not examine the calibration certificate for accuracy	4.3.2.1
G. No back-up of electronic data records has been made for GC LL009, which has resulted in such data being currently unavailable as the computer has malfunctioned.	4.13.1.4
H. The Potassium Dichromate Calibration Standard for CrVI determinations is not labelled with a use-by date or otherwise subject to stability control	5.5.8
I. The cutting dyes LL014A & B, LL015A are blunt and damaged, and thus do not produce test specimens meeting the requirements of IUP2 & IUP6	5.5.2
J. On leather tensile tests to LLC/LL/TM004, no slippage marks were made on the specimens, and no records were made of subsidiary measurements eg thickness,	5.4.1/4.13

Description Minor NCs	Reference to ISO 17025
width of dumbbells.	
K. Neither the lab nor calibration cert 2-1013 dated 3rd April 2008 document that the Tensile testing machine meets the specified accuracy requirements (EN10002 or derivatives).	4.3.1
L. There is no documented WI to define criteria for cessation of work, and recommencement of conditioning period, when the T/RH goes out of control (see Appendices of ISO139) eg during power outages.	5.3.2
M. No reference fabric results have been performed on the Martindale Abrasion test (ISO12947-2) since July 2007.	5.5.10
N. Specimens for ISO105E04 are not flat in supporting Petrie dishes, as specified in Standard	5.5.1
O. Although the Perspirometer masses are calibrated, no documented confirmation is available to show that the total force specified in ISO105E04 is met	5.5.2
P. No validation that temperature stability meets requirements of ISO105 for lauderometer bath TL/015, and for spatial temperature distribution of oven TL/019	5.4.5.1
Q. The three operators who perform fatness ratings do not all initial the test results sheets.	4.13.2.1
R. ISO105F10: No documentation to certify that the multifibre strip in use (batch 302) meets specified requirements	4.6.2
S. Extensive data on fastness ratings form ISO105 are not analysed for operator or time trends	4.12.1
T. The contract revue for ILO/094 of 14th Feb 2008 does not show which fabric mass test is required by the customer, nor who in PCSIR has spoken to the customer to clarify tests requirements	4.4.1a

The undersigned states that the content in the report is not in conflict with NA's policy and practice.

20 April 200, Robert Stocks
technical assessor

date.....
lead assessor

NORSK
AKKREDITERING

ACCREDITATION DOCUMENT

TEST 216

PCSIR Laboratories Complex Lahore, Textile, Leather & Microbiology Laboratories

200 - Ferozepur Road, Lahore - 54600 , Pakistan

The scope of accreditation is P07 Physical testing, P12 Chemical analysis og P16 Microbiological analysis in accordance with the specifications on the following pages in this document.

The accreditation was first time granted 11.09.2007 and given according to Parliamentary Proposition no. 106 (1989/1990) and the Statutes of Norwegian Accreditation , established by Royal Decree of 7 October 1993
The laboratory complies with the requirementes in NS-EN ISO/IEC 17025 (2005)

The accreditation requires regular surveillance, and is valid until 12.09.2012.
The decision of accreditation made by Norwegian Accreditation implies that the organisation has been found to fulfil the requirements for accreditation within the scope.
The organitation itself is responsible for the results of performed measurements.

NORWEGIAN ACCREDITATION

23.10.2008
Date

Norwegian Accreditation

Accreditation document
Accreditation no. TEST 216

Administrative/geographical unit:

Leather laboratory
200 - Ferozepur Road, Lahore - 54600, Pakistan

Permanent facility

P07 Physical testing

Object	Parameter	Reference standard	Identity of internal	Comments
Leather and Leather Made-ups	Tensile Strength	Internal method	LL/TM/004	Method based on BS 3144 (method 5) and SLP 6 (IUP 6) (2001)
Leather and Leather Made-Ups	Tear Strength	Internal method	LL/TM/006	Method based on BS 3144 (method 6) and SLP 7 (IUP 8)(2001)
Leather and Leather Made-ups	Colour fastness to Circular Rubbing	Internal method	LL/TM/005	Method based on BS 1006, UK-LC (1996) and SLF 5

Permanent facility

P12 Chemical analysis

Object	Parameter	Reference standard	Identity of internal	Comments
Leather and Leather Made-ups	Pentachlorophenols (PCP)	Internal method	LL/TM/002	Method based on CLRI/Freiburg (gas chromatography)
Leather and Leather Made-ups	pH of Aqueous Extracts	Internal method	LL/TM/007	Method based on BS 1309:9 (1996) and SLC 13 (IUC 11). Electrometric determination
Leather	Chromium VI	IUC 18	LL/TM/001	
Leather	Formaldehyde	IUC 19	LL/TM/003	

23.10.2008
Date

Norwegian Accreditation

NORSK AKKREDITERING

Accreditation document
Accreditation no. TEST 216

Administrative/geographical unit:
Microbiology Laboratory
200 - Ferozepur Road, Lahore - 54600, Pakistan

Permanent facility

P07 Physical testing

Object	Parameter	Reference standard	Identity of internal	Comments
Fabrics	Mass Per Unit Area (Weight) of Fabric	ASTM D 3776-07	TL/TP/012	

Permanent facility

P16 Microbiological analysis

Object	Parameter	Reference standard	Identity of internal	Comments
Water	Heterotrophic Plate Count at 22 °C or 37 °C	Standard Methods 9215 B	ML/TM/003	Pour plate method. Method accepted by APHA and EPA
Foods	Total Plate Count	Manual of Food Quality Controls 14/4, Chaper 2	ML/TM/001	FAO Food and Nutrition Paper
Foods	Salmonella	Manual of Food Quality Controls 14/4, Chaper 4	ML/TM/005	FAO Food and Nutrition Paper
Foods	Staphylococcus aureus	Manual of Food Quality Controls 14/4, Chaper 12	ML/TM/006	FAO Food and Nutrition Paper
Foods	Yeast and Moulds	Manual of Food Quality Controls 14/4, Chaper 19	ML/TM/007	FAO Food and Nutrition Paper
Foods	Total coliforms, fecal coliforms and E. coli	Manual of food quality controls 14/4, Chapter 3	ML/TM/002	FAO Food and Nutrition Paper
Water	Fecal coliforms and E. coli	Standard Methods 9221E & F	ML/TM/004	MPN method. Method accepted by APHA and EPA
Water	Total Coliforms	Standard Methods 9221B	ML/TM/004	MPN method. Method accepted by APHA and EPA

23.10.2008
Date

Inger Lise Lake
Norwegian Accreditation

Accreditation document
Accreditation no. TEST 216

Administrative/geographical unit:
Textile laboratory
200 - Ferozepur Road, Lahore - 54600, Pakistan

Permanent facility

P07 Physical testing

Object	Parameter	Reference standard	Identity of internal	Comments
Textiles	Water Repellency: Spray Test	AATCC 22	TL/TP/022	
Textiles	Determination of Abrasion of Fabrics by Martindale Method	EN ISO 12947-2	TL/TP/009	

Permanent facility

P12 Chemical analysis

Object	Parameter	Reference standard	Identity of internal	Comments
Textiles	Colourfastness to Domestic and Commercial Laundering	ISO 105-C06	TL/TP/002	
Textiles	Colorfastness to Water	ISO 105-E01	TL/TP/004	
Textiles	Colourfastness to Sea Water	ISO 105-E02	TL/TP/005	
Textiles	Colourfastness to Perspiration	ISO 105-E04	TL/TP/006	
Textiles	Colourfastness to Rubbing (16 mm peg)	ISO 105-X12	TL/TP/007	
Textiles	Colorfastness to Dry Cleaning	ISO 105-D01	TL/TP/003	

23.10.2008
Date

Norwegian Accreditation

Name of organisation:	PCSIR Karachi		
Manager of the organisation:	Tanzil Haider Usmani		
Accreditation no/ application no:	TEST 218	Date of assessment:	21. and 22.04.2008
Sites assessed:	Textile and chemistry laboratories		

1 The assessment

This report deals with:

Initial ass.		Extraordinary ass.	x	Renewal	
Surveillance	x	Extension		Full assessment	

Assessment team::

Name	Position
Erik Figenschou	Technical assessor chemistry (Extraordinary visit)
Robert Stocks	Technical assessor textile testing (Surveillance visit)
Roald K. Nilsen	Lead assessor

Personnel interviewed:

Name	Position
Mr. Zain-ul Ibad	Quality Manager
Mr. AlemAhmed	Technical manager, Textile laboratory
Ms. Seema Ismat	Technical manager, Microbiology laboratory

Participants at the closing meeting:

Name	Position
See separate list	

2 Non-compliances

Categorisation of non-compliances is described in NA Doc 55 and on NA's web-site (www.akkreditert.no).

Deadline for submission of corrective actions: **05.06.2008**

3 Results from the assessment

Below, the results from the assessment against the accreditation requirements as described in ISO/IEC 17025:2005 (General requirements for calibration and test laboratories) and the requirements defined in the laboratory's own management system, are described.

ISO 17025 – 4 – Requirements for management

4.1 Organization

No changes since last visit.

NC no				
Compliance	x	Not in compliance		

4.2 Management system

Not covered during this visit.

NC no				
Compliance	x	Not in compliance		

4.3 Document control

Corrective actions against NC 2 raised during the surveillance visit in December 2007 were evaluated. Internal audits covering document control have been performed in all accredited laboratories in March 2008 and NCs were then identified. All these NCs are now closed by the laboratory itself. However, during this visit problems with the document control system have again been identified specially in the Quality manager's office but also elsewhere. A new essential NC (NC 2) was raised against this. At the same time NC 2 raised during the surveillance visit in December 2007 were closed.

See also reports from technical assessors and **minor NC** raised by technical assessor in textile testing.

NC no	2			
Compliance		Not in compliance	x	

4.4 Review of contracts

Not covered by lead assessor during this visit. However, see report from technical assessor in textile testing.

NC no				
Compliance	x	Not in compliance		

4.5 Subcontracting

Not covered by lead assessor during this visit. However, see report from technical assessor in textile testing.

NC no					
Compliance	x	Not in compliance			

4.6 Purchase of services and supplies

Not covered by lead assessor during this visit. However, see report from technical assessor in textile testing and **minor NC** raised by him.

NC no					
Compliance		Not in compliance	x		

4.7 Service to the customer

Not covered during this visit.

NC no					
Compliance	x	Not in compliance			

4.8 Complaints

Not covered during this visit.

NC no					
Compliance	x	Not in compliance			

4.9 Handling non-conforming work

It seems to be a problem in all labs that NCs are not registered during routine daily work. No NCs have been registered in any of the accredited labs since December 2008. In the period March 2007 till December 2007 only 13 NCs were raised all together (covering all labs) and about 50 percent of these were raised in the microbiology laboratory. During internal audits relevant NCs are identified and registered. However, most of these probably could and should have been identified during daily work.

Minor NC:
No NCs have been registered in routine work in any of the accredited labs since the surveillance visit in December 2008.

See also report from technical assessor in textile testing.

NC no				
Compliance		Not in compliance	x	

4.10 Improvement

Not covered during this visit.

NC no				
Compliance	x	Not in compliance		

4.11 Corrective actions

Since no NCs have been raised in daily work since the surveillance visit in December 2007 this was not covered in detail. However, delays in closing NCs were observed.

Minor NC: NC raised in the Microbiology laboratory in 2007 have not been closed by the Quality manager. There is no obvious reason for this delay.

NC no				
Compliance		Not in compliance	x	

4.12 Preventive actions

Not covered during this visit.

NC no				
Compliance	x	Not in compliance		

4.13 Technical registrations

See reports from technical assessors and **minor NCs** given by technical assessor in textile testing.

Lead assessor visited the microbiology laboratory to check the implementation of minor NC 2 raised by the technical assessor during the surveillance visit in December 2007. The working steps in the bench record are now generally properly dated and signed but a few examples of missing dates were identified. This will be followed up during the next surveillance visit.

NC no	

Compliance		Not in compliance	x	

4.14 Internal audits

Corrective actions against NC 1 raised during the surveillance visit in December 2007 were evaluated. The lab has provided internal training for new auditors and some of the new auditors have been used as auditors in March 2008. However, the reports/checklists from these audits show that all elements planed to be covered were not covered. **See minor NC raised against this.** However, other internal audits (e.g. audit of Center for environmental studies) performed in March 2008 by more experienced auditors are acceptable and the reports document what was covered, and results and conclusions are clearly given for each element audited.

NC no				
Compliance		Not in compliance	x	

4.15 Management review

Not covered during this visit.

NC no				
Compliance	x	Not in compliance		

ISO 17025 – 5 – TECHNICAL REQUIREMENTS

5.2 Personnel

There is no new staff employed at the textile laboratories since the initial visit last year. Regarding competence and training of personnel in textile laboratories see report from technical assessor and **minor NC** raised by him.

For chemistry laboratories, see report from the technical assessor.

NC no				
Compliance		Not in compliance	x	

5.3 Premises and environment

See report from technical assessor in textile testing.

NC no					
Compliance	x	Not in compliance			

5.4 Methods for testing, calibration and validation

See reports from technical assessors and essential and **minor NCs** raised by them.

NC no	**3 and 6**				
Compliance		Not in compliance	x		

5.5 Equipment

See reports from technical assessors and **minor NC** given by the technical assessor in textile testing.

NC no					
Compliance		Not in compliance	x		

5.6 Measurement traceability

NC 1 is a continuation of NC 10 given at the surveillance visit in December 2007 regarding calibration of balances and reference thermometer. NC 10 given at the visit in December 2007 was closed during this extraordinary visit. The new NC 1 covers all laboratories at TEST 218.

See also reports from technical assessors and essential and **minor NCs** given by them.

NC no	**1 and 5**				
Compliance		Not in compliance	x		

5.7 Sampling

Not relevant.

NC no					
Compliance		Not in compliance			

5.8 Handling of test and calibration objects

See report from technical assessor in textile testing.

NC no	

Compliance	x	Not in compliance		

5.9 Assuring the quality of results from testing and calibration

See reports from technical assessors and essential NC raised by them.

NC no	**3 and 4**			
Compliance		Not in compliance	x	

5.10 Reporting results

See report from technical assessor in textile testing and **minor NC** raised by him.

NC no				
Compliance		Not in compliance	x	

4 Other requirements

NA-Doc 14 Conditions for the use of NA's logo in accreditation marks and for making reference to accreditation

Uses of double logos (use of both NA and PNAC accreditation marks) on test reports were checked at the ILO office during this extraordinary visit. By use of asterisks the accreditation status (not accredited by PNAC or not accredited by neither NA nor PNAC) of each parameter were clarified in the test reports in a satisfactory way. No examples were shown that tests reports had been issued with an asterisk saying "not accredited by NA". This is a situation that could occur easily because they are accredited for a larger scope by PNAC then by NA. This will be followed up during the next visit.

NC no				
Compliance	x	Not in compliance		

NA-Doc 25/31 Accreditation conditions

Before this surveillance and extraordinary visit the laboratory was asked to sent documentation to the assessors at least 4 weeks prior to the on site visit **according to the requirement in NA Dok. 25/31**. In spite of several reminders (e-mails) to the quality manager no answers or feedback was given and no documents were received until one week prior to the assessment. Not all documents required were then sent to the assessors. Among the documents missing were results from participation in PT and ILC which should be sent to the technical assessors. **This is not acceptable and this was made clear to the laboratory during the opening meeting. It was the intention of the lead assessor to raise an essential NC regarding this violation against the NA requirements but by a mistake this was**

forgotten. However, we expect that the rules and deadlines given by NA will be followed in the future including deadlines for sending in documentation for corrective actions.

NC no					
Compliance		x	Not in compliance		

NA-Doc 26 a Requirements for calibration and control of balances for accredited test laboratories

NC 1 is a continuation of NC 10 given at the surveillance visit in December 2007 regarding calibration of balances. NC 10 given at the visit in December 2007 was closed during this extraordinary visit. The new NC 1 covers all laboratories at TEST 218.

NC no	1				
Compliance			Not in compliance	x	

NA-Dok 26 b Requirements for calibration and control of thermometers for accredited test laboratories

NC 1 is a continuation of NC 10 given at the surveillance visit in December 2007 regarding calibration of reference thermometer. NC 10 given at the visit in December 2007 was closed during this extraordinary visit. The new NC 1 covers all laboratories at TEST 218.

NC no	1				
Compliance			Not in compliance	x	

NA-Doc 50 Flexible accreditation (if relevant)

Not relevant.

NA-Dok 52 Calculation of measurement uncertainty in calibration

Not relevant.

5 Implementation of corrective actions for non-compliances noted during the previous assessments

Minor NCs raised by lead assessor during initial assessment visit for textile laboratory in April 2007 was corrected in a satisfactory way. However a new serious NC (NC 2) regarding document control was raised during this visit.

Regarding NCs raised during surveillance visit in December 2007:

NC 1 is closed, see clause 4.14 for details.
NC 2 is closed, see clause 4.3 for details. A new, similar NC is raised during this visit.
NC 3 is closed, see clause 5.4 for details. A new, similar NC is raised during this visit.
NC 4 is closed, see clause 5.9 for details. A new, similar NC is raised during this visit.
NC 5 is closed, see clause 5.9 for details.
NC 6 is **not** closed. NA needs more documentation to be able to close this NC. It was agreed that further documentation for NC 6 is to be sent to NA within one week (28th of April 2008).
NC 10 is closed; see under NA Doc. 26a and NA Doc. 26b for details. A new, similar NC is raised during this visit.

6 Recommendation regarding accreditation

Continuation of the accreditation is recommended for all laboratories if satisfactory documentation for NCs given at this visit and NC 6 given at the surveillance visit in December 2007 are sent to NA within the agreed time limits (05.06.2008 and 29.04.2008, respectively).

7 Recommendation regarding suspension

Not relevant.

8 Recommendation regarding scope of accreditation

In the scope for the textile laboratory (P07 Physical testing) the following additions under **Comments** in recommended:

- For internal method KL/ACRC/TestM/015: **Method 5 only.**
- For internal method KL/ACRC/TestM/017: **9 Kpa only.**

9 Recommendation regarding administrative/ geographical units

Not relevant.

10 Any changes since the previous assessment

No changes for textile laboratories.

11 Complaints

The organisation has the right to complaint against actual errors in the report. Such complaint shall be forwarded to Norwegian Accreditation within 3 weeks after the report has been sent from NA.

12 Other

See summary report dated 22.04.2008.

Copies of the following newly revised NA documents were handed over to the quality manager during this visit: NA Dok. 9, 26b, 39 and 25/31.

The undersigned confirms that this report is not violating NA's policies and practices.

Place/ date: Karachi, 23.04.2008

Roald K. Nilsen (sig.)

Lead Assessor

Place/ date: Oslo, 30/4-2008

Technical Director, Norwegian Accreditation

13 Enclosures/ references Agenda for the assessment

Non-compliances; Number of very serious non-compliances: 0
Number of essential non-compliances: 6
Number of minor non-compliances: 18

Summary report
Accreditation document
Reports from technical assessors, laboratories

Report from assessment of laboratories performed by technical assessor/expert according to the requirements in ISO 17025

Case no: 07/0392 — 20

Name of the organisation:	PCSIR Karachi
Assessed locations:	Chemical laboratories

Accr. no. : TEST 218 Appl. no.:	Date of assessment: 21th April 2008

(The complete report may be repeated. Extract from the report can only be repeated when this is accepted in writing by Norwegian Accreditation)

1. Reporting assessor/expert

Name: **Erik Figenschou** Technical area: **P12**

2. General information

1. time visit		Extraordinary visit	X	Renewal	
Surveillance		Extension of scope		Complete assessment	

Specification of surveillance activities not mentioned above:

Surveillance with assessment of selected elements	
Document review	
Technical assessment NS EN ISO/IEC 17025: 2005	X
Technical expert NS-EN ISO/IEC 17025:	

Interviews

Name	**Function / technical area**
Ms. Askari Begum	Technical manager Chemical FOOD
Zuzzer Ali Shamsuddin	Technical deputy - Chemical FOOD; Mycotoxins Lab
Dr. Arfa Yasmin	Technical manager - Chemical Pharma
Dr. Alia Bano Mnushi	Technical manager - Chemical-Environment

3. Recommendation

3.1 Recommendation regarding accreditation/renewal:
Not relevant.
3.2 Recommendation regarding change of the responsible for validation, when relevant (valid for flexible scope):
Not relevant.
3.3 Recommendation regarding changes/extension of accreditation scope:
Not relevant.

4. Changes since the last visit (if any):

To new analysts are employed in the Chemical FOOD laboratory. They are still under training.

5. Extent of assessment

(The numbers are references to the paragraphs in ISO 17025)

4	**Management requirements**
4.1	**Organization** *(evaluation of the competence to the technical management)*
	Not assessed
	Non-conformity no
4.2	**Management system** *(availability of authorized documents in the laboratory.. Is it possible for the personnel to find the documents in the in the management system?)*
	Non-conformity no
4.3	**Document control** *(are controlled documents and templates in use in the laboratory? Are the last versions in use? Does scrap of paper exist?)*
	NC 2 from December 2007 **Chemical food:** 6 Documents was controlled in two technical manual at the laboratory. All the documents and the quality manual had the same version as the original documents. No unauthorized copies were found in any of the laboratory premises. **Chemical Pharma:** 4 Documents was controlled in two technical manual at the laboratory. All the documents and the quality manual had the same version as the original documents. No unauthorized copies were found in any of the laboratory premises. **Chemical-Environment:** 4 Documents was controlled in two technical manual at the laboratory. All the documents and the quality manual had the same version as the original documents. There war found one unauthorized document on the wall in one of the laboratories. The document contained detailed information of how to perform the method. The description was useful for trainees, but all document have to be a part of the quality system. The recommendation is to close NC 2, but see new NC from lead assessor.
	Non-conformity no
4.4	**Review of requests, tenders and contracts** *(request about services and changes. Information about limitation in the methods)*
	Not assessed
	Non-conformity no
4.5	**Subcontracting of tests and calibrations** *(have the client accepted use of*

	subcontractors?)
	Not assessed
	Non-conformity no
4.6	**Purchasing services and suppliers** *(labelling of chemicals, regents and consumer goods included initial inspection)*
	Not assessed
	Non-conformity no
4.9-4.11	**Control of nonconforming testing and/or calibration work/corrective actions** *(have relevant non-conformities been registered? Have good technical cause analysis been performed? Have consequence analysis been performed? Are the evaluation in connection with corrective actions technical satisfactory?)*
	Not assessed
	Non-conformity no
4.13	**Control of records** *(registrations, handling of raw data, changes of raw data, traceability of documentation, archives. For vertical audit, specify the sample number/ journal number/ technical area, parameter and object)*
	Minor NC 10 form December 2007 **Chemical FOOD; Mycotoxins Lab:** The laboratory has contacted the provider of Ochratoxin and Aflatoxin chemicals. The provider was interested to inform the laboratory the batch numbers of these chemicals, but they have now established at better dialog with the provider. Control based on samples showed that date of the analyses was recorded. **The recommendation is to close minor NC 10.**
	Non-conformity no
5	**Technical requirements**
5.2	**Personnel**
5.2.1	**Training** *(are the CVs clear and updated? Training and qualification of personnel, new employed and after a long absence)*
	Not assessed
	Non-conformity no
5.2.2	**Maintenance of competence** *(including testing experience)*
	Not assessed
	Non-conformity no
5.2.4	**Job descriptions**
	Not assessed
	Non-conformity no
5.3	**Accommodation and environmental conditions**
	Not assessed
	Non-conformity no
5.4	**Test and calibration methods and method validation**
	Not assessed
	Non-conformity no
5.4.1	**General** *(evaluation if the laboratory has appropriate methods and procedures)*

	Minor NC 9 from December 2007: 3 methods were examined: References to other documents were now a part of the method description. **The recommendation is to close minor NC 9.**
	Non-conformity no
5.4.2	**Selection of methods** *(information on type of methods used for testing/calibration. If the latest valid edition of standard methods are used. Routines to ensure that the client orders correct analysis)*
	Not assessed
	Non-conformity no
5.4.3/ 5.4.4	**Laboratory-developed methods/ Non-standard methods** *(updated plans for introduction of laboratory developed methods/ are use of non-standard methods agreed on with the client?)*
	Not assessed
	Non-conformity no
5.4.5	**Validation of methods** *(procedures for validation, conduct and reporting of validation. Are modifications, if any, in the standard method validated and documented? Are modifications identifiable in the method description?)*
	Not assessed
	Non-conformity no
5.4.6	**Estimation of uncertainty of measurement** *(If the uncertainty is based on metrological and statistically basis: Have all relevant contributions been taken into consideration? Are the calculations documented in a controlled document?* *If the uncertainty is calculated in experimental data: Does the reported uncertainty represent the total uncertainty and measurement range ? Are the important contributions to the uncertainty reported? Are the calculations documented in a controlled document. If no requirement to calculate uncertainty (e.g. microbiology, NDT): are the important contribution to uncertainty identified?*
	NC 3 from December 2007: **Chemical food:** The laboratory do now perform an analysis of the estimated uncertainty bases on the results form the PT results. The deviations of the laboratory results from the PT values were compared to their own uncertainty under the assessment. The conclusion is that the estimated uncertainties are realistic. **Chemical Pharma:** This laboratory has only one qualitative method in the scope. **Chemical-Environment:** A comparison between the PT results and the estimated uncertainties showed that the uncertainties were underestimated. **An essential NC (No 3) was given.** **Since a new NC is given, the recommendation is to close NC 3**
	Non-conformity no **3**
5.4.7	**Control of data** *(calculations, LIMS, excel, data transfer, use, registration, maintenance and validation)*
	Not assessed

	Non-conformity no
5.5	**Equipment** *(maintenance of equipment, logbooks, instrument register, labelling of equipment)*
	Not assessed
	Non-conformity no
5.6	**Measurement traceability** *(how does the laboratory achieve traceability on the methods? Calibration and control of equipment, use of reference materials/standards, calibration certificate/standards, calibration program)*
	Not assessed, se the report from lead assessor
	Non-conformity no

5.6.3	**Reference standards and reference materials** *(reference standards, reference materials, intermediate checks, transport and storage)*
	See 5.6
	Non-conformity no
5.7	**Sampling** *(if relevant)*
	Not relevant.
	Non-conformity no
5.8	**Handling of test and calibration items** *(does the laboratory make registrations if it is any irregular by receiving the samples? Identification of objects /samples, make anonymousness of test objects, storage and disposal)*
	Not assessed
	Non-conformity no
5.9	**Assuring the quality of test and calibration** *results (How does the laboratory assure the quality of the results such as proficiency testing, CRM, RM, control chart etc? Do programmes exist for the full scope applied for? Is the participation sufficient? Are the results satisfactory? Has the laboratory implemented a procedure for evaluation of its own results? Have the laboratory records from trend analysis and systematic errors?)*
	Minor NC 7 from December 2007: Methods from the different laboratories were examined: These methods gave information of internal quality control and control material. **The recommendation is to close minor NC 7** **NC 5 from December 2007:** All the control chard for the methods in the laboratories was examined. The control chard were now in use, and the acceptance criteria were based on statistical calculations. **The recommendation is to close NC 5** **NC 4 from December 2007:** **Chemical food:** The evaluation of the PT results is now satisfactory. The evaluation includes the uncertainty of the laboratory. In addition a statistical analysis is performed (trends are plotted). The laboratory evaluates the results versus their own uncertainty **Chemical Pharma:**

	This laboratory has only one qualitative method in the scope. They had result from a new PT. The PT results were satisfactory. **Chemical-Environment:** A statistical analysis of the PT results is performed, but the laboratory still compares the results with Z-score and not their own uncertainty. **An essential NC (No 3) was given:** Measurement uncertainty was not used when the PT results was evaluated (The differences between the lab result and the PT average were on the whole larger than the uncertainty of the laboratory) Since a new NC is given the recommendation is to close NC 4
	Non-conformity no
5.10	**Reporting the results** *(is the report precise and clear? Are the units of measure correct? Are all information that is required in a test report/calibration certificate registered? Are the results from subcontractors according to the requirements? Is the accreditation mark/reference to accreditation satisfactory? Are non-accredited results/accredited results marked satisfactory? By simplified reporting: Is the report according to the agreement with the client?*
	Not assessed
	Non-conformity no
5.10.5	**Opinions and interpretations** *(if relevant)*
	Not relevant.
	Non-conformity no
NA Dok	**Other requirement documents**
No. 51	**Flexible accreditation** *(if relevant)*
	Not relevant.
	Non-conformity no
14	**Rules for use of Norwegian Accreditation's (NA's) logo and for references to NA's accreditation**
	Not assessed
	Non-conformity no
No. 26a	**Requirements for calibration and control of balances in accredited test laboratories**
	Not assessed, se the report from lead assessor
	Non-conformity no
No. 26b	**Calibration of thermometers in connection with accreditation of test laboratories**
	Not assessed, se the report from lead assessor
	Non-conformity no
	Non-conformity no
No. 52	**Expression of the uncertainty of measurement in calibration (EA-4/02)**
	Not relevant. *Non-conformity no*

Report from assessment of laboratories performed by technical assessor/expert according to the requirements in ISO 17025

6. Demonstrations	Method identity/parameter/ object:	Demonstrated by/discussed with:
(Specify methods and person. Describe also if the method has been reviewed/ discussed)		
7. Follow up non-conformities from the last visit:		
8. Notes/summary/ conclusion		
9. Next visit *(Are there anything that shall be evaluated seriously during the next visit, or specific personnel that should be present)*		

The undersigned states that the content in the report is not in conflict with NA's policy and practice.

Date 29/04-2008 E. Fjellheim
technical assessor

date 05.05.08
lead assessor

The organisation has the right to complaint against the errors in the report. A complaint must be presented at last 3 weeks after the report has been sent from Norwegian Accreditation

Name of the organisation:	PCSIR Karachi
Assessed locations:	Textile laboratories

Accr. no. : TEST 218 Appl. no.:	Date of assessment: 21. and 22.04.2008

(The complete report may be repeated. Extract from the report can only be repeated when this is accepted in writing by Norwegian Accreditation)

1. Reporting assessor/expert

Name: **Robert Stocks** Technical area: **P09/P12 (Textile)**

2. General information

1. time visit		Extraordinary visit		Renewal	
Surveillance	x	Extension of scope		Complete assessment	

Specification of surveillance activities not mentioned above:

Surveillance with assessment of selected elements	x
Document review	
Technical assessment NS EN ISO/IEC 17025: 2005	x
Technical expert NS-EN ISO/IEC 17025:	

Interviews

Name	**Function / technical area**
Mrs Ausaf Aleem	Manager designate of textiles testing labs

3. Recommendation

3.1 Recommendation regarding accreditation/renewal:
That accreditation be maintained, subject to satisfactory clearance of the essential NC's
3.2 Recommendation regarding change of the responsible for validation, when relevant (valid for flexible scope):
Not relevant.
3.3 Recommendation regarding changes/extension of accreditation scope:
That two small changes be made to scope viz:
ISO3801 be limited to method 5
ISO12947-2 be limited to 9KPa

4. Changes since the last visit (if any):

N/A

5. Extent of assessment

(The numbers are references to the paragraphs in ISO 17025)

4	**Management requirements**
4.1	**Organization** *(evaluation of the competence to the technical management)*
	The technical management continues to be generally effective, but the evidence below shows areas of some weakness in checking calibration and results.
	Non-conformity no
4.2	**Management system** *(availability of authorized documents in the laboratory. Is it possible for the personnel to find the documents in the in the management system?)*
	Not examined by this assessor
	Non-conformity no
4.3	**Document control** *(are controlled documents and templates in use in the laboratory? Are the last versions in use? Does scrap of paper exist?)*
	Technical Documents are well controlled and easily available in the lab. One instance of an internal method was noted which was not authorised for use.
	Non-conformity no See G in list of minor NC's below.
4.4	**Review of requests, tenders and contracts** *(request about services and changes. Information about limitation in the methods)*
	System of contract review was checked on a sample of jobs eg ILD/ATR/842/08, and found to be working satisfactorarily.
	Non-conformity no
4.5	**Subcontracting of tests and calibrations** *(have the client accepted use of subcontractors?)*
	No evidence of subcontracting found during last year.
	Non-conformity no
4.6	**Purchasing services and suppliers** *(labelling of chemicals, regents and consumer goods included initial inspection)*
	One example of purchased goods not being checked before use was found
	Non-conformity no See K on list on minor NC's below.
4.9-4.12	**Control of nonconforming testing and/or calibration work/corrective actions** *(have relevant non-conformities been registered? Have good technical cause analysis been performed? Have consequence analysis been performed? Are the evaluation in connection with corrective actions technical satisfactory?)*
	Some errors were seen in records, and these are reported below under 5.4. Because the lab staff did not find these errors themselves, there was no registration of the nc's. Procedures for investigation of nc's were documented.
	Non-conformity no
4.13	**Control of records** *(registrations, handling of raw data, changes of raw data, traceability of documentation, archives. For vertical audit, specify the sample number/ journal number/ technical area, parameter and object)*
	Generally records were found to be satisfactory. However, four unrelated instances of minor problems in this area do show evidence that there is a lack of attention to detail in the lab. VA was performed using jobs ILD/ATR 842/08, 365/08, and 61/08.
	Non-conformity no See A, D, L, & N on list of minor NC's below.
5	**Technical requirements**

5.2	**Personnel**
5.2.1	**Training** *(are the CVs clear and updated? Training and qualification of personnel, new employed and after a long absence)*
	The training records show evidence of being updated on a regular basis. However they lack actual dates when this was done, though it is traceable to a particular yearly review. The actual tests to which the training relates are not documented in the training records. The interview with Ms Aleem showed that a new key member of staff had records, experience, qualifications etc for the important role she is to play in the future of the lab.
	Non-conformity no See K on list of minor NC's below
5.2.2	**Maintenance of competence** *(including testing experience)*
	The staff take part in regular updating of their competence
	Non-conformity no
5.2.4	**Job descriptions**
	The job descriptions match what is expected of the staff, and the qualifications required.
	Non-conformity no
5.3	**Accommodation and environmental conditions**
	Whilst the conditioning system appeared to be capable of maintaining the conditions, the measuring equipment did not meet requirements of ISO139.
	Non-conformity no See NC 08/5
5.4	**Test and calibration methods and method validation**
	The methods used, their control & validation are satisfactory for the type of testing performed.
	Non-conformity no
5.4.1	**General** *(evaluation if the laboratory has appropriate methods and procedures)*
	The lab has procedures in place to check that methods are valid for the tests they perform. In one case a small deviation in method was noted.
	Non-conformity no See C on list of minor NC's below.
5.4.2	**Selection of methods** *(information on type of methods used for testing/calibration. If the latest valid edition of standard methods are used. Routines to ensure that the client orders correct analysis)*
	The tests are mainly conducted using International or US Standards. The Internal methods are all based on still valid obsolete ISO's. The lab did not have a documented supplement to describe the way fastness ratings (ISO105) were performed.
	Non-conformity no See I on list of minor NC's below.
5.4.3/ 5.4.4	**Laboratory-developed methods/ Non-standard methods** *(updated plans for introduction of laboratory developed methods/ are use of non-standard methods agreed on with the client?)*
	The client is informed of the internal methods to be used.
	Non-conformity no
5.4.5	**Validation of methods** *(procedures for validation, conduct and reporting of validation. Are modifications, if any, in the standard method validated and documented? Are modifications identifiable in the method description?)*
	Two instances of missing validation information were noted during the visit
	Non-conformity no See H & M in list of minor NC's below.

5.4.6	**Estimation of uncertainty of measurement** *(If the uncertainty is based on metrological and statistically basis: Have all relevant contributions been taken into consideration? Are the calculations documented in a controlled document? If the uncertainty is calculated in experimental data: Does the reported uncertainty represent the total uncertainty and measurement range ? Are the important contributions to the uncertainty reported? Are the calculations documented in a controlled document. If no requirement to calculate uncertainty (e.g. microbiology, NDT): are the important contribution to uncertainty identified?*
	The lab has carried out commendable work on the estimation of test uncertainty. The re are still gaps in the programme, and some estimates need to consider all the sources of uncertainty
	Non-conformity no See NC 08/6
5.4.7	**Control of data** *(calculations, LIMS, excel, data transfer, use, registration, maintenance and validation)*
	Whilst all records are checked and countersigned, there was evidence that these processes were not working sufficiently well to discover errors in the records from the witnessed tests.
	Non-conformity no See B on list of minor NC's below.
5.5	**Equipment** *(maintenance of equipment, logbooks, instrument register, labelling of equipment)*
	The equipment in use was generally of a high standard, and capable of achieving the accuracies required in the witnessed tests. A minor problem was seen on one piece of equipment
	Non-conformity no See J on list of minor NC's below.
5.6	**Measurement traceability** *(how does the laboratory achieve traceability on the methods? Calibration and control of equipment, use of reference materials/standards, calibration certificate/standards, calibration program)*
	Numerous errors, omissions, unaccredited certificates etc were found on the calibration records relating to the witnessed tests. A thorough audit of this area by the lab would probably discover several other deficiencies in other tests.
	Non-conformity no See NC 08/5

5.6.3	**Reference standards and reference materials** *(reference standards, reference materials, intermediate checks, transport and storage)*
	The lab was found to be using reference materials, and intermediate checks on the witnessed tests eg ISO12947-2
	Non-conformity no
5.7	**Sampling** *(if relevant)*
	The taking of specimens as per Standards requirements was seen to be satisfactory. The main test samples are client supplied.
	Non-conformity no
5.8	**Handling of test and calibration items** *(does the laboratory make registrations if it is any irregular by receiving the samples? Identification of objects /samples, make anonymousness of test objects, storage and disposal)*
	The lab has good systems of handling samples, and ensuring that any confidential information is removed from tested samples once that are no longer to be retained by the lab.
	Non-conformity no

5.9	**Assuring the quality of test and calibration** *results (How does the laboratory assure the quality of the results such as proficiency testing, CRM, RM, control chart etc? Do programmes exist for the full scope applied for? Is the participation sufficient? Are the results satisfactory? Has the laboratory implemented a procedure for evaluation of its own results? Have the laboratory records from trend analysis and systematic errors?)*
	The lab has taken part in a number of PT or ILC exercises in the last year. However, several omissions and gaps in the 2008 programmes were observed, and an essential NC has been raised in this area.
	Non-conformity no See NC 08/4
5.10	**Reporting the results** *(is the report precise and clear? Are the units of measure correct? Are all information that is required in a test report/calibration certificate registered? Are the results from subcontractors according to the requirements? Is the accreditation mark/reference to accreditation satisfactory? Are non-accredited results/accredited results marked satisfactory? By simplified reporting: Is the report according to the agreement with the client?*
	The vertical audits revealed some minor reporting problems, with an instance where the reported result did not agree with the one measured
	Non-conformity no See O on list of minor NC's below
5.10.5	**Opinions and interpretations** *(if relevant)*
	Not relevant.
	Non-conformity no
NA Dok	**Other requirement documents**
No. 51	**Flexible accreditation** *(if relevant)*
	Not relevant.
	Non-conformity no
14	**Rules for use of Norwegian Accreditation's (NA's) logo and for references to NA's accreditation**
	The NA logo was found to be correctly used on the VA jobs audited (see above).
	Non-conformity no
No. 26a	**Requirements for calibration and control of balances in accredited test laboratories**
	NC rasied by lead assessor
	Non-conformity no
No. 26b	**Calibration of thermometers in connection with accreditation of test laboratories**
	Nc raised by lead assessor
	Non-conformity no
	Non-conformity no
No. 52	**Expression of the uncertainty of measurement in calibration (EA-4/02)**
	Not relevant. *Non-conformity no*

6. Demonstrations	Method identity/parameter/ object:	Demonstrated by/discussed with:
(Specify methods and person. Describe also if the method has been reviewed/ discussed)	Tensiles to ISO13934-1	Kamran Ahmed
	Washing Fastness to ISO105C03	Munazza Abdul Wazah
	pH to AATCC81	Naheed Kauser
	Fabric Mass to ISO3081-5	Muhammad Waris
	Martindale Abrasion to ISO12947-2	Kamran Ahmed
	Colour Fastness to ISO105D02	Javaid Mughal
7. Follow up non-conformities from the last visit:	The minor NC's from the 2007 had generally been completed eg reference fabric now labelled, ECE detergent CofC obtained, contract review improved etc. It was noted that one relating Rating Standards to ASTMD4970 had not been completed, but this test remains non-accredited, so this has not been re-raised.	
8. Notes/summary/ conclusion	The staff in the lab demonstrated the witnessed tests in a competent manner, and all were keen to develop their knowledge and skills. The estimates of test uncertainty were evidence of solid achievement in this area, although more work needs to be done. The minor lapses noted above were evidence of some lack of attention to detail. The major weakness of the lab remains calibration, where the certificates, records etc still showed major deficiencies which require urgent correction.	
9. Next visit *(Are there anything that shall be evaluated seriously during the next visit, or specific personnel that should be present)*	Calibration PT/ILC Technical Auditing Records Checking	

Description Minor NCs	**Reference to ISO 17025**
A. Charts from thermohydrograh (KL/ACRC/THG/038) in conditioning room are not being retained as quality system records.	4.13.1.1
B. Job ILD/ATR/842/08 contains errors in the ID of the Standard, the ID of the tensile tester, and in the number of specimens tested. None of these errors was found during checking of the data sheets and records.	5.4.7
C. In the demonstration of ISO13934-1 during the visit, no lines were used on the specimens to determine the presence or absence of slippage.	5.4.1
D. The estimate of test uncertainty for ISO13934-1 is undated	4.13.2
E. The estimate of test uncertainty for ISO13934-1 does not include all sources of uncertainty eg effect of variations in the RH of the controlled atmosphere, or between operator effects. (see also NC 08/6)	5.4.6.2
F. Training records are undated and do not contain reference to the specific Standard, or the effectiveness of the training	5.2.1/5.2.2
G. The IHM KL/ACRC/TEST-M/003 was not authorised for use in PCSIR Textiles Karachi	4.3.2.1

H. No documented validation that the temperature of the Lauderometer bath for ISO105C03 (IHM M/003) remain within specified limits for the duration of the tests.	5.4.5.2
I. No supplementary procedure is documented to state that at least two operators perform rating to grey and colour change scales to ISO105 tests, and how any discrepancies are resolved.	5.4.2
J. WI KL/ACRC/WI/15 does not document that dimensions of specimens are reverified after changes to the cutter (KL/ACRC/008) blades	5.5.1
K. No certificate of conformity for Batch 509486 woven felt pads for ISO12947-1 Martindale Abrasion test	4.6.2
L. Tested specimens from the Martindale Abrasion test (ISO12947) are not retained as original data	4.13.2.1
M. No validation on Crockmeter (LC/ACRC/125) peg meets requirement of ISO105 (ie 16mm)	5.4.5.2
N. For job ILD/ATR/61/08, no original mass measurements could be found in lab note book	4.13.2.2
O. For report ILD/ATR/365/08 the reported result for pH does not agree with the measurement recorded in the lab note book	5.10.1

Karachi 22:04:08

Robert Stocks

23 April 2008

Date.....
technical assessor

The undersigned states that the content in the report is not in conflict with NA's policy and practice.

date 250408
lead assessor

The organisation has the right to complaint against the errors in the report. A complaint must be presented at last 3 weeks after the report has been sent from Norwegian Accreditation

NORSK
AKKREDITERING

ACCREDITATION DOCUMENT

TEST 218

PCSIR Laboratories complex, Karachi
off University Road Karachi
Karachi - 75280
Pakistan

The scope of accreditation is P07 Physical testing, P12 Chemical analysis og P16 Microbiological analysis in accordance with the specifications on the following pages in this document.

The accreditation was first time granted 13.09.2007 and given according to Parliamentary Proposition no. 106 (1989/1990) and the Statutes of Norwegian Accreditation , established by Royal Decree of 7 October 1993
The laboratory complies with the requirementes in NS-EN ISO/IEC 17025 (2005)

The accreditation requires regular surveillance, and is valid until 13.09.2012.
The decision of accreditation made by Norwegian Accreditation implies that the organisation has been found to fulfil the requirements for accreditation within the scope.
The organitation itself is responsible for the results of performed measurements.

NORWEGIAN ACCREDITATION

27.10.2008
Date

Inger Cecilie Laake
Norwegian Accreditation

NORSK AKKREDITERING

Accreditation document
Accreditation no. TEST 218

Administrative/geographical unit:
Center for Environmental Studies, PCSIR Karachi

Permanent facility

P12 Chemical analysis

Object	Parameter	Reference standard	Identity of internal	Comments
Food	Fe, Pb, Cd, Zn	AOAC 18th Edition	KLC/CES/WI004	

27.10.2008
Date

Norwegian Accreditation

Accreditation document
Accreditation no. TEST 218

Administrative/geographical unit:
Chemical -Pharmaceutical Laboratory, PCSIR Karachi

Permanent facility

P12 Chemical analysis

Object	Parameter	Reference standard	Identity of internal	Comments
Spice	Sudan-I,II,III & IV	AOAC 920.208B	KL/PRC/004	UV visible spectroscopy, TLC

27.10.2008
Date

Norwegian Accreditation

NORSK AKKREDITERING

Accreditation document
Accreditation no. TEST 218

Administrative/geographical unit:
Food Chemistry Laboratory, PCSIR Karachi

Permanent facility

P12 Chemical analysis

Object	Parameter	Reference standard	Identity of internal	Comments
Cereals grain, cereals flour & products	Moisture	AOAC 925.10	KL/FMRRC/WI-011/012	Air Oven Method
Cereals	Protein	AOAC 920.87	KL/FMRRC/ WI-011/015	Kjeldahl Method
Cereals	Fat	AOAC 920.39C	KL/FMRRC/ WI-011/014	Soxhlet Method
Cereals grain and flour	Ash	AOAC 923.03	KL/FMRRC/ WI-011/013	Direct Method
Cerals	Crude Fiber	AOAC 920.86	KL/FMRRC/WI/134	Weende Method
Cerals	Carbohydrate	Internal method	KL/FMRRC/WI/091	Method based on calulation from Nitrogen Free Extract according to: Modern Food Analysis by Hart & Fisher 1971
Cerals	pH	AOAC 943.02	KL/FMRRC/WI/092	
Cerals	Calorific Value / Energy Value	Internal method	KL/FMRRC/WI/093	Method based on calculation according to: MacCance & Widdowson's. The composition of Foods by Paul & Southgate 4th Ed 1988
Raw/Processed Foods	Fat	AOAC 922.06	KL/FMRRC/WI/131	Acid Hydrolysis Method
Raw/Processed Foods	Sorbic acid	AOAC 47.3.36	KL/FMRRC/WI/095	Oxidation Method
Food	Vitamin C	AOAC 967.21	KL/FMRRC/WI/098	Titremetric Method
Raw/Processed Foods	Vitamin A	Internal method	KL/FMRRC/WI/097	Method based on UV-Spectrophotometer; Pearson's Composition & Analysis of Food 9th Edition (Page 641)
Raw/Processed Foods	Vitamin C	AOAC 985.33	KL/FMRRC/WI/132	Titrimetric method
Red Chili, Rice, Food, Feed & Agriculture Commodities	Aflatoxins B1, B2, G1, G2	AOAC 975.36	KL/FMRRC/WI/025	1.Thin-layer chromatographic method 2. Liquid- Liquid Partition Chromatography
Milk & Milk Products	Aflatoxin M1	AOAC 980.21	KL/FMRRC/WI/026	1.Thin-layer chromatographic method 2. Column Chromatography
Red Resin, Wheat & Feed	Ochratoxin A	AOAC Chapter 49	KL/FMRRC/WI/027	1.Thin-layer chromatographic method 2. Column Chromatography

27.10.2008
Date

Norwegian Accreditation

Accreditation document
Accreditation no. TEST 218

Administrative/geographical unit:
Microbiology Laboratory, PCSIR Karachi

Permanent facility

P16 Microbiological analysis

Object	Parameter	Reference standard	Identity of internal	Comments
Water	Heterotrophic Plate Count at 22 □C or 37 □C	Standard Methods 9215 B	KL/FMRRC/WI/121	Pour plate method. Method accepted by APHA and EPA
Water	Total Coliforms and E. Coli	ISO 9308-1	KL/FMRRC/WI/001	Membrane filtration
Water	Coliform organisms, thermotolerant coliform organisms, and presumptive E. coli	ISO 9308-2	KL/FMRRC/WI/001	Multiple tube (most probable number) method
Food	Aerobic Plate Count	USFDA BAM Chapter 03	KL/FMRRC/WI/002	
Food	Total coliforms, fecal coliforms and E. coli	USFDA BAM Chapter 04	KL/FMRRC/WI/004	Multiple tube (most probable number) method
Food	Mould and Yeast Count	USFDA BAM Chapter 18	KL/FMRRC/WI/003	
Food	Salmonella	USFDA BAM Chapter 05	KL/FMRRC/WI/005	
Food	Staphylococcus aureus	USFDA BAM Chapter 12	KL/FMRRC/WI/088	

27.10.2008
Date

Norwegian Accreditation

NORSK AKKREDITERING

Accreditation document
Accreditation no. TEST 218

Administrative/geographical unit:
Textile laboratory, PCSIR Karachi

Permanent facility

P07 Physical testing

Object	Parameter	Reference standard	Identity of internal	Comments
Textiles (woven fabrics)	Recovery Angle Method	AATCC 66	KL/ACRC/TestM/009	
Textiles	Determination of maximum force using the grab method (tensile strength)	ISO 13934-2	KL/ACRC/TestM/010	
Textiles	Determination of maximum force and elongation at maximum force using the strip method	ISO 13934-1	KL/ACRC/TestM/011	
Textiles (Woven fabrics)	Determination of number of threads per unit length	ISO 7211-2	KL/ACRC/TestM/013	
Textiles (Woven fabrics)	Determination of mass per unit length and mass per unit area	ISO 3801	KL/ACRC/TestM/015	Limited to method 5
Textiles	Determination of the abrasion resistance of fabrics by the Martindale method -- Part 1: Martindale abrasion testing apparatus	ISO 12947-1	KL/ACRC/TestM/017	
Textiles	Determination of the abrasion resistance of fabrics by the Martindale method -- Part 2: Determination of specimen breakdown	ISO 12947-2	KL/ACRC/TestM/017	Limited to 9KPa
Textiles	Spray Rating	Internal method	KL/ACRC/TestM/018	Method based on AATCC 22 (2001)

Permanent facility

P12 Chemical analysis

Object	Parameter	Reference standard	Identity of internal	Comments
Textiles	Colorfastness to Crocking	AATCC-8	KL/ACRC/TestM/004	AATCC Crockmeter Method

27.10.2008
Date

Norwegian Accreditation

Accreditation document
Accreditation no. TEST 218

Administrative/geographical unit:
Textile laboratory, PCSIR Karachi

Permanent facility

P12 Chemical analysis

Object	Parameter	Reference standard	Identity of internal	Comments
Textiles	Colour fastness to perspiration	ISO 105-E04	KL/ACRC/TestM/005	
Textile	Colorfastness to Water	ISO 105-E01	KL/ACRC/TestM/006	
Textiles	Colour fastness to sea water	ISO 105-E02	KL/ACRC/TestM/007	
Textiles	Colour fastness to rubbing: Organic solvents	ISO 105-D02	KL/ACRC/TestM/008	
Textiles	Blend Ratio (Polyester/Cotton)	Internal method	KL/ACRC/TestM/012	Method based on ISO 1833 Method 10 (1977)
Water-Extract from Wet Processed Textiles	pH of the Water-Extract	AATCC-81	KL/ACRC/TestM/019	
Textiles (fabrics)	Colour fastness to washing and laundring	Internal method	KL/ACRC/Test/M001	Based on obsolete standard ISO 105 C01
Textiles (fabrics)	Colour fastness to washing and laundring	Internal method	KL/ACRC/Test/M002	Based on obsolete standard ISO 105 C02
Textiles (fabrics)	Colour fastness to washing and laundring	Internal method	KL/ACRC/TestM/003	Based on obsolete standard ISO 105 C03

27.10.2008
Date

Norwegian Accreditation

Name of organisation:	PCSIR Labs Complex Lahore, Electrical Measurement &Test lab		
Manager of the organisation:	Mohammad Saleem		
Accreditation no/ application no:	TEST 219	Date of assessment:	28. and 29.04.2008
Sites assessed:			

1 The assessment

This report deals with:

Initial ass.	☐	Extraordinary ass.	☐	Renewal	☐
Surveillance	x	Extension	☐	Full assessment	☐

Assessment team:

Name	**Position**
Berndt Mårtenson	Technical assessor, P05 and P20
Roald K. Nilsen	Lead assessor

Personnel interviewed:

Name	**Position**
Muhammad Azhar	Quality manager
Technical manager and Head Engineering Research Centre	Irfan Ahmad Rabbani

Participants in the closing meeting:

Name	**Position**
See separate list	

2 Non-compliances

Categorisation of non-compliances is described in NA Doc 55 and on NA's web-site (www.akkreditert.no).

Deadline for submission of corrective actions: **13.06.2008.**

3 Results from the assessment

Below, the results from the assessment against the accreditation requirements as described in ISO/IEC 17025:2005 (General requirements for calibration and test laboratories) and the requirements defined in the laboratory's own management system, are described.

ISO 17025 – 4 – Requirements for management

4.1 Organization

No changes in the organization since the initial assessment visit. The description of the organization is in accordance with the real situation.

NC no	-				
Compliance	x	Not in compliance			

4.2 Management system

The quality objectives established at present is only partly qualitative. The laboratory should work more on their quality objectives and add new objectives which may measure the improvement of the system. See also point 4.15 in this report and § 4.10 in ISO 17025.
See also report from technical assessor.

NC no	-				
Compliance	x	Not in compliance			

4.3 Document control

The document control system is satisfactorily implemented. The system may be simplified but as long as it works well and is implemented this is acceptable. The Master document list was updated. The following documents were checked in detail:
EMTL/FF/003: Latest edition (01) in use (quality managers (QM) copy was checked). The document was checked and approved according to procedure. The former edition (00) was satisfactorily filed in the archive.
Technical manual Section 4, page 7: Latest edition (01) in use (QMs, Deputy QMs, technical managers (TM) and Deputy TMs copy was checked). Document distribution list was updated. The document was checked and approved according to the procedure. The former edition (00) was satisfactorily filed in the archive.

Minor NC: In an amendment page (amendment no. 8) a spelling mistake must have been performed; discard issue no should be 01 and not 00.

NC no	-				
Compliance		Not in compliance	x		

4.4 Review of contracts

The system for review of contracts seems to be well implemented. Two contracts were checked and compared to corresponding test reports. There is traceability between the contract and the test report through the unique sample ID given by the laboratory when receiving the sample.

NC no	-				
Compliance		x	Not in compliance		

4.5 Subcontracting

The laboratory have described that they shall not use the subcontractors. How to communicate with the customers in case of stop in testing have been described.

NC no	-				
Compliance		x	Not in compliance		

4.6 Purchase of services and supplies

Not covered during this visit.

NC no					
Compliance		x	Not in compliance		

4.7 Service to the customer

The laboratory had about 30 customers last year. Feedback forms are given to the costumers regularly in connection with issuing of test reports. 19 feedback forms have been returned to the ILO office last year. All evaluation forms are filed by the laboratory itself (not by the ILO office). ILO office was not visited during this surveillance visit.
Statistics on the results have been set up for year 2007 and also for the first 3 months of 2008 by the laboratory themselves. All feedbacks received have been positive towards the service received from the laboratory.

NC no	-				
Compliance		X	Not in compliance		

4.8 Complaints

One complaint has been received since the initial assessment visit. The complaint was handled according to the procedure except that no complaint form was filled in by the laboratory. This

is acceptable because the complaint was a misunderstanding by the customer. A written answer was given to the customer complaining.
Filing of complaints is satisfactory.

NC no	-				
Compliance	X	Not in compliance			

4.9 Handling non-conforming work

Since May 2007 only five NCs have been raised by the laboratory staff during daily work. One NC was registered in October 07 and then one each month in 2008, so there has been a positive tendency in registration of NC during daily routine work lately. This will be followed up during the next surveillance visit.
Consequence analysis e.g. for reported results are not performed or are not documented as part of the evaluation done in connection with registration of NC-work.

Minor NC: There is a mixing of NC and potential NC is the corrective action forms and the preventive action form.

The NCs registered have been logged in the Corrective action log sheet.

NC no	3				
Compliance		Not in compliance	x		

4.10 Improvement

The attitude of the laboratory management towards using the tools described in the management system and accreditation standard (ISO 17025) for improvement is good.

NC no	-				
Compliance	x	Not in compliance			

4.11 Corrective actions

The few NCs registered in daily routine work are registered and followed up through the corrective action forms. However, root course analysis are not performed or not documented and follow up of effects of the corrective actions performed are not documented properly. This is also the case for NCs registered during internal audits.

NC no	3				
Compliance		Not in compliance	x		

4.12 Preventive actions

No preventive actions have been performed. This will be followed up at the next surveillance visit.
Following trends in PT is to be regarded as a preventive action. However, because of few results from PT for each parameter are available at the moment no such trend plots have been made. This will be followed up during the next surveillance visit. Trend plots of results of internal control analysis are established.

Minor NC: There is a mixing of NC and potential NC is the corrective action forms and the preventive action form.

NC no	-			
Compliance		Not in compliance	x	

4.13 Technical registrations

The archive of absolute documents were checked by sampling and found satisfactory (see clause 4.3 in this report).
See technical assessors report for evaluation of technical records.

NC no	-			
Compliance	x	Not in compliance		

4.14 Internal audits

The system for internal audits works satisfactory although points of improvement have been identified.
Internal audits covering both the management and technical part of the management system have been conducted according to the plan established for 2007 and 2008. Horizontal audits were performed in autumn 2007. In March 2008 vertical audits were performed. The plans are now signed and dated.
The following **minor NC** was given:

- Reports from internal audits do not give conclusions and positive feedback.
- Comments given by internal auditors should have been given as NCs.

Comment: The descriptions of for instance which equipment, files, methods and personnel that were checked could be improved (leading to better traceability in the report/documentation). If all equipment were checked during an audit then that information should be given in the audit report or in enclosed checklists.

Please see also NA Dok. 9 which give some guidance regarding internal audits.

Approvals of internal auditors are now satisfactorily documented.

NC no	-				
Compliance		Not in compliance	x		

4.15 Management review

The last two management review meeting took place in January and March 2008. All points on the agenda were discussed according to the minute but quality objectives were not covered. However, preparation for evaluation and revision of the quality objectives are in progress as part of the preparation for the next management review meeting taking place in May 2008.
Comment: The agendas given in Quality manual and QM Procedure are not identical.

The minutes could be more specific when describing evaluations and conclusions that the management drew on each subject of the agenda. In the minutes actions agreed upon were identified and time limits for follow up given if relevant.

Please see clause 5.2 regarding quality objectives.

NC no	-				
Compliance		x	Not in compliance		

ISO 17025 – 5 – TECHNICAL REQUIREMENTS

5.2 Personnel

No new staff members have been employed since the initial assessment visit. The implementation of the system for introduction of new personnel was therefore not checked. Training plans for 2007 and 2008 have been established and are signed and dated. Documentation for the conduct and participation in training of staff according to the established plans were checked and found satisfactory.

CVs are updated and signed (in March 2008).

Minor NC: *Minimum requirement for each position have not been set in the management system.*

See also report from technical assessor.

NC no	-				
Compliance			Not in compliance	x	

5.3 Premises and environment

See report from technical assessor.

NC no	-				
Compliance	x	Not in compliance			

5.4 Methods for testing, calibration and validation

See report from technical assessor.

NC no	-				
Compliance	x	Not in compliance			

5.5 Equipment

See report from technical assessor and essential NC raised by him.

NC no	4				
Compliance		Not in compliance	x		

5.6 Measurement traceability

NC 1 given by lead assessor is regarding calibration of balances and reference thermometer.
See also report from technical assessor.

NC no	1				
Compliance		Not in compliance	x		

5.7 Sampling

Not relevant.

NC no					
Compliance		Not in compliance			

5.8 Handling of test and calibration objects

See report from technical assessor.

NC no	-				
Compliance	x	Not in compliance			

5.9 Assuring the quality of results from testing and calibration

See report from technical assessor.

NC no	-				
Compliance	x	Not in compliance			

5.10 Reporting results

Lead assessor checked test reports (ERC/EMTL/073, ERC/EMTL/066-1 and ERC/EMTL/067) by random sampling in the ILO office. The accredited test reports were satisfactory (except the use of the accreditation logo, please see later on).

See also report from technical assessor and essential NC raised by him.

NC no	**5**				
Compliance		Not in compliance	x		

4 Other requirements

NA-Doc 14 Conditions for the use of NA's logo in accreditation marks and for making reference to accreditation

The laboratory started using the NA logo in January 2008. However, it has been used in an incorrect way on both test reports and on letters. Accredited organisations are only allowed to use the NA logo together with their unique ID (TEST 219), which is then called the accreditation mark. See serious NC raised by the lead assessor.

NC no	**2**				
Compliance		Not in compliance	x		

NA-Doc 25/31 Accreditation conditions

Practice regarding sending of documents to NA prior to this surveillance visit was satisfactory. All document required according to NA Dok. 25/31 was sent to the assessors.

NC no	-

Compliance	x	Not in compliance		

NA-Doc 26 a Requirements for calibration and control of balances for accredited test laboratories

NC 1 given by lead assessor is regarding calibration of balances.
See also report from technical assessor.

NC no	1			
Compliance		Not in compliance	x	

NA-Dok 26 b Requirements for calibration and control of thermometers for accredited test laboratories

NC 1 given by lead assessor is regarding calibration of reference thermometer.
See also report from technical assessor.

NC no	1			
Compliance		Not in compliance	x	

NA-Doc 50 Flexible accreditation (if relevant)

Not relevant.

NC no				
Compliance		Not in compliance		

NA-Dok 52 Calculation of measurement uncertainty in calibration

Not relevant.

NC no				
Compliance		Not in compliance		

5 Implementation of corrective actions for non-compliances noted during the previous assessment

All corrective actions against NCs given by the lead assessor during the initial assessment visit (including both essentials and minors) have been satisfactorily implemented with the exception of use of accreditation mark on test reports and letters. A new NC is raised against this.

6 Recommendation regarding accreditation

Continuation of the accreditation is recommended if satisfactory documentation for NCs given at this visit is sent to NA within the agreed time limit.

7 Recommendation regarding suspension

Not relevant.

8 Recommendation regarding scope of accreditation

Reference standard has to be given in internal method no. EMTL/SOA/29.

9 Recommendation regarding administrative/ geographical units

Not relevant.

10 Any changes since the previous assessment

No changes.

11 Complaints

The organisation has the right to complaint against actual errors in the report. Such complaint shall be forwarded to Norwegian Accreditation within 3 weeks after the report has been sent from NA.

12 Other

See summary report dated 29.04.2008.

Copies of the following newly revised NA documents were handed over to the quality manager during this visit: NA Dok. 9, 14, 26b, 39 and 25/31.

The undersigned confirms that this report is not violating NA's policies and practices.

Kjeller, 06.05.2008:

Lead Assessor

Kjeller, 09.05.2008

Technical Director, Norwegian Accreditation

13 Enclosures/ references (Delete what is not relevant)

Agenda for the assessment
Non-compliances;
- Number of very serious non-compliances: 0
- Number of essential non-compliances: 5
- Number of minor non-compliances: 4

Summary report
Accreditation document
Reports from technical assessors, laboratories

Report from assessment of laboratories performed by technical assessor/expert according to the requirements in ISO 17025

Case no:
07/0393

Name of the organisation:	PCSIR Labs Complex Lahore,
Assessed locations:	Electrical Measurement &Test lab

Accr. no. : TEST 219 Appl. no.:	Date of assessment: 28th and 29th of April 2008

(The complete report may be repeated. Extract from the report can only be repeated when this is accepted in writing by Norwegian Accreditation)

1. Reporting assessor/expert

Name: **Berndt Mårtenson** Technical area: **P05 and P20**

2. General information

1. time visit		Extraordinary visit		Renewal	
Surveillance	x	Extension of scope		Complete assessment	

Specification of surveillance activities not mentioned above:

Surveillance with assessment of selected elements	x
Document review	
Technical assessment NS EN ISO/IEC 17025: 2005	
Technical expert NS-EN ISO/IEC 17025:	

Interviews

Name	**Function / technical area**
Allah Yar	Technical Officer
Zafar Iqbal	Scientific Officer
Abdul Majeed	Technical Officer
Muhammad Azhar	Quality Manager

3. Recommendation

3.1 Recommendation regarding accreditation/renewal:
Not relevant.
3.2 Recommendation regarding change of the responsible for validation, when relevant (valid for flexible scope):
Not relevant.
3.3 Recommendation regarding changes/extension of accreditation scope:
Not relevant.

4. Changes since the last visit (if any):

No changes

5. Extent of assessment

(The numbers are references to the paragraphs in ISO 17025)

4	**Management requirements**
4.1	**Organization** *(evaluation of the competence to the technical management)*
	The organisation is suitable for the test house, 5 senior staff members have been approved to do accredited measurements and sign the test report.
	Non-conformity no
4.2	**Management system** *(availability of authorized documents in the laboratory. Is it possible for the personnel to find the documents in the in the management system?)*
	All personnel have access to the quality/management system, The originals are printed documents. During vertical audit it was noted that the laboratory follow the written procedures.
	Non-conformity no
4.3	**Document control** *(are controlled documents and templates in use in the laboratory? Are the last versions in use? Does scrap of paper exist?)*
	The document control seems to work, updates are marked in *italics* and distributed according to a distribution list
	Non-conformity no
4.4	**Review of requests, tenders and contracts** *(request about services and changes. Information about limitation in the methods)*
	Not evaluated this time.
	Non-conformity no
4.5	**Subcontracting of tests and calibrations** *(have the client accepted use of subcontractors?)*
	Non-conformity no
4.6	**Purchasing services and suppliers** *(labelling of chemicals, regents and consumer goods included initial inspection)*
	Not evaluated this time.
	Non-conformity no
4.9-4.11	**Control of nonconforming testing and/or calibration work/corrective actions** *(have relevant non-conformities been registered? Have good technical cause analysis been performed? Have consequence analysis been performed? Are the evaluation in connection with corrective actions technical satisfactory?)*
	When a faulty test instrument is discovered, it is essential to analyse if previous test reports where this instrument have been used could have been affected. See also lead assessor's report.
	Non-conformity no 3
4.13	**Control of records** *(registrations, handling of raw data, changes of raw data, traceability of documentation, archives. For vertical audit, specify the sample number/ journal number/ technical area, parameter and object)*
	Vertical audits where made on the following test reports: ESC/EMTL 067 ESC/EMTL 045 ESC/EMTL 073 ESC/EMTL 069 ESC/EMTL 066-1, 066-2

	All documents and printed out test result related to a test case are kept together in a file that will be kept for at least 6 years. No missing data were identified.
	Non-conformity no
5	**Technical requirements**
5.2	**Personnel** No change in the personal since last visit. They are well motivated, suitable educated and trained.
5.2.1	**Training** *(are the CVs clear and updated? Training and qualification of personnel, new employed and after a long absence)*
	CV's where updated, training was made according to plan. The handling/training on updated standards was made in an exemplary way.
	Non-conformity no
5.2.2	**Maintenance of competence** *(including testing experience)*
	This item is following the given plan in a good way.
	Non-conformity no
5.2.4	**Job descriptions**
	Job descriptions for the test personnel were clear.
	Non-conformity no
5.3	**Accommodation and environmental conditions**
	The laboratory have suitable facilities, temperature and humidity are logged although the humidity is not mentioned in the working procedures. The incoming electricity is stabilised in an appropriate manner.
	Non-conformity no
5.4	**Test and calibration methods and method validation**
	The test methods are the one mentioned in the relevant IEC standards, no need for validation.
	Non-conformity no
5.4.1	**General** *(evaluation if the laboratory has appropriate methods and procedures)*
	The laboratory has appropriate methods and procedures.
	Non-conformity no
5.4.2	**Selection of methods** *(information on type of methods used for testing/calibration. If the latest valid edition of standard methods are used. Routines to ensure that the client orders correct analysis)*
	A good system ensures that the relevant edition of a standard is used, this will also be discussed and decided together with the client.
	Non-conformity no
5.4.3/ 5.4.4	**Laboratory-developed methods/ Non-standard methods** *(updated plans for introduction of laboratory developed methods/ are use of non-standard methods agreed on with the client?)*
	Not used.
	Non-conformity no
5.4.5	**Validation of methods** *(procedures for validation, conduct and reporting of validation. Are modifications, if any, in the standard method validated and documented? Are modifications identifiable in the method description?)*
	Not needed, only IEC standard methods are used.
	Non-conformity no

5.4.6	**Estimation of uncertainty of measurement** *(If the uncertainty is based on metrological and statistically basis: Have all relevant contributions been taken into consideration? Are the calculations documented in a controlled document? If the uncertainty is calculated in experimental data: Does the reported uncertainty represent the total uncertainty and measurement range ? Are the important contributions to the uncertainty reported? Are the calculations documented in a controlled document. If no requirement to calculate uncertainty (e.g. microbiology, NDT): are the important contribution to uncertainty identified?*
	The estimation of measurement uncertainty covered this time was made in an appropriate way.
	Non-conformity no
5.4.7	**Control of data** *(calculations, LIMS, excel, data transfer, use, registration, maintenance and validation)*
	All data is controlled in a suitable way.
	Non-conformity no
5.5	**Equipment** *(maintenance of equipment, logbooks, instrument register, labelling of equipment)*
	The laboratory have well maintained, modern and good measurement equipment, but see NC 4 regarding calibration intervals. If the laboratory wish to change the calibration intervals this can be decided only after a stability study have been made.
	Non-conformity no **4 BM**
5.6	**Measurement traceability** *(how does the laboratory achieve traceability on the methods? Calibration and control of equipment, use of reference materials/standards, calibration certificate/standards, calibration program)*
	All relevant measurement equipment have been calibrated according to plan, but see also NC 4 BM
	Non-conformity no

5.6.3	**Reference standards and reference materials** *(reference standards, reference materials, intermediate checks, transport and storage)*
	Correctly handled.
	Non-conformity no
5.7	**Sampling** *(if relevant)*
	Not relevant.
	Non-conformity no
5.8	**Handling of test and calibration items** *(does the laboratory make registrations if it is any irregular by receiving the samples? Identification of objects /samples, make anonymousness of test objects, storage and disposal)*
	Test items are handled in an appropriate manner according to procedure.
	Non-conformity no
5.9	**Assuring the quality of test and calibration** ***results*** *(How does the laboratory assure the quality of the results such as proficiency testing, CRM, RM, control chart etc? Do programmes exist for the full scope applied for? Is the participation sufficient? Are the results satisfactory? Has the laboratory implemented a procedure for evaluation of its own results? Have the laboratory records from trend analysis and systematic errors?)*
	The laboratory have taken part in inter laboratory tests, the results have been evaluated and in one case corrective actions implemented.
	Non-conformity no

5.10	**Reporting the results** *(is the report precise and clear? Are the units of measure correct? Are all information that is required in a test report/calibration certificate registered? Are the results from subcontractors according to the requirements? Is the accreditation mark/reference to accreditation satisfactory? Are non-accredited results/accredited results marked satisfactory? By simplified reporting: Is the report according to the agreement with the client?*
	The test reports follow the requirements in the standard. They are clear and easy to follow. All required information is reported. The verdict as a result of the measured value and the measurement uncertainty has created the NC 5BM. The standard IEC 60227-2 asks for one decimal in the reported test value, this could create problems to deem a result Pass or Fail. A remark that clarify this problem could help. This problem was found in test report ESC/EMTL 066-1.
	Non-conformity no **5 BM**
5.10.5	**Opinions and interpretations** *(if relevant)*
	Not relevant.
	Non-conformity no
NA Dok	**Other requirement documents**
No. 51	**Flexible accreditation** *(if relevant)*
	Not relevant.
	Non-conformity no
14	**Rules for use of Norwegian Accreditation's (NA's) logo and for references to NA's accreditation**
	See Lead Assessor's report
	Non-conformity no
No. 26a	**Requirements for calibration and control of balances in accredited test laboratories**
	See Lead Assessor's report
	Non-conformity no
No. 26b	**Calibration of thermometers in connection with accreditation of test laboratories**
	Handled in a correct way.
	Non-conformity no
	Non-conformity no
No. 52	**Expression of the uncertainty of measurement in calibration (EA-4/02)**
	Not relevant. *Non-conformity no*

6. Demonstrations	Method identity/parameter/ object:	Demonstrated by/discussed with:
(Specify methods and person. Describe also if the method has been reviewed/ discussed)	Insulation resistance at 70C IEC 60227-2 Clause 2.4	Allah Yar, Practical demostration
	Measurement of insulation thickness IEC 60227-2 Clause 1.9	Zafar Iqbal, Practical demostration

	Heat shock test IEC 60811-3-1 Clause 9.1	Allah Yar, Teoretical demonstration only.
	Leakage current and electrical stren gth IEC 60335-2-80 Clause 16	Abdul Majeed, Practical demostration
	Loss of mass test IEC 60811-3-2 Clause 8.1	Zafar Iqbal, Teoretical demonstration only.
7. Follow up non-conformities from the last visit:	Everything was done in a correct way.	
8. Notes/summary/ conclusion	The personnel have a high technical competence in their area and are well motivated. The training has been implemented in a very good way. The laboratory have good measurement methods and relevant and modern measurement equipment. The test facilities are good with controlled temperature and humidity.	
9. Next visit *(Are there anything that shall be evaluated seriously during the next visit, or specific personnel that should be present)*		

The undersigned states that the content in the report is not in conflict with NA's policy and practice.

Date 02.05.08 *Berndt Martenson*
technical assessor

date 05.05.2008
lead assessor

The organisation has the right to complaint against the errors in the report. A complaint must be presented at last 3 weeks after the report has been sent from Norwegian Accreditation

NORSK
AKKREDITERING

ACCREDITATION DOCUMENT

TEST 219

PCSIR Labs Complex, Lahore, Electrical Measurement &Test lab.
200 - Ferozepur Road,
Lahore - 54600,
Pakistan

The scope of accreditation is P05 Electrical testing og P20 Security in accordance with the specifications on the following pages in this document.

The accreditation was first time granted 10.09.2007 and given according to Parliamentary Proposition no. 106 (1989/1990) and the Statutes of Norwegian Accreditation , established by Royal Decree of 7 October 1993
The laboratory complies with the requirementes in NS-EN ISO/IEC 17025 (2005)

The accreditation requires regular surveillance, and is valid until 10.09.2012.
The decision of accreditation made by Norwegian Accreditation implies that the organisation has been found to fulfil the requirements for accreditation within the scope.
The organitation itself is responsible for the results of performed measurements.

NORWEGIAN ACCREDITATION

21.09.2007
Date

Norwegian Accreditation

Accreditation document
Accreditation no. TEST 219

Administrative/geographical unit:
Electrical Measurement &Test lab.
PCSIR Laboratories Complex, Ferozepur Road, Lahore-Pakistan
54600 Lahore - Pakistan

Permanent facility

P05 Electrical testing

Object	Parameter	Reference standard	Identity of internal	Comments
Cable testing	Resistance of conductors	IEC 60227	EMTL/SOA/01	Part 2 clause 2.1 (2003) - Partr 3 (1997) - Part 4 (1997) - Part 5 (2003)
Cable testing	Voltage test on cores at 1500 V	IEC 60227	EMTL/SOA/02	Part 2 clause 2.3 (2003) - Part 5 (2003)
Cable testing	Voltage test on cores at 2000 V	IEC 60227	EMTL/SOA/03	Part 2 clause 2.3 (2003) - Part 4(1997)
Cable testing	Voltage test on completed cable at 2000 V	IEC 60227	EMTL/SOA/04	Part 2 clause 2.2 (1998) - Part 4 (1997) - Part 5 (2003)
Cable testing	Voltage test at 2500 V	IEC 60227	EMTL/SOA/05	Part 2 clause 2.2 (2003) - Part 3 (1997)
Cable testing	Insulation resistance at 70oC	IEC 60227	EMTL/SOA/06	Part 2 clause 2.4 (2003) - Part 3 (1997) - Part 4 (1997) - Part 5 (2003)
Cable testing	Checking of compliance with constructional provisions	IEC 60227	EMTL/SOA/07	Part 2 (2003) - Part 3 (1997) - Part 4 (1997) - Part 5 (2003)
Cable testing	Measurement of insulation thickness	IEC 60227	EMTL/SOA/08	Part 2 clause 1.9 (2003) - Part 3 (1997) - Part 4 (1997) - Part 5 (2003)
Cable testing	Measurement of sheath thickness	IEC 60227	EMTL/SOA/09	Part 2 clause 1.10 (2003) - Part 4 (1997) - Part 5 (2003)
Cable testing	Measurement of overall diameter	IEC 60227	EMTL/SOA/10	Part 2 clause 1.11 (2003) - Part 3 (1997) - Part 4 (1997) - Part 5 (2003)
Cable testing	Ovality	IEC 60227	EMTL/SOA/11	Part 2 clause 1.11 (2003) - Part 4 (1997) - Part 5 (2003)
Cable testing	Tensile test before ageing	IEC 60227 and IEC 60811	EMTL/SOA/12	IEC 60227: Part 3 (1997) - Part 4 (1997) - Part 5 (2003) IEC 60811-1-1 clause 9.1 (1985)
Cable testing	Tensile test after ageing	IEC 60227 and IEC 60811	EMTL/SOA/13	IEC 60227: Part 3 (1997) - Part 4 (1997) - Part 5 (2003) IEC 60811-1-2 clause 8.1 (1985)
Cable testing	Loss of mass test	IEC 60227 and IEC 60811	EMTL/SOA/14	IEC 60227: Part 3 (1997) - Part 4 (1997) - Part 5 (2003) IEC 60811-3-2 clause 8.1 (1985)
Cable testing	Tensile test before ageing	IEC 60227 and IEC 60811	EMTL/SOA/15	IEC 60227: Part 4 (1997) - Part 5 (2003) IEC 60811-1-1 clause 9.2 (1985)
Cable testing	Tensile test after ageing	IEC 60227 and IEC 60811	EMTL/SOA/16	IEC 60227: Part 4 (1997) - Part 5 (2003) IEC 60811 - 1.2 clause 8.1 (1985)
Cable testing	Loss of mass test	IEC 60227 and IEC 60811	EMTL/SOA/17	IEC 60227: Part 4 (1997) - Part 5 (2003) IEC 60811-3-2 clause 8.2 (1985)

Date

Norwegian Accreditation

NORSK AKKREDITERING

Accreditation document
Accreditation no. TEST 219

Administrative/geographical unit:
Electrical Measurement &Test lab.
PCSIR Laboratories Complex, Ferozepur Road, Lahore-Pakistan
54600 Lahore - Pakistan

Permanent facility

P05 Electrical testing

Object	Parameter	Reference standard	Identity of internal	Comments
Cable testing	Insulation (Pressure test)	IEC 60227 and IEC 60811	EMTL/SOA/18	IEC 60227: Part 3 (1997) - Part 4 (1997) - Part 5 (2003) IEC 60811 - 3.1 clause 8.1 (1985)
Cable testing	Sheath (Pressure test)	IEC 60227 and IEC 60811	EMTL/SOA/19	IEC 60227: Part 4 (1997) - Part 5 (2003) IEC 60811-3-1 clause 8.2 (1985)
Cable testing	Bending test for insulation	IEC 60227 and IEC 60811	EMTL/SOA/20	IEC 60227: Part 3 (1997) - Part 4 (1997) - Part 5 (2003) IEC 60811 - 1.4 clause 8.1 (1985)
Cable testing	Bending test for sheath	IEC 60227 and IEC 60811	EMTL/SOA/21	IEC 60227: Part 4 (1997) - Part 5 (2003) IEC 60811 - 1.4 clause 8.2 (1985)
Cable testing	Elongation test for insulation	IEC 60227 and IEC 60811	EMTL/SOA/22	IEC 60227: Part 3 (1997) IEC 60811-1-4 clause 8.3 (1985)
Cable testing	Elongation test for sheath	IEC 60227 and IEC 60811	EMTL/SOA/23	IEC 60227: Part 4 (1997) IEC 60811-1-4 clause 8.4 (1985)
Cable testing	Impact test for insulation	IEC 60227 and IEC 60811	EMTL/SOA/24	IEC 60227: Part 3 (1997) IEC 60811-1-4 clause 8.5 (1985)
Cable testing	Impact test on completed cable	IEC 60227 and IEC 60811	EMTL/SOA/25	IEC 60227: Part 4 (1997) - Part 5 (2003) IEC 60811-1-4 clause 8.5 (1985)
Cable testing	Insulation	IEC 60227 and IEC 60811	EMTL/SOA/26	IEC 60227: Part 3 (1997) - Part 4 (1997) - Part 5 (2003) IEC 60811-3-1 clause 9.1 (1985)
Cable testing	Sheath	IEC 60227 and IEC 60811	EMTL/SOA/27	IEC 60227: Part 3 (1997) - Part 4 (1997) - Part 5 (2003) IEC 60811-3-1 clause 9.2 (1985)
Cable testing	Flexing test	IEC 60227	EMTL/SOA/28	Part 2 clause 3.1 (2003) - Part 5 (2003)
Cable testing	Test of flame retardance	IEC 60332	EMTL/SOA/29	Part -1-1 and Part -1-2

Permanent facility

P20 Security

Object	Parameter	Reference standard	Identity of internal	Comments
Fan testing	Classification	IEC 60335-2-80	EMTL/SOA/30	Clause 6
Fan testing	Marking and instructions	IEC 60335-2-80	EMTL/SOA/31	Clause 7

Date

Norwegian Accreditation

Accreditation document
Accreditation no. TEST 219

Administrative/geographical unit:
Electrical Measurement &Test lab.
PCSIR Laboratories Complex, Ferozepur Road, Lahore-Pakistan
54600 Lahore - Pakistan

Permanent facility

P20 Security

Object	Parameter	Reference standard	Identity of internal	Comments
Fan testing	Protection against access to live parts	IEC 60335-2-80	EMTL/SOA/32	Clause 8
Fan testing	Starting of motor-operated appliances	IEC 60335-2-80	EMTL/SOA/33	Clause 9
Fan testing	Power input and current	IEC 60335-2-80	EMTL/SOA/34	Clause 10
Fan testing	Heating	IEC 60335-2-80	EMTL/SOA/35	Clause 11
Fan testing	Leakage current and electric strength at operating temperature	IEC 60335-2-80	EMTL/SOA/36	Clause 13
Fan testing	Transient over voltages	IEC 60335-2-80	EMTL/SOA/37	Clause 14
Fan testing	Moisture resistance	IEC 60335-2-80	EMTL/SOA/38	Clause 15, excluding15.1 IPX1 and IPX2 water ingress testing
Fan testing	Leakage current and electric strength	IEC 60335-2-80	EMTL/SOA/39	Clause 16
Fan testing	Overload protection of transformers and associated circuits	IEC 60335-2-80	EMTL/SOA/40	Clause 17
Fan testing	Endurance	IEC 60335-2-80	EMTL/SOA/41	Clause 18
Fan testing	Abnormal operation	IEC 60335-2-80	EMTL/SOA/42	Clause 19, excluding 19.11.4 EMC testing of electronics
Fan testing	Stability and mechanical hazards	IEC 60335-2-80	EMTL/SOA/43	Clause 20
Fan testing	Mechanical strength	IEC 60335-2-80	EMTL/SOA/44	Clause 21
Fan testing	Construction	IEC 60335-2-80	EMTL/SOA/45	Clause 22, excluding 22.32 Oxygen bomb test
Fan testing	Internal wiring	IEC 60335-2-80	EMTL/SOA/46	Clause 23
Fan testing	Components	IEC 60335-2-80	EMTL/SOA/47	Clause 24, excluding 24.1 Components testing
Fan testing	Supply connection and external flexible cords	IEC 60335-2-80	EMTL/SOA/48	Clause 25
Fan testing	Terminals for external conductor	IEC 60335-2-80	EMTL/SOA/49	Clause 26
Fan testing	Provision of earthing	IEC 60335-2-80	EMTL/SOA/50	Clause 27
Fan testing	Screws and connections	IEC 60335-2-80	EMTL/SOA/51	Clause 28

Date

Norwegian Accreditation

Accreditation document
Accreditation no. TEST 219

Administrative/geographical unit:
Electrical Measurement &Test lab.
PCSIR Laboratories Complex, Ferozepur Road, Lahore-Pakistan
54600 Lahore - Pakistan

Permanent facility

P20 Security

Object	Parameter	Reference standard	Identity of internal	Comments
Fan testing	Clearances, creepage distance and solid insulation	IEC 60335-2-80	EMTL/SOA/52	Clause 29
Fan testing	Resistance to heat and fire	IEC 60335-2-80	EMTL/SOA/53	Clause 30
Fan testing	Resistance to rusting	IEC 60335-2-80	EMTL/SOA/54	Clause 31
Fan testing	Radiation, toxicity and similar hazards	IEC 60335-2-80	EMTL/SOA/55	Clause 32

Date

Norwegian Accreditation

Name of organisation:	Leather Research Centre (LRC), PCSIR Karachi		
Manager of the organisation:	Zuzzer Ali Shamsuddin		
Accreditation no/ application no:	TEST 220	Date of assessment:	24. and 25.04.2008
Sites assessed:			

1 The assessment

This report deals with:

Initial ass.		Extraordinary ass.		Renewal	
Surveillance	x	Extension		Full assessment	

Assessment team:

Name	Position
Robert Stocks	Technical assessor leather testing
Roald K. Nilsen	Lead assessor

Personnel interviewed:

Name	Position
Hafiz Rub Nawaz	Quality manager and Technical manager physical testing
Zuzzer Ali Shamsuddin	Director
Aftab Hussain	Ass. Purchasing officer
Nadiim Hussain	In charge ILO

Participants in the closing meeting:

Name	Position
See separate list	

2 Non-compliances

Deadline for submission of corrective actions: **09.06.2008**

Categorisation of non-compliances is described in NA Doc 55 and on NA's web-site (www.akkreditert.no).

3 Results from the assessment

Below, the results from the assessment against the accreditation requirements as described in ISO/IEC 17025:2005 (General requirements for calibration and test laboratories) and the requirements defined in the laboratory's own management system, are described.

ISO 17025 – 4 – Requirements for management

4.1 Organization

No changes in the organization since the initial assessment visit. The description of the organization is in accordance with the real situation.
Wage system is now described. The communication system is now better described. The communication is done through circulars, meetings and daily conversation in the laboratory.
Minutes exist from regular meetings but this routine (writing of minutes from meetings) is not described in the management system (comment).

NC no	-				
Compliance	x	Not in compliance			

4.2 Management system

The quality policy statement is updated and in accordance with the requirements. New quality objectives for year 2008 were established during the last management review meeting.
Comment: These quality objectives are more like plans for the future (for example expansion of scope) and less objectives for the quality of the management system and the work performed by the laboratory.
It is now described that the integrity of the management system is secured through regular meetings in the quality management team where changes in documents and system are discussed.
Relevant NA Documents are now given in the list of reference documents.

NC no	-				
Compliance	x	Not in compliance			

4.3 Document control

The document control system is well implemented. The system is complicated and may be simplified but as long as it works well and is implemented this is acceptable. The Master document list is updated.
New text is now clearly identified when a document is revised or reissued.
Forms are now properly approved.

The archive of absolute documents was checked for the following documents: LRC/QSP/001 (issue no. 1 and 2) and LRC/QSP/013 (issue no. 1, 2 and 3) and found satisfactory.

NC no	-

Compliance	x	Not in compliance		

4.4 Review of contracts

The system for review of contracts seems to be well implemented. Two contracts were checked and compared to corresponding test reports. There is traceability between the contract and the test report through the Sample registration log book.
See also report from technical assessor.

NC no	-			
Compliance	x	Not in compliance		

4.5 Subcontracting

No subcontractors have been used for testing activities since accreditation was granted by NA.

NC no	-			
Compliance	x	Not in compliance		

4.6 Purchase of services and supplies

List of approved suppliers have been updated lately. Comment: The list is signed (approved) but not dated.
List of suppliers approved by PCSIR Laboratory Complex, Karachi was now available in purchase office at LRC.

NC no	-			
Compliance	x	Not in compliance		

4.7 Service to the customer

The leather testing laboratories have 135 customers. The ILO office have given customer feedback forms to all customers last year together with the test reports. However, only 11 forms have been returned to the ILO office. Statistics on the results have been set up for the last year.
One feedback form was giving some critical remarks. These have been transferred to a complaints form and handled as a complaint by the laboratory.

NC no	-			
Compliance	x	Not in compliance		

4.8 Complaints

One complaint has been received (in September 2007 through customer feedback form) since the initial assessment visit. The complaint was handled according to the procedure and a written answer was given to the customer complaining. The complaint has been logged in the Customer Complaint log form.

NC no	-				
Compliance	x	Not in compliance			

4.9 Handling non-conforming work

Since May 2007 only two NCs have been raised by the laboratory staff during daily work. These NCs have been documented and handled in a good way. However, the number of NCs registered is daily work is low and NC-work is probably underreported. This will be followed up during the next surveillance visit.
The NCs registered have been logged in the Corrective action log form.

NC no	-				
Compliance	x	Not in compliance			

4.10 Improvement

The attitude of the laboratory management towards using the tools described in the management system and accreditation standard (ISO 17025) for improvement is evaluated to be good.

NC no	-				
Compliance	x	Not in compliance			

4.11 Corrective actions

The few NCs registered in daily routine work are handled and documented (on NC/CAR-form) in a good manner through root course analysis, corrective actions and follow up of effects of the actions performed. This is also the case for NCs registered during internal audits.

NC no	-				
Compliance	x	Not in compliance			

4.12 Preventive actions

One preventive action have been registered and performed since the initial assessment visit as documented on preventive action form.
The preventive action registered has been logged in the Preventive action log form.

NC no	-				
Compliance		x	Not in compliance		

4.13 Technical records

The archive of absolute documents were checked by sampling and found satisfactory (see also clause 4.3 in this report).
See technical assessors report for evaluation of technical records.

NC no	-				
Compliance		x	Not in compliance		

4.14 Internal audits

The system for internal audits works well although points of improvement have been identified.
Internal audits covering both the management and technical part of the management system have been conducted according to the plan established for 2007 and 2008. The reports from these audits are well written and give a summary of the findings with both positive and negative feedback about the implementation of the system. NCs are identified and reported and handled on a NC-form made especially for internal audits. Comments: Vertical audits have been performed as part of the horizontal audits but this are not clearly stated in the checklists and reports from the audits.
Checklists are filled in by the auditor giving information on what was covered and the results. More details (e.g. ID of equipment, methods witnessed and personnel files checked) are given in notes. The checklists and notes are given as appendices to the reports.
Names of approved auditors are given in the audit plans together with the date of approval (of new auditors).

The following **minor NCs** were given in the area of internal audits:

- Internal audits of QMR office did not cover all relevant elements according to the check-list used but the NC raised and the summary report do indicate that at least some of these elements were covered. In the audit report from internal audit of the Physical testing laboratory some comment were given which should have been given as NCs.
- Checklist for internal audits is missing "Complaints" and NA requirements .

Please see also NA Dok. 9 which gives some guidance regarding internal audits.

NC no	-				
Compliance		Not in compliance	x		

4.15 Management review

The last management review meeting took place in November 2008. All points on the agenda were discussed according to the minute including quality objectives.
The minute is still not specific enough when describing evaluations and conclusions that the management drew on each subject of the agenda but it has improved since last visit. In the minute actions agreed upon were identified and time limits for follow up given.

Please see clause 5.2 regarding quality objectives.

NC no	-				
Compliance	x	Not in compliance			

ISO 17025 – 5 – TECHNICAL REQUIREMENTS

5.2 Personnel

No new staff members have been employed since the initial assessment visit. The implementation of the system for introduction of new personnel was therefore not checked. Documentation for the conduct and participation in training of staff according to plan for year 2007 (internal courses) was checked and found satisfactory. Training plan for 2008 has been established. The first course (internal) was performed according to this plan in February 2008 as documented in attendance sheet.
Training of the new deputy quality manager was not assessed during this visit. This will be followed up at next visit.

CVs are updated.

Minor NC: Minimum requirement for each position have not been described in the management system.

See also report from technical assessor.

NC no	-				
Compliance		Not in compliance	x		

5.3 Premises and environment

See report from technical assessor.

NC no	-				
Compliance		x	Not in compliance		

5.4 Methods for testing, calibration and validation

See report from technical assessor and essential and **minor NCs** raised by him.

NC no	3				
Compliance			Not in compliance	x	

5.5 Equipment

See report from technical assessor and **minor NCs** raised by him.

NC no	-				
Compliance			Not in compliance	x	

5.6 Measurement traceability

NC 1 given by lead assessor is regarding calibration of balances and reference thermometer.
See also report from technical assessor and essential and **minor NCs** raised by him.

NC no	1, 2				
Compliance			Not in compliance	x	

5.7 Sampling

Not relevant.

NC no					
Compliance			Not in compliance		

5.8 Handling of test and calibration objects

See report from technical assessor and **minor NC** raised by him.

NC no	-

Compliance		Not in compliance	x	

5.9 Assuring the quality of results from testing and calibration

See report from technical assessor and **minor NC** raised by him.

NC no	-			
Compliance		Not in compliance	x	

5.10 Reporting results

See report from technical assessor and **minor NC** raised by him.

Lead assessor checked test reports by random sampling in the ILO office. The accredited test reports were satisfactory.

NC no	-			
Compliance		Not in compliance	x	

4 Other requirements

NA-Doc 14 Conditions for the use of NA's logo in accreditation marks and for making reference to accreditation

Use of double logos (use of both NA and PNAC accreditation marks) on test reports was checked at the ILO office. By use of asterisks the accreditation status (accredited by NA or accredited by PNAC or accredited by both NA and PNAC) of each parameter was clarified in the test reports in a satisfactory way. All test reports checked had only parameters accredited by both NA and PNAC.

NC no	-			
Compliance	x	Not in compliance		

NA-Doc 25/31 Accreditation conditions

Practice regarding sending of documents to NA prior to this surveillance visit was satisfactory. All document required according to NA Dok. 25/31 was sent to the assessors.

Minor NC:
What information that shall be sent to NA regarding changes is not described in detail.

NC no	-			
Compliance		Not in compliance	x	

NA-Doc 26 a Requirements for calibration and control of balances for accredited test laboratories

NC 1 given by lead assessor is regarding calibration of balances.
See also report from technical assessor and part of essential NC raised by him.

NC no	1, 2			
Compliance		Not in compliance	x	

NA-Dok 26 b Requirements for calibration and control of thermometers for accredited test laboratories

NC 1 given by lead assessor is regarding calibration of reference thermometer.
See also report from technical assessor and part of essential NC raised by him.

NC no	1, 2			
Compliance		Not in compliance	x	

NA-Doc 50 Flexible accreditation (if relevant)

Not relevant.

NC no				
Compliance		Not in compliance		

NA-Dok 52 Calculation of measurement uncertainty in calibration

Not relevant.

NC no				
Compliance		Not in compliance		

5 Implementation of corrective actions for non-compliances noted during the previous assessment

All corrective actions against NCs given by the lead assessor during the initial assessment visit (including both essentials and minors) have been satisfactorily implemented.

6 Recommendation regarding accreditation

Continuation of the accreditation is recommended if satisfactory documentation for NCs given at this visit is sent to NA within the agreed time limit.

7 Recommendation regarding suspension

Not relevant.

8 Recommendation regarding scope of accreditation

The following changes in the scope are recommended (see technical assessors report for details):

- For parameter tensile strength (LTD/TM001): reference is changed from internal method to standard method ASTMD 2209 (2004).
- For parameter Elongation at Break (LTM/TM001): reference is changed from internal method to standard method ASTMD 2211 (2005).

Changes are recommended if satisfactory documentation (verification reports) are sent to NA (see technical assessors report for details) within the agreed time limit (09.06.2008) for new editions of standard methods, eg. ISO 3376 and ISO 3377.

9 Recommendation regarding administrative/ geographical units

Not relevant.

10 Any changes since the previous assessment

A new deputy Quality manager has been appointed (NA has not been informed about this).

11 Complaints

The organisation has the right to complaint against actual errors in the report. Such complaint shall be forwarded to Norwegian Accreditation within 3 weeks after the report has been sent from NA.

12 Other

See summary report dated 25.04.2008.

Copies of the following newly revised NA documents were handed over to the quality manager during this visit: NA Dok. 9, 26b, 39 and 25/31.

The undersigned confirms that this report is not violating NA's policies and practices.

Place/ date: Karachi, 26.04.2008

Lead Assessor

Place/ date: Kjeller, 9/5 - 08

Technical Director, Norwegian Accreditation

13 Enclosures/ references

Agenda for the assessment
Non-compliances;
- Number of very serious non-compliances: 0
- Number of essential non-compliances: 3
- Number of minor non-compliances: 12

Summary report
Accreditation document
Reports from technical assessor, laboratories

Report from assessment of laboratories performed by technical assessor/expert according to the requirements in ISO 17025

Case no:
07/0390

Name of the organisation:	LRC, PCSIR Karachi
Assessed locations:	Leather laboratories

Accr. no. : TEST 220 Appl. no.:	Date of assessment: 24. and 25.04.08

(The complete report may be repeated. Extract from the report can only be repeated when this is accepted in writing by Norwegian Accreditation)

1. Reporting assessor/expert

Name: **Robert Stocks** Technical area: **P09/P12 (leather testing)**

2. General information

1. time visit		Extraordinary visit		Renewal	
Surveillance	x	Extension of scope		Complete assessment	

Specification of surveillance activities not mentioned above:

Surveillance with assessment of selected elements	x
Document review	
Technical assessment NS EN ISO/IEC 17025: 2005	x
Technical expert NS-EN ISO/IEC 17025:	

Interviews

Name	**Function / technical area**

3. Recommendation

3.1 Recommendation regarding accreditation/renewal:
Not relevant.
3.2 Recommendation regarding change of the responsible for validation, when relevant (valid for flexible scope):
Not relevant.
3.3 Recommendation regarding changes/extension of accreditation scope:
That two minor changes in scope be implemented viz:
Delete ASTMD2209(1995) from comments of tensiles strength. Add new entry for tensiles with ASTMD2209 (2004) as Ref method; with LTD/TM001 as internal method
Delete ASTMD2211(1995) from comments on Elongation. Add new entry for Elongation at Break with ASTMD2211(2005) as Ref method; with LTD/TM001 as internal method.

4. Changes since the last visit (if any):

5. Extent of assessment

(The numbers are references to the paragraphs in ISO 17025)

4	**Management requirements**
4.1	**Organization** *(evaluation of the competence to the technical management)*
	The technical management continues to be competent, and has implemented a quality system meeting the technical requirements of ISO17025.
	Non-conformity no
4.2	**Management system** *(availability of authorized documents in the laboratory. Is it possible for the personnel to find the documents in the in the management system?)*
	Not examined by this assessor.
	Non-conformity no
4.3	**Document control** *(are controlled documents and templates in use in the laboratory? Are the last versions in use? Does scrap of paper exist?)*
	All technical documents appeared to be well controlled, with systems operating to ensure the latest versions are in use.
	Non-conformity no
4.4	**Review of requests, tenders and contracts** *(request about services and changes. Information about limitation in the methods)*
	The clients needs were documented and understood on the VA's performed
	Non-conformity no
4.5	**Subcontracting of tests and calibrations** *(have the client accepted use of subcontractors?)*
	No subcontracting was evidenced since the 2007 visit.
	Non-conformity no
4.6	**Purchasing services and suppliers** *(labelling of chemicals, regents and consumer goods included initial inspection)*
	Supplies eg chemicals are checked and labelled before use
	Non-conformity no
4.9-4.11	**Control of nonconforming testing and/or calibration work/corrective actions** *(have relevant non-conformities been registered? Have good technical cause analysis been performed? Have consequence analysis been performed? Are the evaluation in connection with corrective actions technical satisfactory?)*
	Few NC's have been raised, but good procedures are in place to investigate reasons for anomalies.
	Non-conformity no
4.13	**Control of records** *(registrations, handling of raw data, changes of raw data, traceability of documentation, archives. For vertical audit, specify the sample number/ journal number/ technical area, parameter and object)*
	Records are detailed, with implemented systems for extensive checking. Jobs ATR/1577/07, 1685/08, &n 1695/08 were used for VA. Some minor NC's were revealed, detailed elsewhere in this report.
	Non-conformity no

5	**Technical requirements**
5.2	**Personnel**
5.2.1	**Training** *(are the CVs clear and updated? Training and qualification of personnel, new employed and after a long absence)*
	The staff were well qualified, and keen to turn-out quality results. The CV's were in place.
	Non-conformity no
5.2.2	**Maintenance of competence** *(including testing experience)*
	The system of maintenance of competence was audited for the staff witnessed performing testing, and found to be working properly, with confirmation being undertaken tearly.
	Non-conformity no
5.2.4	**Job descriptions**
	Job descriptions existed for the grades of staff employed in testing.
	Non-conformity no
5.3	**Accommodation and environmental conditions**
	The environmental conditions were suitable for leather testing.
	Non-conformity no
5.4	**Test and calibration methods and method validation**
	Most methods were either International Standards, or tests based on old IS's
	Non-conformity no
5.4.1	**General** *(evaluation if the laboratory has appropriate methods and procedures)*
	The lab is operating with appropriate test methods for the parameters being measured.
	Non-conformity no
5.4.2	**Selection of methods** *(information on type of methods used for testing/calibration. If the latest valid edition of standard methods are used. Routines to ensure that the client orders correct analysis)*
	The International Standards were generally supplemented with amplifying Internal procedures. However, in one case this did not reflect the actual practice of the laboratory.
	Non-conformity no See B on list of minor NC's below.
5.4.3/ 5.4.4	**Laboratory-developed methods/ Non-standard methods** *(updated plans for introduction of laboratory developed methods/ are use of non-standard methods agreed on with the client?)*
	The lab has plans for the updating of some of the physical test methods with newly available International Standards eg ISO3376, 3377. However, it has not yet completed its evaluations of capability etc before submitting application to NA for consideration of additions/changes to scope
	Non-conformity no
5.4.5	**Validation of methods** *(procedures for validation, conduct and reporting of validation. Are modifications, if any, in the standard method validated and documented? Are modifications identifiable in the method description?)*
	The validation that the Bally flex machine meets the requirements of IUP20 are incomplete
	Non-conformity no See E on list of minor NC's below.

5.4.6	**Estimation of uncertainty of measurement** *(If the uncertainty is based on metrological and statistically basis: Have all relevant contributions been taken into consideration? Are the calculations documented in a controlled document? If the uncertainty is calculated in experimental data: Does the reported uncertainty represent the total uncertainty and measurement range ? Are the important contributions to the uncertainty reported? Are the calculations documented in a controlled document. If no requirement to calculate uncertainty (e.g. microbiology, NDT): are the important contribution to uncertainty identified?*
	Although estimates of test uncertainty are generally in place, some deficiencies were found eg in mathematical treatment, and non-inclusion of all relevant factors.
	Non-conformity no See NC 08/3
5.4.7	**Control of data** *(calculations, LIMS, excel, data transfer, use, registration, maintenance and validation)*
	An extensive system of checking is implemented to minimise the risk of errors etc. The checks appeared to be working well.
	Non-conformity no
5.5	**Equipment** *(maintenance of equipment, logbooks, instrument register, labelling of equipment)*
	The lab is furnished with all items of equipment for its accredited tests. Two minor labelling faults were noticed during the visit
	Non-conformity no See A & F on list of minor NC's below.
5.6	**Measurement traceability** *(how does the laboratory achieve traceability on the methods? Calibration and control of equipment, use of reference materials/standards, calibration certificate/standards, calibration program)*
	The calibration area is the one giving rise to most concern in the lab. Numerous examples of deficiencies etc on calibration certificates were found during the visit. An audit by the lab would likely reveal many more. Urgent action is needed to correct these weaknesses. One critical calibrator has not been documented to meet the requirements of ISO17025 section 5.6.
	Non-conformity no See NC 08/2 and C on list of Minor NC's below.

5.6.3	**Reference standards and reference materials** *(reference standards, reference materials, intermediate checks, transport and storage)*
	The lab is trying to establish reference materials, but is hampered by the inherent material variability in leather.
	Non-conformity no
5.7	**Sampling** *(if relevant)*
	N/A
	Non-conformity no
5.8	**Handling of test and calibration items** *(does the laboratory make registrations if it is any irregular by receiving the samples? Identification of objects /samples, make anonymousness of test objects, storage and disposal)*
	The lab is well versed in the taking of specimens from leather samples as specified in the various testing Standards. The leather samples themselves are client supplied. One example of samples not being uniquely identified was found, relating to ILC samples. All client samples were properly handled and identified (including disposal).

	Non-conformity no See G on list of minor NC's below.
5.9	**Assuring the quality of test and calibration** ***results*** *(How does the laboratory assure the quality of the results such as proficiency testing, CRM, RM, control chart etc? Do programmes exist for the full scope applied for? Is the participation sufficient? Are the results satisfactory? Has the laboratory implemented a procedure for evaluation of its own results? Have the laboratory records from trend analysis and systematic errors?)*
	The lab is arranging ILC with other Pakistani accredited labs, but is limited by the low number of these for its accredited tests. It was noted that the conclusions on acceptability (or otherwise) of ILC results was not being documented.
	Non-conformity no See D on list of minor NC's below.
5.10	**Reporting the results** *(is the report precise and clear? Are the units of measure correct? Are all information that is required in a test report/calibration certificate registered? Are the results from subcontractors according to the requirements? Is the accreditation mark/reference to accreditation satisfactory? Are non-accredited results/accredited results marked satisfactory? By simplified reporting: Is the report according to the agreement with the client?*
	The reports examined as part of Vertical Auditing show clear concise reports. One instance of the reporting not matching that specified in the testing standard was found.
	Non-conformity no See H on list of minor NC's below.
5.10.5	**Opinions and interpretations** *(if relevant)*
	Not relevant.
	Non-conformity no
NA Dok	**Other requirement documents**
No. 51	**Flexible accreditation** *(if relevant)*
	Not relevant.
	Non-conformity no
14	**Rules for use of Norwegian Accreditation's (NA's) logo and for references to NA's accreditation**
	Not examined by this assessor
	Non-conformity no
No. 26a	**Requirements for calibration and control of balances in accredited test laboratories**
	See separate NC (08/1) by lead assessor
	Non-conformity no
No. 26b	**Calibration of thermometers in connection with accreditation of test laboratories**
	See separate NC (08/1) by lead assessor
	Non-conformity no
	Non-conformity no
No. 52	**Expression of the uncertainty of measurement in calibration (EA-4/02)**
	Not relevant. *Non-conformity no*

6. Demonstrations	Method identity/parameter/ object:	Demonstrated by/discussed with:
(Specify methods and person. Describe also if the method has been reviewed/ discussed)	DCM Extractables to IUC4	Mrs Sarwat Mehboob
	Chrome to IUC8	Kashif Pervez
	Ash to CRD/TM004	Raj Kumar Dewani
	Tensiles to LTD/TM002	Beena Zehra
	flexing to IUP20	Uzma Nadeem
	Distension to IUP9	Muhammed Zeshan
7. Follow up non-conformities from the last visit:	The minor NC's reported on 2007 visit were found to have been corrected eg daily balance checks being performed, delimiters being used in log books, grinding procedure in place, cold storage Ok for pH standards, client requirements now clearer, deviations on test reports etc.	
8. Notes/summary/ conclusion	The staff performed the witnessed tests competently, and all seemed keen to develop their technical skills and knowledge. The lab has improved measurably since the 2007 visit. The two areas of weakness found in the lab were test uncertainty estimations and calibrations. The documentation was of a high standard, and the training records were comprehensive. The record keeping and checking systems were seen to be working well. The ILC is limited by the number of local accredited labs, and the lab needs to consider expanding its horizons in this area.	
9. Next visit *(Are there anything that shall be evaluated seriously during the next visit, or specific personnel that should be present)*	Calibration Uncertainty	

Description Minor NCs	**Reference to ISO 17025**
A. Sulfuric-Perchloric Acid mixture not labelled (corrected during visit)	5.5.5
B. Procedure CRD/TM004 for ashing does not agree with practice in that the requirement to only use part of muffle furnace near temperature sensor is not stated, and the pre-ashing procedure is not described.	5.4.2
C. Techno are not documented in PCSIR Quality System as meeting requirements of ISO17025 (5.6) for capability, uncertainty etc of calibration of tensile testing machine (LRC/LTD/041)	5.6.1
D. ILC reports from 2007 for DCM Extractables (corrected during visit), tensiles, and for Flexing do not contain conclusions on acceptability of comparison results.	5.9

E. Flexing (IUP20): No calibration or validation that flex angle meets requirement of Standard (22.5±0.5°).	5.4.5.2
F. No identification recorded for residue results on redistilled DCM	5.5.4
G. Unique sample numbers are not being used on all samples for test eg those for ILC	5.8.2
H. LTD/CPC/07 does not contain all the individual results as per 4.3 of IUP9	5.10.2i

Karachi 25.04.08

Robert Stocks

RStocks

28 April 2008
Date.....
technical assessor

The undersigned states that the content in the report is not in conflict with NA's policy and practice

date 02.05.08
lead assessor

The organisation has the right to complaint against the errors in the report. A complaint must be presented at last 3 weeks after the report has been sent from Norwegian Accreditation

NORSK
AKKREDITERING

ACCREDITATION DOCUMENT

TEST 220

Leather Research Centre (LRC), PCSIR Karachi
D-102 South Avenue, S.I.T.E, Karachi

The scope of accreditation is P07 Physical testing og P12 Chemical analysis in accordance with the specifications on the following pages in this document.

The accreditation was first time granted 14.09.2007 and given according to Parliamentary Proposition no. 106 (1989/1990) and the Statutes of Norwegian Accreditation , established by Royal Decree of 7 October 1993
The laboratory complies with the requirementes in NS-EN ISO/IEC 17025 (2005)

The accreditation requires regular surveillance, and is valid until 14.09.2012.
The decision of accreditation made by Norwegian Accreditation implies that the organisation has been found to fulfil the requirements for accreditation within the scope.
The organitation itself is responsible for the results of performed measurements.

NORWEGIAN ACCREDITATION

29/9-08
Date

Norwegian Accreditation

Accreditation document
Accreditation no. TEST 220

Administrative/geographical unit:
Leather Research Centre (LRC), PCSIR Karachi
D-102 South Avenue, S.I.T.E, Karachi

Permanent facility

P07 Physical testing

Object	Parameter	Reference standard	Identity of internal	Comments
Leather	Colour Fastness to rubbing (wet & dry)	Internal method	LTD/TM/004 and LTD/TM/005	Method based on BS 1006:UKLC (1996)
Leather	Tensile strength and percentage extension	ISO 3376	LTD/TM/001 and 002. LTD/TM/003 (persentage extention)	Identical to IUP 06
Leather	Tear load - Double edge tear	ISO 3377-2	LTD/TM/006	Identical to IUP 8
Leather	Distension and strength of grain - Ball burst test	ISO 3379	LTD/TM/007	Identical to IUP-9
Leather	Flex resistance by flexometer method	ISO 5402	LTD/TM/010	Identical to IUP-20
Leather	Softness	ISO 17235	LTD/TM/008	Identical to IUP 36
Leather	Colour fastness to water spotting	ISO 15700	LTD/TM/009	Identical to IUF 420 (A02)

Permanent facility

P12 Chemical analysis

Object	Parameter	Reference standard	Identity of internal	Comments
Leather	Determination of substances (fats and others) soluble in Dichloromethane.	IUC 4	CRD/TM/001	Result given as percent fat
Leather	Chromic Oxide	Internal method	CRD/TM/003	Method based on SLC 8 (IUC 8) (1996)
Leather	Total ash	Internal method	CRD/TM/004	Method based on ASTM D-2617-96
Leather	Determination of volatile matter.	IUC 5	CRD/TM/005	
Aqueous Extract of leather	pH of water extract	Internal method	CRD/TM/006	Method based on SLC-13 (1996)
Fat and oil	Saponification value	ASTM D-5588-95	CRD/TM/008	Re-approved in 2006

29/9-08
Date

Norwegian Accreditation

Name of organisation:	National Textile University, Faisalabad		
Manager of the organisation:			
Accreditation no/ application no:	TEST 221	Date of assessment:	14 April and 15 April 2008
Sites assessed:			

1 The assessment

This report deals with:

Initial ass. [ ]	Extraordinary ass. [ ]	Renewal [ ]
Surveillance [X]	Extension [X]	Full assessment [ ]

Assessment team:

Name	Position
Ms Anne Grændsen	Lead assessor
Mr Robert Stocks	Technical Assessor P12 , P11 and P20
Mr Badar Ul Islam	Observer UNIDO
Mr Raza Hussain	Observer PCSIR Lahore (Day 2)

Personnel interviewed:

Name	Position
Dr Mumtaz Hasan Malik	Associate Professor, Dir. External programmes, Quality Manager
Mr Saleem Raza	Assistant Professor, Dep. Quality Manager, Tech. Manager TPL
Dr Tanveer Hussain	Technical Manager TCL

Participants in the introductory and/or concluding meeting:

Name	Position
Dr Mumtaz Hasan Malik	Associate Professor, Dir. External programmes, Quality Manager
Mr Saleem Raza	Assistant Professor, Dep. Quality Manager, Tech. Manager TPL
Dr Tanveer Hussain	Technical Manager TCL
Mr Imran Khan Mazari	Deputy Technical Manager TPL
Mr Uzair Hussain	Deputy Technical Manager TPL
Mr Gulzar Ahmad	Deputy Technical Manager TCL
Mr Syed Q. Z. Gilani	Deputy Technical Manager TCL
Ms Anne Grændsen	Lead assessor
Mr Robert Stocks	Technical Assessor P12 , P11 and P20
Mr Badar Ul Islam	Observer UNIDO
Mr Raza Hussain	Observer PCSIR Lahore (Day 2)

Deadlines corrective actions:

- Submission of CAs connected to present accreditation scope: **02.06.2008**
- Submission of CAs connected to extension of the accreditation scope (physical testing of textiles): **02.08.2008**

2 Non-compliances

Categorisation of non-compliances is described in NA Doc 55 and on NA's web-site (www.akkreditert.no).

3 Results from the assessment

Below, the results from the assessment against the accreditation requirements as described in ISO/IEC 17025:2005 (General requirements for calibration and test laboratories) and the requirements defined in the laboratory's own management system, are described.

ISO 17025 – Chapter 4 – Requirements for management

4.1 Organization

There are no major changes in the organisation and budget structure.

The top management and key personnel are unchanged.

- Mr Biabani is the Vice Chancellor (top manager) of the organization.
- Dr Mumtaz Hasan Malik has been appointed as Quality Manager.
- Mr Saleem Raza is appointed as Deputy Quality Manager.

The laboratories are still used for commercial purposes as well as for demonstrations to students.

Regarding key personnel and key positions following changes were observed:

- Mr Baland Iqbal, technical manager TPL, is on leave and Mr Saleem Raza, deputy Quality Manager is covering his duties
- The officer in the Customers Service Section has resigned and Mr Safdar is substituting this position until a new employee is recruited. The substitute is getting support from the testing laboratories.
- Regarding responsibilities a minor amendment is given in Dep. Quality Managers job description.

There are no major changes in the communication processes within the organization or the reporting lines given in organization charts. Meetings are arranged as planned. Also during this surveillance visit all employees addressed each other in a friendly and polite manner and good cooperative skills were demonstrated.

NC no	--				
Compliance		X	Not in compliance		

4.2 Management system

Some major changes were performed in the management system after the initial visit. The index in the Quality Manual is updated and is now containing essential elements as quality policy, quality objectives and document hierarchy. Current management system covers the requirements in ISO 17025 and is comprised of:

- Quality manual
- Procedures Manual
- Technical procedures (section I and II) and work instructions
- Forms, records and external documents

The Quality Policy is amended since last visit. The Quality objectives are reviewed by the management during the Management Review arranged in March 2008. The management concluded not to change the current objectives.

NC no	--				
Compliance		X	Not in compliance		

4.3 Document control

The laboratory has a master list which identifies all controlled documents belonging to the quality management system. The list was reviewed during the assessment. The list of controlled documents contained information on document no, revision no, issuing date and retention date of withdrawn documents. A very few documents have been revised after accreditation has been granted to NTU. The master list of controlled documents does not identify the number of copies. However number of copies can be found in the distribution list.

Document control routines were checked for two of the revised documents:

- NTU/QM-4.2/04 Quality Policy
- NTU/QM-5.2/01 Personnel (Job description Deputy Quality Manager)

The Change/review request forms were properly filled inn and the obsolete documents were filed as described.

Updating of two copies of the Quality Manuals was reviewed. A minor deficiency was observed in one of them.

No hand corrections were observed in any valid document.

Remark:
Copies of the latest edition of quality policy and the quality objectives were put on the wall in the laboratories. However these copies were not listed in the distribution list, and they were not equipped with revision number or revision date.

Minor non-conformities:

- Internal audit file: CAR No 6 was not found in the file.
- The Quality Manual belonging to the Quality Manager did not contain the latest edition of the Quality Policy.

NC no	--				
Compliance			Not in compliance	X	

4.4 Review of contracts

There are no changes in this area. Requests and "contracts" are handled by the CSS. A request letter is often submitted with the samples. A receipt is prepared for the customer on delivery and is considered to be the contract. The receipt contains information on analysis to be performed and analytical fees. If clarification is needed, there is a close cooperation between CSS and the relevant Technical Manager. The testing capabilities are ensured by the Technical Managers.

Lab code TCL 08-01/01-03 (textile chemistry) was checked in a vertical audit. A client request was found in the file. The request were properly dated and signed by personnel mentioned above. Likewise the receipt (contract) was found. Delivery of the samples to CSS were also properly registered in the protocol kept at CSS

Amended contracts or contract were subcontractors have been used were not observed.

Remark:
Methods to be used are not agreed upon in any request or "contract". However the laboratory explains that the customers have a good understanding of methods to be chosen. The laboratory is using methods which are recognized in the area. The use of simplified receipts as contracts could have been better described in the Quality Manual. In this respect the laboratory is requested to review the management system and approve the compliance between established routines and the requirement in ISO 17025. **Review of requests and contracts will be followed up during the next surveillance visit.**

NC no	--				
Compliance		X	Not in compliance		

4.5 Subcontracting

There is no change since last visit and this area was not assessed during this surveillance visit.

The laboratory is still not using any subcontractor's and. and has no plans to do so. Consequently there is no list of potential subcontractors.

During the initial visit following **minor NC** was raised:

Criteria for selection and approval of subcontractors in the future must be specified and included in the Quality Manual. **NB! This is not in place and will be followed up during the next surveillance visit.**

NC no	--				
Compliance		X	Not in compliance		

4.6 Purchase of services and supplies

Not assessed by lead assessor during this visit.

NC no	--				
Compliance		-	Not in compliance	-	

4.7 Service to the customer

The laboratory cooperates with its customers to clarify their needs.

A filing system for customer feedback is established. Statistical analysis of feed backs is performed in a good way. Illustrative and easy readable diagrams have been produced. Latest trend analysis shows that delivery times can be improved. Due to the statistical analysis the laboratory had raised a NC. Currently a Job Card is under development and will in near future be used for monitoring the delivery times. Delivery times will be followed up during the next surveillance visit.

See **remark** in clause 5.3 regarding confidential handling regarding of customers test results and customers samples.

NC no	--				
Compliance		X	Not in compliance		

4.8 Complaints

The laboratory has established a policy and procedure for registration, handling complaints. All types of complaints (verbal included) are received and logged by the CSS and are dealt with by the Quality Manager and the Technical Managers. Verbal inquiries (negative and positive) are documented in a customers feedback form. Written complaints are recorded in a complaint form. Root causes and corrective actions are performed. Corrective actions are communicated to the customer in writing by the Quality Manager.

2 written complaints have been received since the last visit. One complaint was put forward due to lacking accreditation marks on test reports. The other complaint concerned an unsuitable unit given for yarn thickness. The complaints have been dealt with according to the requirements described in the quality management system. NTU Labs have a good handling of customers' complaints.

The complaints were discussed during the Management Review.

NC no	--				
Compliance		X	Not in compliance		

4.9 Handling non-conforming work

NC's are reported in connection with internal audits and during daily work. Since the NC system was put into use in 2007 approximately 40 NC's have been raised. Most of the NC's are raised in connection with the vertical audits conducted in TCL and TPL. Root cause analyses and corrective actions are performed within reasonable time.

All NC's are categorized. The laboratory is monitoring trends. NC handling, trend analysis included, is discussed in the Management Reviews.

NC no	--				
Compliance		X	Not in compliance		

4.10 Improvement

Following tools are used in the process of improving the quality system:

- Quality policy and quality objectives
- Audit results
- Corrective and preventive actions
- Statically analysis of internal control data

The different subjects have been dealt with in the Management Reviews.

NC no	--				
Compliance		X	Not in compliance		

4.11 Corrective actions

See clause 4.9 in this report.

See also technical assessor's report, **minor non-conformity** included

NC no	--				
Compliance			Not in compliance	X	

4.12 Preventive actions

Not assessed during this surveillance visit

NC no	--				
Compliance	-	Not in compliance	-		

4.13 Technical registrations

The laboratory demonstrates that handling of raw data is taken care of in a good manner. Records (assigned with a unique name and number) are stored in designated areas in the laboratories or in CSS. Registrations are in general done by permanent pen, and they properly dated and signed. All records reviewed were tidy and easily readable. Very few corrections were observed. When corrections are done it is according to the descriptions in the Quality Manual. The described routines fulfil the requirement in ISO 17025.

A vertical audit was carried out on a test report with Lab Sample Code TCL 08-01/01-03 (textile chemistry). The laboratory demonstrated good traceability to timeframes and operators throughout the system regarding all elements included in the analysis. All calculations and transferences of data were traceable and properly checked.

Remark: Some very few registrations performed with pencil were observed. Permanent pens are mandatory for essential data that are going to be kept as evidence.

Minor non-conformities:

- The test report file, chemical testing lab (TCL): Use of different templates (accreditation logo or not) for reporting test results is not traceable.
- Audit checklists have a column for identification of CAR No #. The CAR No # is not filled in for audits conducted in March 2008.

See also technical assessor's report, **minor non-conformity** included

NC no	-				
Compliance		Not in compliance	X		

4.14 Internal audits

An audit plan for 2008 had been prepared by the Quality Manager. Since the initial assessment the organization has been conducting one internal audit in NTU Labs in March 2008. Checklists and reports from the audit are filed in a proper way. Negative findings are dealt with in the ordinary non-conformity handling system. Root causes and corrective actions are taken within reasonable time. It has been carried out an additional audit to check the effect of the corrective actions carried out.

The laboratory has 3 approved auditors. There are no changes since the initial visit.

Essential non-conformity:

The internal audit system has still shortcomings:

- Vertical audits are not implemented in the audit plan worked out for 2008

- The audit plan worked out does not demonstrate that the laboratory is auditing all elements in ISO17025. However the deputy quality manager has an audit checklist in progress which can supplement the audit plan
- Clause 4.4, 4.8 and 4.14 has not been audited in the audit conducted in March 2008. However these clauses are implemented in a new checklist which is in progress.

NC no	**NC08-4**				
Compliance			Not in compliance	X	

4.15 Management review

Management reviews are organised annually. Issues to be discussed during the management reviews are listed in the Quality Manual. Vice Chancellor is responsible for the meeting assisted by the Quality Manager. All senior staff from the laboratories is attending the meeting. Minutes from the meetings shall be recorded and maintained.

Since last visit the laboratory has been conducting one Management Review (20.03.2008). The agenda and the minute from the meeting were reviewed. The Management Reviews conducted in March 2008 has minor deficiencies.

Remarks:

- The laboratory can focus more on statistical analysis of NCs raised in connection to daily work and internal audits. There are no needs for repeating details already recorded in the regular NC handling system.

- Following remark was given last year: "It is a discrepancy between the meeting frequency given in the Quality Manual and the procedure MP-12. In clause 3 in MP-12 it is described a meeting frequency of at least twice a year. The Quality Manager and his deputy had a common understanding of annual meetings. The meeting frequency given in MP-12 is considered to be a typing error and will be corrected." **NB! Clause 4.1.1 in the procedure MP12the frequency is still not corrected to annually.**

Minor non-conformity:

Following subjects has not been discussed:

- Results of inter laboratory tests or proficiency testing.
- Suitability of methods and connected procedures

NC no	--				
Compliance			Not in compliance	X	

ISO 17025 – CHAPTER 5 – TECHNICAL REQUIREMENTS

5.2 Personnel

Recently updated CVs for all key personnel were submitted to the assessor team in advance of the assessment.

Annually training plans are worked out.

Records concerning training carried out in TPL since last visit were reviewed.

- Approved operators are performing the analysis under observation and training needs are identified. All methods are checked on annually basis.
- On job training is then provided due to the needs identified.
- PT'samples are analysed two times annually

Remarks:
In general training and training records are considered to be satisfactory. However some subjects should be improved before next visit.

- TPL has not established a list of approved personnel for the different methods. However, a list of assigned personnel is established. TCL has listed of approved personnel properly.
- All PT-samples are analysed by the assigned operators. PT-samples should preferably be analysed by **all** approved personnel. PT-results shall give a "picture" of the laboratory performance, not the performance of one operator.

NC no	--				
Compliance		X	Not in compliance	-	

5.3 Premises and environment

Access to and use of the testing facilities is described as restricted to authorized personnel. Visitors to the laboratories are recorded by Customers Service Section.

Remark:
The assessor team and the observers went directly into the testing facilities without being asked to register in Customers Service Section. The visitor record and use and placing of the record is not properly clarified and descried. Routines for confidentiality declarations, supervision etc. needs to be reviewed. The existing procedure MP 05 is only applicable for customers. New routines have to be applicable to all visitors. **The laboratory is requested to improve the routines before next surveillance visit.**

See technical assessor's report **minor** and **essential non-conformities** included.

NC no	**NC08-3**				
Compliance			Not in compliance	X	

5.4 Methods for testing, calibration and validation

See technical assessor's report, **essential non-conformities** included.

NC no	**NC08-1**				
Compliance			Not in compliance	X	

5.5 Equipment

See technical assessor's report, **minor** and **essential non-conformities** included.

NC no	**NC08-3**				
Compliance			Not in compliance	X	

5.6 Measurement traceability

See also technical assessor's report, **minor** and **essential non-conformities** included.

NC no	**NC08-2**				
Compliance			Not in compliance	X	

5.7 Sampling

Not relevant

NC no	--				
Compliance		-	Not in compliance	-	

5.8 Handling of test and calibration objects

See technical assessor's report.

NC no	--				
Compliance		X	Not in compliance		

5.9 Assuring the quality of results from testing and calibration

See technical assessor's report.

NC no	--				
Compliance		X	Not in compliance		

5.10 Reporting results

The 2008 file of test reports issued by TCL was reviewed. Principally the test reports and certificates fulfil the requirement in ISO 17025. All test reports checked were properly signed by authorized personnel.

A template containing the NA logo is recently taken into use. See clause 4.13 and NA Dok 14 for further information.

Electronic transmission of test results is not in use.

An amended test report (TPL 07-12/566) was observed when reviewing the complaint file. The routines described in the Quality manual were followed. The description in the Quality Manual is in compliance with the requirements in ISO 17025.

Remarks:
Reports including opinions and interpretations are not issued by NTU. No such reports were observed during the assessment

The Quality Manual clause 5.10.3.3 and 5.10.5 are contradictory. Opinions and interpretations are described as a possibility in 10.10.3.3 and in 5.10.5 it is stated that reporting of opinions and interpretations are not done. **The contradiction should be corrected before next visit.** If opinions and interpretation in the test reports will be permitted it has to be clearly stated that this is not a part of the accredited scope. This is not stated in the Quality Manual and **should be corrected before next visit.**

NC no	--				
Compliance		X	Not in compliance		

4 Other requirements

NA-Doc 14 Conditions for the use of NA's logo in accreditation marks and for making reference to accreditation

A satisfactory description of the use of the accreditation mark was included in the quality system after the previous visit. NTU Labs has recently started using the accreditation mark on test reports containing accredited analyses. Analyses not accredited are reported separately without any accreditation mark. The new template was reviewed and considered to be satisfactory. Use of accreditation mark could not be assessed. See ***minor non-conformity*** described in clause 4.13.

NC no	--				
Compliance		X	Not in compliance		

NA-Doc 25/31 Accreditation conditions

NTU Labs has cooperated well with the accreditation body in the period between the initial visit and the surveillance visit. The organization has forwarded all documents asked for within agreed time limits.

NC no	--				
Compliance		X	Not in compliance		

NA-Doc 26 a Requirements for calibration and control of balances for accredited test laboratories

See technical assessor's report, **essential non-conformities** included.

NC no	**NC08-2**				
Compliance			Not in compliance	X	

NA-Dok 26 b Requirements for calibration and control of thermometers for accredited test laboratories

See technical assessor's report, **essential non-conformities** included.

NC no	**NC08-2**				
Compliance			Not in compliance	X	

NA-Doc 50 Flexible accreditation (if relevant)

Not relevant

NC no	--				
Compliance		-	Not in compliance	-	

NA-Dok 52 Calculation of measurement uncertainty in calibration

Not relevant

NC no	--				
Compliance		-	Not in compliance	-	

5 Implementation of corrective actions for non-compliances noted during the previous assessment

Except the calibration area and establishing of criteria for future selection and approval of subcontractors corrective actions are implemented. See report from TA (clause 5.5/5.6) and LA (Clause 4.5) for further information.

6 Recommendation regarding accreditation

Accreditation is recommended maintained for the current accreditation scope if satisfactory corrective actions are undertaken within the time limit for all essential NCs. Under the same conditions above the extension of the revised accreditation scope for physical testing is recommended. One test method was withdrawn from the application during assessment: ASTM D 5035-06 "Breaking force and elongation of textile fabrics".

Minor non-conformities are described in this report will followed up during the next assessment visit. The laboratory also has to correct remaining minor non-conformities from last visit (see the clause above).

7 Recommendation regarding suspension

Not relevant

8 Recommendation regarding scope of accreditation

See clause 6 above.

9 Recommendation regarding administrative/ geographical units

Not relevant

10 Any changes since the previous assessment

- Refurbishing of facilities is finalized since last visit.
- Staff changes are described in clause 4.1.
- Instrument changes see report from TA

11 Complaints

The organisation has the right to complaint against actual errors in the report. Such complaint shall be forwarded to Norwegian Accreditation within 3 weeks after the report has been sent from NA.

12 Other

No further comments.

The undersigned confirms that this report is not violating NA's policies and practices.

Islamabad, 16.04.2008
Lead Assessor

Place/ date: 25/4-2008
Technical Director, Norwegian Accreditation

13 Enclosures/ references

Agenda for the assessment
Non-compliances;

Number of very serious non-compliances	0
Number of essential non-compliances	04
Number of minor non-compliances	21

Summary report
Accreditation document
Report from technical assessor P12

Name of the organisation:	**National Textile University, Faisalabad**
Assessed locations:	**Faisalabad**

Accr. no. : TEST 221 Appl. no.:	Date of assessment: 14-15 April 2008

(The complete report may be repeated. Extract from the report can only be repeated when this is accepted in writing by Norwegian Accreditation)

1. Reporting assessor/expert

Name: **Robert Stocks** Technical area: **PP12 and P07/P20**

2. General information

1. time visit [ ]	Extraordinary visit [ ]	Renewal [ ]
Surveillance [X]	Extension of scope [X]	Complete assessment [ ]

Specification of surveillance activities not mentioned above:

Surveillance with assessment of selected elements	[ ]
Document review	[ ]
Technical assessment NS EN ISO/IEC 17025: 2005	[X]
Technical expert NS-EN ISO/IEC 17025:	[ ]
Technical assessment NS EN ISO/IEC 15189:	[ ]
Technical expert NS-EN ISO/IEC 15189:	[ ]

Interviews

Name	**Function / technical area**
See demonstrations, clause 6	

3. Recommendation

3.1 Recommendation regarding accreditation/renewal:

That accreditation is continued for the existing scope, and extended as below, provided satisfactory evidence of corrective actions is submitted for all essential NC's

3.2 Recommendation regarding change of the responsible for validation, when relevant:

Not relevant

3.3 Recommendation regarding changes/extension of accreditation scope:

Subject to clearance of essential NC's extension to scope for physical tests according NA-S5 is recommended. However breaking force and elongation of textile fabrics (Grab Method), ASTM D 5034 was withdrawn from the application during the surveillance visit and will not be included in the scope.

All tests to be conducted in conditioned atmosphere meeting ISO139 (2005)

4. Changes since the last visit (if any):

Refurbishing of TPL is finalized and conditioning environment is improved.

There are no other major changes.

5. Extent of assessment

	Management requirements
4.1	**Organization**
	Description/evaluation: Not evaluated by this assessor *Non-conformity no* --
4.2	**Quality system**
	Description/evaluation: Not evaluated by this assessor *Non-conformity no* --
4.3	**Document control**
	Description/evaluation: The document control system was found to be good for Standards and other technical documents in use in both the Chemical and Physical Test areas *Non-conformity no* --
4.4	**Review of requests, tenders and contracts**
	Description/evaluation: Not evaluated by this assessor *Non-conformity no* --
4.5	**Subcontracting of tests**
	Description/evaluation: None in tests subject to accreditation *Non-conformity no* --

4.6	**Purchasing services and suppliers**
	Description/evaluation: Critical suppliers were listed and there was evidence of application of the rating system to them e.g. Uster for technical equipment for cotton. *Non-conformity no* --
4.9-4.11	**Control of nonconforming testing and/or calibration work/corrective actions**
	Description/evaluation: Complaints records examined by lead assessor. The Testex PT round of Nov 2007 showed anomalous results were obtained by the lab for Martindale Abrasion to ISO12947. Corrective action had been carried out. However, no evaluation of the effectiveness of this corrective action had been performed to date. *Non-conformity no* See G in appended list of Minor NC's
4.13	**Control of records**
	Description/evaluation: Generally, test records were good. However, the temperatures reached during moisture determinations of cotton (ISO6741) were not being recorded.
	Non-conformity no See P in appended list of Minor NC's
5	**Technical requirements**
5.2	**Personnel**
	Summary/Conclusion: The staff were qualified and the test witnessing showed they were competent to perform the tests on the scope, and subject to the extension application. The staff were keen to develop their skills, and enthusiastic about producing quality results. *Non-conformity no* --
5.2.1	**Training**
	Description/evaluation: Evaluated by lead assessor.
5.2.2	**Maintenance of competence**
	Description/evaluation: Extensive within lab operator comparisons are in place for all tests, and these demonstrated that competence was being maintained. The use of summary tables would enable this to be audited more readily, but all necessary information was present in the detailed records in the files.

5.2.4	**Job descriptions**
	Description/evaluation: Not evaluated by this assessor.
5.3	**Accommodation and environmental conditions**
	Description/evaluation: The Conditioned environment is now clearly capable of maintaining the conditions specified in ISO139 for textile tests. The continuous thermohydrograph recorder, although not calibrated shows a sufficiently constant trace to support this conclusion. The digital measuring device T-793 (TLP-37) shows that the temperature and humidity are at the correct levels. However, it (together with the older wet/dry bulb system T-756 (TLP-76)), cannot indicate to the accuracy defined in ISO139 (namely ±0.1°C & ±0.1%RH). Their calibration certificates contain supposed observations which do not agree with the precision available. Two further Minor NC's were noted, relating to actions when electrical supply interruptions occur, and some extra 'mapping' verifications of the conditions.
	Non-conformity no See NC082 & 083; and H & J in Minor NC list.
5.4	**Test and calibration methods and method validation**
	Summary/Conclusion: International and US national Standards are in use for all the tests. *Non-conformity no*
5.4.1	**General**
	Summary/Conclusion: The methods are suitable for the customers' needs. Because there are slight differences between ISO & ASTM Standards for environmental conditioning, the lab has perforce to choose one set of conditions viz those to ISO139. The Standards are supplemented by in-house procedures which are well written and properly controlled.
5.4.2	**Selection of methods**
	Description/evaluation: The Standards in use are the latest versions, and the lab has determined that it can perform these Standard tests.
5.4.3/ 5.4.4	**Laboratory-developed methods/ Non-standard methods**
	Description/evaluation: N/A

5.4.5	**Validation of methods**
	Description/evaluation: The lab has validated that it meets the requirements of the tests, (the ASTM's of which contain precision and bias information), by participation in PT and lab-arranged ILC. *Non-conformity no* --
5.4.6	**Estimation of uncertainty of measurement**
	Description/evaluation: The lab is to be commended for its considerable efforts in the past year in estimating uncertainty of measurement. Whilst these estimates are in themselves probably of the right order, they still need further work to refine them, as laid out in NC081 *Non-conformity no* --
5.4.7	**Control of data**
	Description/evaluation: The lab has an extensive system of checking the derived calculations from the test observations. *Non-conformity no* --
5.5	**Equipment**
	Description/ valuation: The deficiencies in test equipment identified in 2007 have been remedied, eg Reference Grey Scales & Martindale foam & wool abradent obtained. However, there are some small aspects of equipment, maintenance, and operation which still need improvement. These were not thought to be systematic, being related to different sub paragraphs of 5.5 and largely unconnected. They are mostly part ofthe extension tests and all except one have been left as Minor NC's
	Non-conformity no See A, B, C, D, E (now part of NC082), I, K, M, O, & Q
5.6	**Measurement traceability**
	Summary/conclusion: The calibration of the equipment is the major area of the laboratory's operations which need urgent improvement. Part of the problems relate to traceability of mass and temperature calibrations within Pakistan, and, as such, are not the direct fault of the laboratory, but who will need to keep-up pressure on the calibration chain to help ensure that full traceability is developed during 2008. *Non-conformity no* --

5.6.1	**General**
	Description/evaluation: Many pieces of equipment, eg Martindale Abrasion Machine, Twist tester, Micronaire, Yarn Strength Tester etc are correctly labelled by the lab as still needing calibration. However, the scope cannot be extended until evidence is seen to confirm that proper calibrations of such equipment have been achieved. This forms part of NC 082.
5.6.2	**Specific requirements**
5.6.2.1	**Calibration**
	Description/evaluation: N/A
5.6.2.2	**Testing**
	Description/evaluation: The deficiencies in both existing equipment, and that to be used in extension-to-scope tests, are detailed in NC082. The lab agreed to remove from use a balance (TPL-05), which is only internally calibrated, and use an available externally calibrated balance instead (see N in list of Minor NC's)
5.6.3	**Reference standards and reference materials**
	Description/evaluation: The lab has reference standards/materials for some tests (eg Micronaire), but has not yet obtained a suitable reference fabric for the Martindale Abrasion test (see F in list of Minor NC's)
5.7	**Sampling**
	Description/evaluation: The lab takes specimens and sub-samples from customer selected samples. It demonstrated a good level of competence it these selection processes *Non-conformity no* --
5.8	**Handling of test and calibration items**
	Description/evaluation: The lab has good systems of sample handling and conditioning (and has obtained sample racks for this purpose since the last visit. *Non-conformity no* --
5.9	**Assuring the quality of test and calibration results**
	Description/evaluation: The lab takes part in AATCC and Testex PT schemes for its current and proposed tests. It has also arranged ad hoc ILC comparisons during the last year, and has a good programme of internal comparisons of the test operatives.

	Non-conformity no --
5.10	**Reporting the results**
	Description/evaluation: Evaluated by lead assessor. *Non-conformity no* --
5.10.5	**Opinions and interpretations**
	Description/evaluation: N/A *Non-conformity no* --
	Flexible scope
	Description/evaluation: N/A
NA Dok	**Other requirement documents**
No. 51	**Flexible accreditation**
	Description/evaluation: N/A *Non-conformity no* --
No 14	**Rule for use of Norwegian Accreditation's (NA) logo and for references to NA's accreditation**
	Description/evaluation: Not evaluated by this assessor *Non-conformity no* --
No 25/31	**Accreditation conditions**
	Description/evaluation: Not evaluated by this assessor *Non-conformity no* --
No. 26a	**Requirements for calibration and control of weighing machines in accredited testing laboratories**
	Description/evaluation: Subject to extensive investigation by NA, and not examined in detail during the visit – however see NC082 for some relevant observations *Non-conformity no* --
No. 26b	**Calibration of thermometers in connection with accreditation of test laboratories**
	Description/evaluation: As 26a *Non-conformity no* --

No 52	Expression of the uncertainty of measurement in calibration (EA-4/02)
	Description/evaluation: N/A *Non-conformity no* --

6. Demonstrations	Method identity/parameter/ object:	Demonstrated by or discussed with:
	ISO12947 Martindale Abrasion	Saeed ul Hasan
	ISO17202 & ASTMD1422 Twist	Saeed ul Hasan
	ISO2062 &ASTMD2256 Yarn Tensiles	Z ul Rehman
	ISO2403 & ASTMD1448 Micronaire of Cotton	Saeed ul Hasan
	ISO6741-1 & ASTMD2495 Moisture in Cotton	Hafiz abu Bakar
	ISO13397 & ASTMD1424 Elmendorf tear	Saeed ul Hasan
	ISO12945 & ASTMD4970 Martindale Pilling	Saeed ul Hasan
	ISO 7211-1 &ASTMD1059 Yarn count	Z ul Rehman
	ISO7211-5 & ASTMD3775 Fabric Count	Z ul Rehman
	ISO1833 (PE-Cotton)	Muhammad Amin
	ISO105E04 Perspiration Fastness	Anjun Rehman
7. Follow up non-conformities from the last visit:	The NC's raised during the 2007 visit have been largely addressed. The conditioning environment now appears to be functioning, although its measuring equipment still needs further improvement. Many of the items necessary for testing, and which were missing in 2007 have now been procured, with just one or two outstanding (for the tests which were not granted in 2007). The lab has put in a lot of effort on estimating test uncertainties, and in PT/ILC	
8. Notes/summary/ conclusion	The lab has continued to improve over the last year. Major advances are evident in Environment, PT, and Uncertainty. The staff are clearly competent at routine testing, and enthusiastic about further improvement. However, Calibration remains a major weakness. In part this reflects calibration problems affecting the whole of Pakistan e.g. in mass and temperature, but also a lack of appreciation in the lab's own role in ensuring that its calibrations meet the requirements of ISO17025, and in a timely way.	
9. Next visit	Calibration Reports	

The undersigned states that the content in the report is not in conflict with NA's policy and practice.

16 April 2008, Robert Stocks
technical assessor

24.04.08 Jane Grendahl
lead assessor

NORSK
AKKREDITERING

ACCREDITATION DOCUMENT

TEST 221

National Textile University
Sheikhupura Road
Faisalabad-37610
Pakistan

The scope of accreditation is P07 Physical testing og P12 Chemical analysis in accordance with the specifications on the following pages in this document.

The accreditation was first time granted 24.09.2007 and given according to Parliamentary Proposition no. 106 (1989/1990) and the Statutes of Norwegian Accreditation , established by Royal Decree of 7 October 1993
The laboratory complies with the requirementes in NS-EN ISO/IEC 17025 (2005)

The accreditation requires regular surveillance, and is valid until 24.09.2012.
The decision of accreditation made by Norwegian Accreditation implies that the organisation has been found to fulfil the requirements for accreditation within the scope.
The organitation itself is responsible for the results of performed measurements.

NORWEGIAN ACCREDITATION

22.10.2008
Date

Norwegian Accreditation

Accreditation document
Accreditation no. TEST 221

Administrative/geographical unit:
National Textile University
Sheikhupura Road
Faisalabad-37610
Pakistan

Permanent facility

P07 Physical testing

Object	Parameter	Reference standard	Identity of internal	Comments
Textiles -- Cotton fibres	Determination of micronaire value	ISO 2403		
Fiber	Micronaire Reading of Cotton Fibers	ASTM D 1448-05		
Textiles -- Cotton fibres	Determination of length (span length) and uniformity index	ISO 4913		
Fiber	Standard Test Method for Length and Length Uniformity of Cotton Fibers by Photoelectric Measurement	ASTM D 1447-07		
Textiles -- Cotton fibres	Determination of breaking tenacity of flat bundles	ISO 3060		
Fiber	Standard Test Method for Breaking Strength and Elongation of Cotton Fibers (Flat Bundle Method)	ASTM D 1445-05		
Textiles -- Fibres and yarns	Determination of commercial mass of consignments -- Part 4: Values used for the commercial allowances and the commercial moisture regains	ISO/TR 6741:4		
Fiber	Moisture in Cotton by Oven-Drying	ASTM D 2495-07		
Textiles -- Yarns from packages	Method of test for breaking strength of yarn by the skein-method	ISO 6939		
Yarns	Standard Test Method for Breaking Strength of Yarn in Skein Form	ASTM D 1578-06		
Textiles -- Yarns from packages	Determination of single-end breaking force and elongation at break	ISO 2062		

22.10.2008
Date

Norwegian Accreditation

Accreditation document
Accreditation no. TEST 221

Administrative/geographical unit:
National Textile University
Sheikhupura Road
Faisalabad-37610
Pakistan

Permanent facility

P07 Physical testing

Object	Parameter	Reference standard	Identity of internal	Comments
Yarns	Tensile Properties of Yarns by the Single-Strand Method	ASTM D 2256-02		
Textiles -- Yarn from packages	Determination of linear density (mass per unit length) by the skein method	ISO 2060		
Yarns	Yarn Number Based on Short-Length Specimens	ASTM D 1059-01		
Textiles -- Woven fabrics -- Construction	Determination of linear density of yarn removed from fabric	ISO 7211-5		
Yarns	Standard Test Method for Linear Density of Yarn (Yarn Number) by the Skein Method	ASTM D 1907-07		
Yarns	Twist in Single Spun Yarns by the Untwist-Retwist Method	ASTM D 1422-99		
Textiles -- Yarns	Determination of twist in yarns -- Direct counting method	ISO 2061		
Yarns	Standard Test Method for Twist in Yarns by Direct-Counting	ASTM D 1423-02		
Textiles	Determination of fabric propensity to surface fuzzing and to pilling -- Part 1: Pilling box method	ISO 12945-1		
Fabrics	Method for determination of the resistance to pilling and change of appearance of fabrics	BS 5811		
Textiles	Determination of fabric propensity to surface fuzzing and to pilling -- Part 2: Modified Martindale method	ISO 12945-2		

22.10.2008
Date

Norwegian Accreditation

Accreditation document
Accreditation no. TEST 221

Administrative/geographical unit:
National Textile University
Sheikhupura Road
Faisalabad-37610
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Permanent facility

P07 Physical testing

Object	Parameter	Reference standard	Identity of internal	Comments
Fabrics	Pilling Resistance and Other Related Surface Changes of Textiles Fabrics (Martindale Pressure Tester Method)	ASTM D 4970-05		
Fabrics	Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test)	ASTM D 5034-08		
Textiles. Woven fabrics	Determination of number of threads per unit length	ISO 7211-2		
Fabrics	Fabric Count of Woven Fabric	ASTM D 3775-03		
Tear properties of fabrics	Determination of tear force using ballistic pendulum method (Elmendorf)	ISO 13937-1		
Fabrics	Tearing Strength of Fabrics by Falling-Pendulum Type (Elmendorf) Apparatus	ASTM D 1424-07a		
Textiles -- Woven fabrics	Determination of mass per unit length and mass per unit area	ISO 3801		
Fabrics	Mass Per Unit Area (Weight) of Fabric	ASTM D 3776-07		
Textiles	Determination of the abrasion resistance of fabrics by the Martindale method -- Part 1: Martindale abrasion testing apparatus	ISO 12947-1		
Fabrics	Standard Test Method for Abrasion Resistance of Textile Fabrics (Martindale Abrasion Tester Method)	ASTM D 4966-98		

22.10.2008
Date

Norwegian Accreditation

Accreditation document
Accreditation no. TEST 221

Administrative/geographical unit:

National Textile University
Sheikhupura Road
Faisalabad-37610
Pakistan

Permanent facility

P12 Chemical analysis

Object	Parameter	Reference standard	Identity of internal	Comments
Textile, fabrics	Colour fastness to perspiration	ISO 105-E04	TP-01	.
Textile, fabrics	Colour fastness to Perspiration	AATCC-15	TP-01	.
Water-Extract from Wet Processed Textiles	pH of the Water-Extract from Wet Processed Textiles	AATCC-81	TP02	.
Textile, fabrics	Colour fastness to domestic and commercial laundering	ISO 105-C06	TP-03	.
Textile, fabrics	Colorfastness to Sodium Hypchlorite Bleach in Home Laundering	AATCC-61	TP-03	.
Textile, fabrics	Colour fastness to rubbing	ISO 105-X12	TP-04	.
Textile, fabrics	Colorfastness to Crocking. AATCC Crockmeter Method	AATCC-8	TP-04	.
Textile, fabrics	Color fastness to washing	Internal method	TP-05	Based on obsolete standard ISO 105-C01 : 1989
Textile, fabrics	Color fastness to washing	Internal method	TP-06	Based on obsolete standard ISO 105-C02 : 1989
Textile, fabrics	Color fastness to washing	Internal method	TP-07	Based on obsolete standard ISO 105-C03 : 1989
Textile, fabrics	Color fastness to washing	Internal method	TP-08	Based on obsolete standard ISO 105-C04 : 1989
Textile, fabrics	Color fastness to washing	Internal method	TP-09	Based on obsolete standard ISO 105-C05 : 1989
Textile, fabrics	Colorfastness to Drycleaning	AATCC-132	TP-11	.
Textile, fabrics	Colorfastness to Drycleaning	ISO 105-D01	TP-11	.
Textile, fabrics	Colorfastness to Water	ISO 105-E01	TP-12	.
Textile, fabrics	Colorfastness to Water	AATCC-107	TP-12	.
Textile, fabrics	Absorbency of Bleached Textiles	AATCC-79	TP-13	.
Textile, fabrics/yarn	Fiber Analysis: Quantitative	ISO 1833	TP-14	.
Textile, fabrics/yarn	Fiber Analysis: Quantitative	AATCC-20A	TP-14	.

22.10.2008
Date

Norwegian Accreditation

Accreditation document
Accreditation no. TEST 221

Administrative/geographical unit:
National Textile University
Sheikhupura Road
Faisalabad-37610
Pakistan

Permanent facility

P12 Chemical analysis

Object	Parameter	Reference standard	Identity of internal	Comments
Textile, fabrics	Determination of pH of aqueous extract		TP-02	
Textile, fabrics	Colorfastness to Sodium Hypochlorite Bleach in Home Laundering	AATCC-188	TP-10	

22.10.2008
Date

Norwegian Accreditation

Norsk Akkreditering

To NA accredited and applicant laboratories in Pakistan

Deres ref./Your ref.	Vår ref./Our ref.	Dato/Date
		08.04.08

Requirements for measurement traceability

In October 2007 it was communicated to all NA accredited test laboratories that to comply with the ILAC, EA and NA policy on measurement traceability, balances, thermometers and other important equipment used in accredited methods would have to be calibrated by

- A laboratory which is accredited by an accreditation body which is a signatory to the ILAC/ EA/ APLAC MRA

or

- By a national metrology institute which has signed the BIPM MRA.

NA's policy is described in NA Doc. 25/31, which has been made available to all NA accredited laboratories. This policy has been enforced in all NA accredited laboratories both in Norway and abroad. In Pakistan, laboratories were given some time to comply with this policy, as acceptable traceability is not easily available.

During the surveillance visits in December 2007 and January 2008 it became clear that several laboratories have still not obtained acceptable measurement traceability for their equipment. This mainly relates to balances and thermometers.

By this letter, all NA accredited laboratories are informed that failure to comply with the policy for measurement traceability by the end of 2008 will result in suspension of the methods for which the equipment is relevant. We do understand that this requires some economical effort, but as an EA MLA signatory NA is obliged to enforce this policy.

In this situation, the simplest solution for calibration of thermometers may be to purchase new thermometers which have been calibrated by an accredited laboratory abroad.

For balances, it is currently necessary that an acceptable calibration laboratory (according to the policy mentioned above) calibrate the balances on-site in Pakistan. Some laboratories have asked if it is acceptable to purchase weights which are calibrated by an acceptable laboratory and then they would perform the calibrations of the balances themselves. The answer to this is that internal calibrations are only accepted after an application has been received and assessed by NA's assessors, measurement

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uncertainty has been calculated and the laboratories have participated in an inter laboratory comparison for these measurements.

Another issue that has been raised has to do with the calibration certificates. It is necessary to specify that you require accredited calibration of your equipment. This means that you must require calibration certificates which contain the logo of the accreditation body with the accreditation number/ ID of the calibration laboratory. Calibration certificates issued by organisations/ laboratories which are certified (e.g. to ISO 9000) are not accepted.

Laboratories which currently have open NCs regarding lack of acceptable traceability must as a minimum present a plan for how to solve this in a satisfactory way. Copies of calibration certificates must be sent to Norwegian Accreditation by 1 December 2008 at the latest.

Laboratories to be assessed in 2008 will receive NCs if traceability is not acceptable.

PNAC accredited laboratories (whether it is NPSL or other laboratories) will be accepted as soon as PNAC has signed the APLAC MRA.

Yours sincerely,

Inger Cecilie Laake

Inger Cecilie Laake
Technical Director
Norwegian Accreditation

Cc: Zawdu Felleke, Unido
Abdul Rashid, Director General/Pakistan National Accreditation Council
Technical officers in NA
Relevant NA technical assessors.