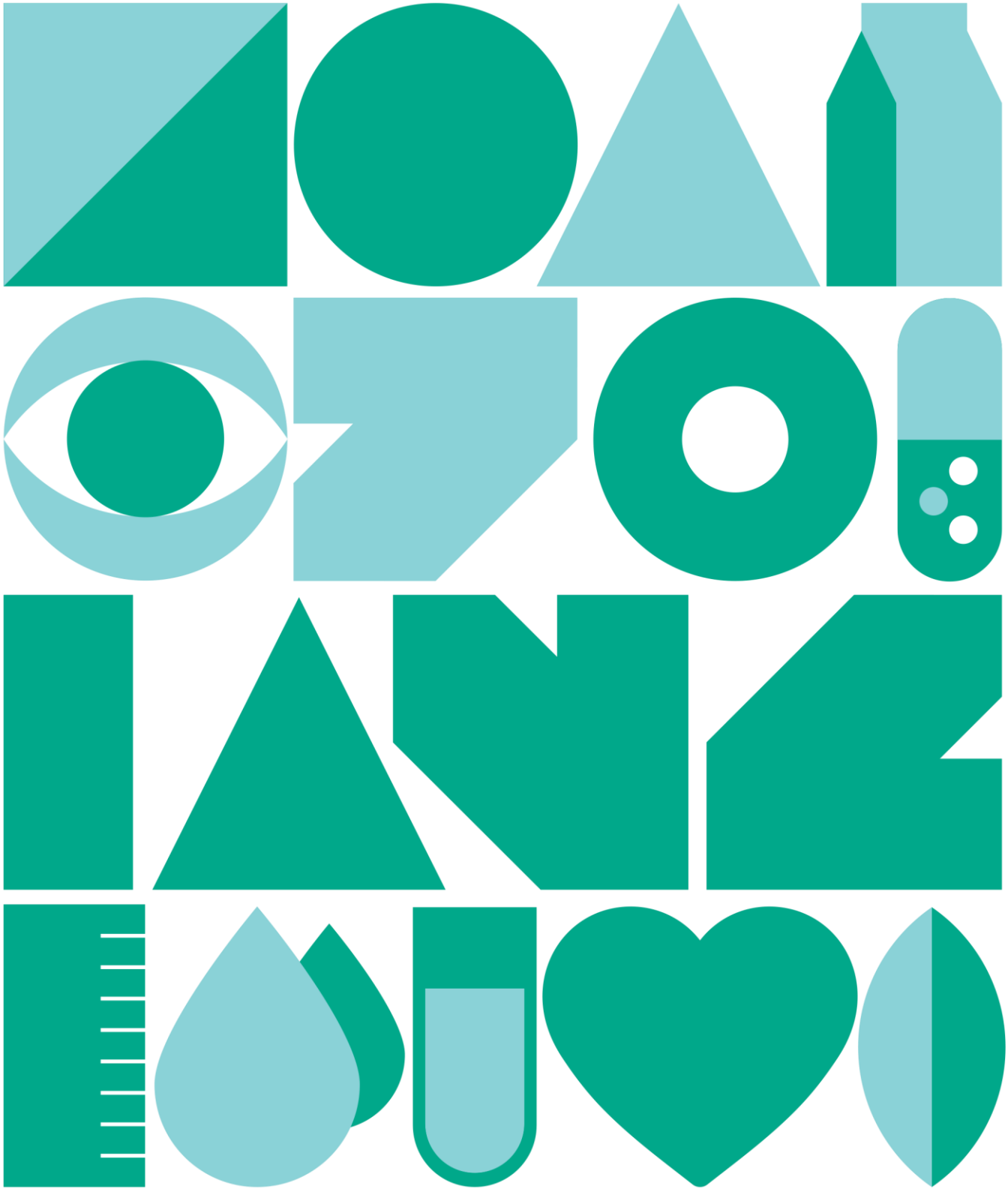

Supplementary Criteria for Accreditation
Seconded Sampling

Fourth Edition July 2020

The NZ mark of competence
Tohu Matatau Aotearoa

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Supplementary Criteria for Accreditation

Mechanical Testing Laboratory Accreditation Programme

Seconded Sampling

AS LAB C4.5

Fourth Edition July 2020

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Edition Statement

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2	Revised, reformatted and renamed. Previously '*Laboratory Operations by Seconded Personnel*'	February 2008	978-0-908611-27-0
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4	Updated to reflect Standards changes; rebranded	July 2020	To be advised

Contents

1 Introduction

1.1 Supplementary Criteria provide additional information, with regard to specific types of test, to the General Criteria for Accreditation. They provide detail or add extra information to the generally stated requirements of IANZ General Criteria for Accreditation (ISO/IEC 17025) and IANZ Specific Criteria for the particular field.

1.2 This supplementary criteria details the specific requirements covering the accreditation of field sampling and tests on fresh concrete by staff who are not directly employed by the laboratory, but who are seconded to the laboratory for these tasks.

There are three areas (types of sampling/testing) for which extension under this scheme has been granted:

4.01 Aggregates

Sub-class: Sampling of roading aggregates

4.02 Bituminous Materials

Sub-class: Sampling of bituminous paving mixtures

Sampling of bituminous materials

4.04 Concrete

Sub-class: Sampling fresh concrete

Slump

Spread

Moulding & field curing of concrete test cylinders

Transporting of concrete test cylinders to the laboratory

Mortar or Grout Tests

It must be emphasised that the tests for which extension may be granted are limited to those basic tests which would normally be carried out only in the field and for which the laboratory must already be accredited.

1.3 These requirements were previously described in Telarc Technical Notes 7 and 15. It is a subsidiary document to IANZ Specific Criteria – Mechanical Testing (AS LAB C4), which includes general requirements for mechanical testing laboratories. This document must be read in conjunction with the current issues of IANZ publications:

(a) ISO/IEC 17025 *General Requirements for the Competence of Testing and Calibration Laboratories*

(b) IANZ, *Specific Criteria for Accreditation: Mechanical Testing* (AS LAB C4)

(c) IANZ, *Procedures and Conditions for Accreditation* (AS 1)

1.4 The addition of this scheme to the Scope of Accreditation may be granted only when the laboratory has:

(a) Included all aspects as detailed in the checklist in Appendix 2.

(b) Demonstrated that the laboratory's approved signatory, and where necessary the designated on-site personnel, have a sound understanding of the relevant techniques.

This addition may require a technical assessment involving a Technical Expert.

1.5 Included in this document is information on contractual arrangements, quality system requirements, site requirements, equipment, training, test records and other aspects of good laboratory management practice.

2 Background

Contract documents from specifiers (such as NZ Transport Agency and local and regional authorities) often require IANZ endorsed reports for field testing of fresh concrete and for endorsed laboratory test reports to include sampling. For an accredited laboratory to endorse the work being carried out, the work must be done by staff directly employed by the laboratory - often at considerable cost to the supplier or contractor.

To avoid these costs, sub-contractors will often carry out these tasks themselves. The final test reports issued by accredited laboratories in these cases can be IANZ-endorsed only in respect of the work actually carried out in the laboratory. The results are then tagged as applying to the samples "as received" and the field work cannot be covered by the IANZ endorsement.

This document offers an arrangement in which the field sampling and tests on fresh concrete (including preparation of concrete test specimens) can be endorsed even when some of the personnel involved in the work are not direct employees of the accredited laboratory.

The principal adopted is that field samplers/testers must carry out the work as though they were employees of the laboratory. They must be entirely accountable to the laboratory, which in turn must hold the right to direct any work being carried out.

In the absence of the "employer-employee" link in this scheme, a number of safeguards are required and accreditation of a laboratory under this scheme is conditional on constant and rigid adherence to the criteria contained in this document.

The criteria may be summarised as follows:

(a) The scheme will be administrated as an extension to the Scope of Accreditation of laboratories already holding accreditation for the sampling/testing involved. The scheme has been allocated the class of test 4.15

(b) There must be an agreement between the laboratory and the employer of the personnel involved which effectively transfers the employer/employee responsibility link to the laboratory when laboratory work is being carried out

(c) The scheme applies to individually identified personnel who can satisfy the accredited laboratory as to their competence to perform the sampling/testing operations

(d) Standard sampling/testing procedures must be used

(e) The accredited laboratory's Quality System must include the policy, responsibilities and procedures outlined in this document.

(f) The laboratory shall review and record information relating to risks to impartiality and confidentiality arrangements for any seconded sampling personnel, to ensure they continue to remain impartial and any information obtained relating to the laboratory's activities remains confidential.

It is most important to emphasise that these are the minimum operating safeguards considered necessary when using personnel not in the direct employ of the laboratory. A laboratory operating this scheme may include any other aspects, as it sees fit, to provide additional security.

A laboratory operating this scheme must consider very carefully the authority it is delegating to outside personnel while retaining the responsibility for the quality of their work. At all times the laboratory must reserve the right to not accept work carried out by seconded personnel in the event that any doubt exists.

3 Class of Test

To formalise the administration of this scheme an individual class of test has been allocated, as follows:

4.15 Sampling & Fresh Concrete Tests by Seconded Personnel

(a) Sampling

(i) Aggregates

(ii) Bituminous materials

(iii) Fresh concrete, mortar or grout

(b) Field tests on fresh concrete, mortar or grout

For laboratories accredited to operate this scheme, this class will be entered on the laboratory's Scope of Accreditation.

4 Operational Detail

Fundamental to the accreditation of this scheme is a sound and well documented set of operating procedures. In addition to documenting its procedures, a laboratory must be able to demonstrate that it can supervise the work of others who are not direct employees.

4.1 Agreement

The field sampling/testing personnel being recognised under this scheme will not be direct employees of the laboratory. As such, the contractual employer/employee link is missing. Without this legal link there can be no formal authority by the laboratory over the seconded personnel and, similarly, no responsibility by the seconded personnel toward the laboratory. To overcome this shortfall there shall be a formal agreement between the laboratory and the employer of the seconded personnel concerned which effectively moves the employer/employee link over to the laboratory when laboratory work is being carried out. This ensures that the laboratory has the authority to direct the work required and ensure that adequate quality standards are maintained.

4.1.1 A formal written agreement similar to that in Appendix 1 will be required. The agreement does not have to be in this exact form but it shall include all the points covered. It should also include, or make reference to, any other matters of a financial and/or responsibility nature relating to the particular arrangement.

4.1.2 The agreement may be of an ongoing nature or be limited to a job by job basis. There is no restriction on the time coverage of the agreement.

4.2 Laboratory Staff

4.2.1 Staff responsible for supervising the work of field sampling/testing will be designated "Approved Signatories" for this extension to the Scope of Accreditation and shall fulfil the obligations of Approved Signatories as described in *Specific Criteria of Accreditation - Mechanical Testing* (AS LAB C4).

4.2.2 The Approved Signatories responsible for the work of the field personnel will need to be satisfied that the field work is carried out competently and conscientiously. They will need to ensure that the required equipment and facilities are available and that seconded personnel are not subject to a conflict of priorities or other interests when work for the laboratory is carried out.

4.2.3 Any training provided to seconded personnel shall be carried out by the Approved Signatory with the assigned responsibility (i.e. holds class of test 4.15). Delegation is not permitted.

4.2.4 IANZ assessment procedures will not necessarily involve scrutiny of field personnel registered with the laboratory, but emphasis will be placed on the competence of the Signatory to exercise appropriate control over the training and performance of the registered personnel.

4.3 Seconded Personnel

4.3.1 There is no restriction on the number of seconded personnel that a laboratory may maintain on its register (Refer Appendix 3). However, the laboratory needs to consider very carefully the resources it has available to implement the scheme. Should the procedures not be implemented as required, the laboratory places itself in a very vulnerable position.

When contemplating adding a new person to the system, very careful consideration should be given to the benefits being received versus the risks that will be accepted.

4.3.2 There shall be records for each registered person which comprise as a minimum:

(a) A signed agreement with the person's employer;

(b) Records of their qualifications, training and work experience;

(c) Training and competency records;

(d) Annual audit details;

(e) Records of any periodic on-site checks made by supervisory staff.

These details shall be retained for the same period as any associated test records.

4.4 On-site Work Place

4.4.1 The places where sampling/testing are carried out and where any samples are stored before delivery to the accredited laboratory shall comply with the requirements of the relevant standard test methods.

4.4.2 Where the method for a field test states specific site requirements (e.g. tests on fresh concrete) then these shall be checked and approved by the laboratory prior to tests being accepted from this site. A register of approved sites shall be maintained and test records **shall** show what site was used.

4.4.3 An annual audit of each approved site shall be undertaken. This can be combined with the annual audit of an approved field operator.

4.4.4 It is the responsibility of Approved Signatories to ensure that the requirements of the standard test methods are met, that the seconded personnel maintain their work places and that any sampling/testing equipment is in acceptable condition.

4.5 Equipment

4.5.1 The relevant standard test methods will normally define any equipment to be used.

4.5.2 Approved Signatories shall be satisfied that the proper equipment is available for use, that proper storage facilities are available and that regular checking is carried out to demonstrate continued compliance with the requirements of the standard test methods. **Such checks shall be recorded and be available for review during an IANZ assessment.**

4.5.3 Any site equipment requiring calibration shall be under the control of the laboratory's quality system.

4.6 Sampling/Test Methods

4.6.1 In general, extension to the Scope of Accreditation of a laboratory under this scheme will be confined to sampling/testing carried out in accordance with published standards such as NZS 4407, NZS 3111, NZS 3112, ASTM D979, ASTM D140, etc.

4.6.2 Each field sampler/tester shall have an up to date copy of the relevant sampling/test methods readily available at all times. If clarification of the standard procedure is required, this shall be provided as a controlled in-house test method or controlled supplement to the published method. Uncontrolled documentation must be avoided.

4.6.3 Procedures for handling, packaging and delivering samples to the laboratory shall be documented and appropriate records retained.

4.7 Sampling/Test Records

4.7.1 Records of the quality of field samples and test specimens that are delivered to the laboratory for subsequent processing, their manner of delivery and the information accompanying them will need to demonstrate that the field work has been carried out in accordance with the relevant standard test methods.

4.7.2 Records of sample condition on receipt by the laboratory shall be maintained. Samples not complying fully with the requirements of the test methods shall not be used for IANZ-endorsed testing work.

4.7.3 All relevant information shall be reported to the accredited laboratory on a suitable pro forma sampling/test worksheet provided by the laboratory and signed by the approved sampler/tester to certify that the work has been in accordance with the relevant standards.

Sampling sheets shall show all required sampling details, including the random sampling plan (see NZS 4407 clause 2.2 and ISO/IEC 17025:2017 clause 7.3.1).

4.7.4 Sampling forms may be designed to suit the requirements of the laboratory or a particular job but they shall provide for all the information specified in the relevant methods and incorporate all the requirements of accreditation.

For concrete, mortar or grout testing, the test records shall clearly show the site location, the dates and times when tests or parts of tests were performed and by whom. When making concrete cylinders for compression

testing, the records shall show the number of moulded cylinders or tests rejected as unsatisfactory both on-site and at the laboratory, the reasons for the rejection and the appropriate follow-up action.

Note: Special pro forma sheets are usually not necessary and it is normal for seconded personnel to use the standard documentation developed for laboratory use. Care needs to be exercised to ensure that seconded personnel use up-to-date sheets (i.e. document control).

4.8 Quality System

4.8.1 The laboratory's quality system (manual) shall cover all aspects associated with the operation of this scheme.

4.8.2 As well as documenting the policies, responsibilities and procedures for control of the field work (as required by this document), all quality system records covering proper operation of the scheme shall be referenced (e.g. training records for on-site personnel, records of non-conforming samples/tests, specimen delivery records and complaints). Similarly, full records of any follow-up activity (i.e. corrective action) with regard to supervision, sub-standard work, complaints, etc., is required.

4.8.3 All documents, procedures and forms used shall be part of the quality system documentation. Quality records shall be retained for ten years.

4.8.4 Laboratories shall maintain a register of seconded personnel. See 4.9.

4.8.5 The register and all records relating to seconded personnel shall be confidential to the laboratory but shall be made available for review during the course of any IANZ assessment.

4.9 Register of Samplers/Testers

4.9.1 The register shall be a summary of other records and shall include the name of each person approved under the scheme. It shall also include, as a minimum, the methods they are approved for and the date of expiry of their recognition. It should also include the date of their last audit and the proposed date of their next audit.

4.9.2 The register shall be available for ready reference by staff at the point of sample entry into the laboratory's system. This will ensure that appropriate decisions will be made concerning the endorsement of sampling in all subsequent test reports.

4.10 Audit

4.10.1 An on-site audit of each approved sampler/tester shall be carried out at least annually to ensure that the requirements of this scheme are being maintained.

4.10.2 A pro forma audit checklist shall be developed for conducting these audits. These audit records are to be reviewed at laboratory management reviews.

4.10.3 The audit shall involve witnessing of all or part of the sampling or part-testing for which the seconded personnel have approval. Any corrective actions identified and recorded during audits shall be cleared within the agreed time. If necessary, further visits shall be made (and recorded).

4.10.4 Annual audits of seconded personnel shall be carried out by an IANZ Approved Signatory as defined in 4.2.1 above. Delegation is not permitted.

4.10.5 The administrative procedures and records for the operation of this scheme shall be included in the annual internal audit of the laboratory operations.

Audit questions will include:

(a) Are agreements for all parties complete and up to date?

(b) Is the register of samplers/testers up to date?

(c) Are the annual personnel audits being conducted at the designated time?

(d) Are the annual approved site testing location audits being conducted? (For tests on fresh concrete)

(e) Are records of the audits available?

(f) Are any shortcomings, in training or test location, being identified and corrective action taken as necessary?

Appendix 1: Example of an Agreement

LETTERHEAD

Agreement between: ..... (laboratory)

And: ..... (employer of seconded personnel)

Laboratory

On behalf of the laboratory, I confirm our prior discussions regarding laboratory work to be undertaken in the field by your personnel working as an extension of our IANZ accredited laboratory. The agreement under which we provide our services must be in accordance with IANZ Supplementary Criteria AS LAB C4.5 "Seconded Personnel". The agreement under which International Accreditation New Zealand (IANZ) permits us to endorse test certificates, which include the results of such sampling/testing, are summarised as follows:

1. Your personnel must act in relation to all such testing as a person seconded to our laboratory staff and must be accountable entirely to ourselves for that work.
2. Your personnel must be adequately trained.
3. The equipment and the on-site working area must comply with the requirements of the relevant methods specified in the Contract Document.
4. Procedures must not deviate from the specified methods.
5. Records generated must meet laboratory requirements at all times.

In order that we may comply with the above IANZ requirements, I seek your agreement to the following:

1. Persons nominated for field sampling/testing must be adequately trained to our satisfaction.

   Note: We can provide such training if required. If the nominee has had adequate training elsewhere, and a written record of that training, a demonstration of competence may be all that is required.

2. The arrangement whereby we can endorse test results applies only to those individual personnel who are accepted by us as competent to undertake the specified sampling/testing. Work carried out by other personnel will not be accepted for IANZ endorsement purposes.
3. Approved personnel shall have sampling/testing defined as a distinct job function by you as employer under sufficient authority or direction so that sampling/testing procedures will not be compromised as a result of other job priorities.
4. You shall instruct in writing all personnel subject to this agreement to always follow without interference all of our directions concerning laboratory work including: communications, timing, procedures, equipment, environmental, maintenance, recording of data and transport of samples.
5. All necessary field equipment and facilities not provided by ourselves shall be provided and maintained by you to our satisfaction.
6. Approved personnel shall furnish all records that we may require.
7. If any of the above conditions are not fulfilled or if in our opinion any other aspect has not been carried out in the manner we require, we reserve the right to withhold IANZ endorsement from the relevant test report.
8. All approved field personnel and approved sites will be subject to an annual audit by ourselves to ensure on-going suitability.

Note: Other matters such as payment of appropriate costs, etc. may need to be included.

This agreement applies to the following seconded personnel and scope of work:

Seconded Personnel:	Scope:

For Laboratory:

Signed by: .....

Title: .....

Date: .....

For Employer of Seconded Personnel:

I agree to comply with the above and to provide your laboratory with the personnel listed above. I further agree that I will instruct them to fully comply with IANZ Supplementary Criteria AS LAB C4.5 as summarised above when working for your laboratory

Signed by: .....

Title: .....

Date: .....

Appendix 2: Review Checklist

Checklist for the review of documentation required for an application for Class of Test 4.15 covered by IANZ Supplementary Criteria – Seconded Personnel (AS LAB C4.5).

Objective

This checklist should be used in conjunction with IANZ Supplementary Criteria AS LAB C4.5 and the relevant / latest standard specifications (e.g. NZS 4402, NZS 4407, NZS 3111, NZS 3112, ASTM D979- etc.), to determine compliance.

Items Requiring Confirmation

Confirmation of the following may be obtained either by the review of documentation supplied by the laboratory prior to the on-site visit or by a review by IANZ staff on-site prior to the conducting of any practical demonstrations required.

1. Does the quality manual include procedures covering all the following aspects?
   (a) Assignment of responsibilities to appropriate staff (for training, auditing, etc.)
   (b) Annual auditing;
   (c) How the audit reminder system will work (often included in the calibration reminder programme);
   (d) The staff secondment agreement and all other administrative pro forma sheets to be used (e.g. training records, summary register, audit checklist, etc.);
   (e) Control of all pro forma sheets being used;
   (f) The training to be provided to seconded personnel;
   (g) Description and controls for the documents to be provided to the seconded personnel (e.g. IANZ Supplementary Criteria AS LAB C4.5, applicable quality procedures, methods, data sheets, etc.);
   (h) Details of what data sheets will be used by seconded staff. (e.g. sampling sheets, test result sheets, etc.);
   (i) Details of any additional information required to be submitted with data sheets;
   (j) How laboratory staff responsible for receiving samples/test results will ensure that the requirements of Supplementary Criteria AS LAB C4.5 have been met (e.g. has the seconded person been audited within the last twelve months?);
   (k) Action that will occur in the event of non-conforming samples/tests being received from seconded personnel;
   (l) Details of circumstances that will require removal of a seconded person from the register;
   (m) Review of impartiality and confidentiality arrangements for any staff involved in seconded sampling, to ensure they continue to remain impartial and any information obtained relating to the laboratories (or seconded sampling) activities remains confidential.

   The above requirements are normally written in only a couple of pages of documented procedure (excluding pro forma sheets).
2. Is the applicant laboratory already accredited in the requested sampling/tests?
3. Are appropriate staff assigned the necessary responsibilities for operating the system?
4. Do the training packages contain all the necessary instructions, such as administrative requirements, sampling/test methods, sample identification, handling, storage & transport details, pro forma sheets, etc?
5. Have appropriate worksheets or sample submittal forms been developed, printed and distributed for use by all seconded personnel?
6. Do the sampling/test worksheets contain all of the required information, e.g. Sampling worksheet:
   (a) Date of sampling;

(b) Time of sampling;

(c) Type of sample;

(d) Identity and unique description of sample;

(e) Sampling method used;

(f) The random sampling plan;

(g) Identity and signature of sampler;

(h) Any special environmental conditions during sampling;

(i) What job/project sampling is for;

(j) Who the client is.

7. Are suitable sample containers and packaging provided/available for use?
8. Are the designated sample containers being used?
9. Are samples being received from on-site personnel, inspected and logged in upon arrival at the laboratory?
10. Is the sample condition on receipt being recorded?
11. Does the laboratory have a checklist for carrying out the annual audits?
12. Does the audit checklist include a review of the job descriptions and/or instructions provided to the seconded personnel regarding laboratory operations?

    This is most important as it directs the seconded person to carry out the instructions of the laboratory as though they were laboratory employees. Similarly, it provides the necessary authority for the laboratory to direct the work of others.

13. Is there a system for reminding supervisory staff that audits are due?

Appendix 3: Example Scheme

The following, while not mandatory, is a summary of a system which has proven by experience to be robust.

(a) The quality system concisely describes all elements of the system (see checklist).

It is important for the system to be as simple as possible. This ensures that the system will be easily administered by the laboratory as well as easily audited by IANZ. Obviously, if the system is simple to operate then it will be easy to keep up to date. If the system is easily audited, less time will be required during assessments.

(b) Clear responsibilities are assigned for all aspects.

(c) A standard "package" of documents is developed and provided to seconded personnel.

(d) A separate agreement is established for each person on the register (while this may appear an excess of paper, it makes it very much easier to ensure that each person has an agreement (i.e. quickly audited). It also makes it easier to upgrade/remove an individual's record if necessary (e.g. additional scope).

(e) A standard audit checklist is generated which can be used for both entry into the system (i.e. final approval process) and the annual audits.

(f) A summary register, often computerised, is generated that lists each person's name and includes columns to show dates of audits done/due.

(g) A system is generated for reminding supervisory staff that audits are due. Just as in calibrations, don't overlook the annual audit date. The records should show that the audits were carried out at the designated time and if the audit is postponed for valid reasons, the system should state the reason (and whether or not continuation of recognition is made). Being too busy to carry out the audits is indicative of a lack of laboratory resource and will be viewed as a shortcoming.

Similarly it may be that there are simply too many people on the register for existing staff to administer.

(h) Establish a file folder for all personnel records, and set it up as follows:

(i) The summary register is kept at the front of the folder for quick reference

(ii) The folder is subdivided appropriately. The first subdivision by company, the second subdivision by person (alphabetically)

(iii) All records pertaining to each individual are kept together (i.e. agreement, training records, audit records, etc.). This makes it easy to audit each record and avoids having to flick back and forth between like documents if all like documents are filed together (i.e. all agreements together, all audit records together, etc.). It also makes it much easier to see if records are missing.

(i) A copy of the summary register is located in the sample receiving area for quick reference.

(j) Sample receiving staff are trained in how the system works and in accepting responsibility for ensuring all requirements are being met.

The number of seconded personnel that an average laboratory can maintain depends entirely on the staff resources available. However, laboratories operating this scheme have found a maximum of around fifteen to be workable. Some laboratories have felt comfortable only with the number below ten.