Terms & Conditions for Approved Laboratories

Version 10

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1. INTRODUCTION

The Biofertiliser and Compost Certification "Schemes" (BCS and CCS respectively) are run by REAL. Certification bodies appointed by REAL ("Certification Bodies") provide independent certification services in relation to the Schemes, including the assessment of compost and anaerobic digestate producers (together "Producers").

The CCS provides a set of rules to enable the Certification Bodies to assess and verify that compost producers and the compost they produce conform with:

- the latest edition of the British Standards Institution (BSI)'s Publicly Available Specification (PAS) for Composted Materials (BSI PAS 100);
- the relevant environmental regulators' end-of-waste position:
    - the Environment Agency (EA) Compost Resource Framework
    - Natural Resource Wales (NRW's) Regulatory Position Statement (latest version)
    - Scottish Environment Protection Agency (SEPA's) Regulatory Position Statement (latest version)
    - The Compost Quality Protocol applicable in Northern Ireland; and);
- The CCS Scheme Rules (latest version).

The BCS provides a set of rules to enable the Certification Bodies to assess and verify that digestate producers and the digestate they produce conform with:

- the latest edition of the British Standards Institution (BSI)'s Publicly Available Specification (PAS) for whole digestate, separated liquor and separated fibre from the anaerobic digestion of source-segregated biodegradable materials (BSI PAS 110);
- the relevant environmental regulators' end-of-waste position:
    - the EA's Anaerobic Digestion Resource Framework
    - NRW's Regulatory Position Statement (latest version)
    - SEPA's Regulatory Position Statement (latest version)
    - The Anaerobic Digestion Quality Protocol applicable in Northern Ireland; and);
- BCS Scheme Rules (latest version).

REAL requires that Approved Laboratories test samples of compost and digestate supplied by participating Producers in accordance with the Agreement.

2. INITIAL APPOINTMENT AND RENEWAL

A laboratory's initial appointment (or, in the case of an Approved Laboratory, appointment renewal) is conditional upon demonstrated evidence of compliance with these T&Cs, including the technical and non-technical aspects, assessed by REAL using dependant and independent means detailed below.

2.1 Approval process

Laboratories that wish to become an Approved Laboratory to the Schemes must:

i. provide a completed application form (which can be requested from REAL),

ii. in respect of each Scheme that an application is made, provide three sets of test results on compost or digestate under PAS 100: 2018 and PAS 110:2014 (as applicable) that include all minimum quality and recommended parameters that are:

a. listed in Tables 3 and 4 of PAS 100:2018 for CCS and/or

b. listed in Table 1 of PAS 110:2014 for BCS;

iii. undergo an initial assessment by REAL; and

demonstrate satisfactory performance in relevant independent proficiency testing programmes The three full suites of tests must be performed on three different samples that were taken from one or more Producer sites in compliance with the relevant sampling guidance (available on the CCS and BCS websites or upon request from REAL). The test results will be used to populate data records and support assessment by REAL of how the laboratory complies with the Agreement.

Laboratories must undergo an initial assessment by REAL. Laboratories (including any subcontract laboratories) that are UKAS accredited for one or more required tests (see section 7.1 for specific requirements) will be assessed against these T&Cs only. Laboratories which are not UKAS accredited will have, in addition, an initial assessment of their broader quality management system (QMS).

REAL will provide the applicant laboratory with a written report on completion of the initial assessment documenting compliance with the Approved Laboratory T&Cs and, as applicable, non-compliance(s).

A laboratory may only become approved when REAL are satisfied that the laboratory has demonstrated they have the capability to deliver testing under the relevant Scheme(s). Following an initial appointment (see 2.2), the appointment will be renewed on an annual basis subject meeting the performance monitoring requirements at clause 3 and compliance with these T&Cs. A full annual audit (clause 2.4) will be conducted within six months of reappointment.

A non-UKAS accredited Approved Laboratory will be limited to testing 10% of suite samples per scheme (BCS and CCS) uploaded to the database in each 12-month period. Further guidance on the application and appointment process can be found on the Schemes' websites or can be requested from REAL. Contact details for REAL can be found at: http://www.renewableenergyassurance.org.uk/contact.

2.2 Initial appointment

The initial appointment will be for a period of six months.

2.3 Renewal

If the initial appointment is continued, the appointment will be renewed on the terms set out in clause 2 of this Agreement.

2.4 Annual Audit

For initial appointment and each 12-month renewal phase thereafter, REAL's assessment of compliance with these T&Cs shall include at least one visit to the premises of the Approved Laboratory and of any sub-contractor it may use (unless this is already audited by REAL as an Approved Laboratory). As for the initial assessment, Approved Laboratories which are not UKAS accredited will have, in addition, an audit of their QMS on an annual basis.

A summary audit report will be supplied by REAL to the Approved Laboratory following the audit listing any failures to comply with this Agreement and any other relevant observations/comments. Findings of non-

compliance shall be based upon evidence collected and observations made during the assessment, whether done before the audit, during that visit, or afterwards when corrective action evidence is being evaluated.

If non-compliances are found the Approved Laboratory must supply to REAL within a week from receiving the audit report a list of corrective actions addressing any non-compliance and indicating the maximum timescale for the completion of such corrective actions. Non-compliances must be addressed in a timely manner and within a maximum of one month from the audit report issue date.

Depending on the type and nature of the non-compliance REAL may request that the Approved Laboratory takes corrective actions immediately or may establish that one month is not sufficient to complete the required corrective action and therefore extend the timescale to a maximum of three months.

Depending on the type and nature of the non-compliance and whether this affects the validity of the test results, REAL may suspend testing until the non-compliance has been fully resolved.

3. LABORATORY PERFORMANCE MONITORING

3.1 Spot check visits

REAL reserves the right to carry out one or more extra audits (in person or virtual) if these are required to verify that any non-compliance has been addressed by the Approved Laboratory and any sub-contractor it may use. The costs associated with any additional audits carried out shall be borne by the Approved Laboratory but shall be kept as low as reasonably possible.

An Approved Laboratory agrees (and shall procure the agreement of any sub-contractor it may use) to co-operate with any planned or unannounced spot check external audits carried out by REAL or an external organisation appointed by REAL.

3.2 Proficiency testing programmes / Interlaboratory comparison

An Approved Laboratory shall (or where the Approved Laboratory has sub-contracted any part of the Services it shall procure the sub-contractor to) register and participate in any independent proficiency testing (PT) programme specified by REAL for some or all of the relevant parameters.

If and when such a new PT programme becomes available, or an interlaboratory comparison is setup , REAL reserves the right to extend this agreement to require Approved Laboratories to participate in that programme/comparison.

3.3 Testing for Salmonella spp. and Escherichia coli

Since 2022, the Schemes have moved from the VETQAS proficiency programme for microbial pathogens to the LGC Animal Feeds Proficiency Testing Scheme (AFPS). An Approved Laboratory shall participate in two specific components of the AFPS - Detection of *Salmonella* spp. (PT-AF-06) and Enumeration of *Escherichia coli* (PT-AF-07). Laboratories seeking appointment to one or both Schemes shall register and participate in the AFPS programme. Following appointment, Approved Laboratories shall participate in the two rounds of the AFPS programme annually. If an Approved Laboratory is removed from the AFPS, it shall notify REAL within five working days and will no longer remain approved by REAL to carry out *Salmonella* spp. or *E. coli* testing.

NOTE The advantages of the AFPS programme is the use of 'real' matrix samples as opposed to a freeze-dried ampoule. In addition, the AFPS has a significantly higher number of participants improving statistical rigour for laboratory performance assessment.

The Approved Laboratory will share results of its AFPS performance with REAL within five working days of receipt from LGC. The Approved Laboratory's report sent to info@realschemes.org.uk. The Approved Laboratory shall make reasonable endeavours to procure an agreement to provide such information to REAL from any laboratory to which it sub-contracts its obligations under this Agreement.

When AFPS test results shows that unsatisfactory or incorrect results have been reported, the Approved Laboratory shall carry out an internal investigation to discover the reasons for the results and apply corrective actions to ensure unsatisfactory/incorrect results are not reported in future distributions. A record of the investigation and any corrective action(s) shall be shared with REAL.

The record shall include:

I. Reference to the AFPS sample distribution period;

II. The reason for the incorrect reported result; and

III. The action/s taken by the Approved Laboratory to address the cause of the incorrectly reported result.

REAL reserves the right to suspend the lab appointment to carry out *Salmonella* spp. or *E. coli* testing in the event an Approved Laboratory fails to meet the requirements set out above.

REAL reserves the right to require any Approved Laboratories in future to participate in an alternative PT programme if this is regarded as more suitable than the one specified above.

3.4 **Testing for PTEs**

An Approved Laboratory (or appropriate sub-contractor) shall participate in the Wepal MARSEP PT programme for the relevant PTEs as a minimum.

Approved Laboratories shall share results of Wepal MARSEP PT programme performance with REAL within five working days of receipt from the PT programme organiser. The Approved Laboratory's report sent to info@realschemes.org.uk. The Approved Laboratory shall make reasonable endeavours to procure an agreement to provide such information to REAL from any laboratory to which it sub-contracts its obligations under this Agreement.

Laboratories seeking appointment to either BCS or CCS shall register and participate in at least one round of the Wepal MARSEP PT programme for the relevant PTEs as a minimum. Following appointment, Approved Laboratories shall participate in all rounds of the Wepal MARSEP PT programme annually.

When Wepal MARSEP test results shows that unsatisfactory or incorrect results have been reported, the Approved Laboratory shall carry out an internal investigation to discover the reasons for the results and apply corrective actions to ensure unsatisfactory/incorrect results are not reported in future distributions. A record of the investigation and any corrective action(s) shall be shared with REAL.

REAL reserves the right to suspend the lab appointment to carry out PTE testing in the event an Approved Laboratory fails to meet the requirements set out above.

REAL reserves the right to require any Approved Laboratories in future to participate in an alternative PT programme if this is regarded as more suitable than the one specified above.

4. METHODS OF TESTING FOR COMPOST AND DIGESTATE SAMPLES

4.1 Approved test methods

The test methods, and corresponding versions, used by the Approved Laboratories must be those specified in the Standards or updated methods as communicated by REAL (disseminated to Approved Laboratories via the latest approved laboratory reporting templates). Approved Laboratories must follow the instructions specified in these test methods and any additional instructions specified in the Approved Laboratory's own validated standard operating procedures. Where published test methods are withdrawn, and a suitable alternative is not specified publicly, the use of a withdrawn method or current alternatives should be discussed and agreed with REAL.

Certain test methods specified in the Standards are either owned by REAL or fall under REAL's responsibility. The Approved Laboratory must keep a record of when and for what purpose any such Scheme specific test methods were used. The information must be made available to REAL on request for the purpose of informing further developments of those test methods.

4.2 Alternative test methods

If an Approved Laboratory wishes to undertake alternative test methods, it must seek approval from REAL in writing by submitting an alternative test method request ("Request") setting out:

i. the method reference and name,

ii. the motivation for changes, proposed changes and expected effects of the changes.

iii. evidence that supports the benefits of the proposal.

If the Approved Laboratory has already conducted an assessment of the effects of the changes before submitting a Request, it shall submit the evidence together with the Request.

REAL shall review the Request and send a response within 28 working days. REAL may decide to approve, reject, or request more evidence to support the case for the Request. If a Request is accepted and the changes to the method are implemented at the laboratory, re-validation of the method should be carried out (for guidance go to section 5.6).

If REAL requires more evidence to support a Request, it may require the Approved Laboratory to undertake an independent assessment of the proposed changes which may include trial tests, risk assessments or any other assessments that are relevant to the nature of the proposed changes. The Approved Laboratory shall bear any costs associated with the independent assessment.

5. QUALITY ASSURANCE AND CONTROL

5.1 Quality Management System

The Approved Laboratory must develop, implement, and maintain a Quality Management System (QMS) in line with the requirements in ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*. The Approved Laboratory shall continually improve its QMS.

The QMS shall define and refer to all procedures and systems used by the Appointed Laboratory and consist of documents describing the operation of the QMS. As per ISO/IEC 17025, the Approved Laboratory QMS should include documentation of Policies & Objectives, Processes & Procedures, Standard Operating Procedures (SOPs) and Work Instructions, Checklists, Forms, Templates and Records. All routine tasks should be performed in accordance with written procedures.

An Approved Laboratory must have SOPs that do not deviate from the methodologies specified in the relevant Standards or methodologies approved by REAL where equivalence to PAS 100 or PAS 110 tests has been demonstrated, or from any other instructions specified by REAL (e.g., methods stated in latest versions of Scheme laboratory reporting templates).

In line with the requirements of ISO/IEC 17025, the Approved Laboratory shall comply with the additional requirements set out below.

5.2 **Approved Laboratory's Quality Control**

The number of replicates tested when performing a test method must be as set out in the relevant test method. When the minimum number of replicates is not set out in the test method, in addition to specifying the minimum number of replicates used in the relevant SOP, the laboratory's quality manager must justify the basis on which the number has been chosen and demonstrate how this will ensure that reliable results are obtained.

Quality control measures (QCM) adopted for test methods shall be included and detailed in the SOPs for each test method. The Approved Laboratory must adopt the quality control measures specified in the required test methods unless stated otherwise by REAL. Additional quality control measures may be adopted after consultation with REAL, but the quality control measures specified in the test methods cannot be modified.

The QMS and all quality control measures for test methods must be regularly monitored by the Approved Laboratory and acted upon to improve data variability within an expected margin of error.

5.3 **Complaints**

An Approved Laboratory shall have a policy and procedure for handling complaints and maintain records of complaints as per the requirements of ISO / IEC 17025. This requirement extends to subcontract laboratories used by an Approved Laboratory for Scheme(s) testing.

In the event of receiving a complaint from any interested party (including Producers, Certification Bodies, regulatory authorities) relating to the testing of scheme samples an Approved Laboratory must follow its complaints procedure, investigate the complaint and if required apply corrective action.

A written record of the investigation and any corrective action(s) should be sent to the complainant and REAL (info@realschemes.org.uk). This includes where corrective action(s) have been deemed not necessary by the Approved Laboratory.

The Approved Laboratory is expected to respond to the complaint within one week of receiving the complaint, or sooner if specified to do so in the Approved Laboratory's own complaints policy/procedure. The Approved Laboratory will provide weekly/biweekly updates (as appropriate) for any complaints not addressed within one week.

Approved Laboratories shall maintain records of complaints for a minimum of three years.

In the event of receiving a complaint as set out above, an Approved Laboratory must record:

i. name and contact details of the person who made a complaint;

ii. specific subject(s) of the concern or complaint;

iii. date (and time as applicable) communicated to the Approved Laboratory and name of the person to whom it was communicated;

iv. nature and date(s) of any actions and checks and who carried them out;

v. nature and date of any response to the person who expressed a concern or made the complaint; and

vi. name of the person who communicated the response.

5.4 Internal audits

An Approved Laboratory must conduct and record internal audits (including any subcontract laboratories) at planned intervals, at least annually, or more frequently if required by REAL, to determine whether:

i. the correct procedures and testing timescales are being followed, relevant to the subject of the audit;

ii. any changes need to be made to procedures (as appropriate) in order to improve accuracy, precision, repeatability, reproducibility and equipment performance and efficacy; and

iii. as relevant to the audit, the Agreement is being complied with.

The Approved Laboratory must make records from internal audits available to the IA on request.

5.5 Technical competence

The Approved Laboratory is responsible for the competence and behaviour of its employees, workers, consultants and any other person authorised by the Approved Laboratory to deliver the Services acting on its behalf ("Staff"). The technical competence of Staff should be assured and maintained through a training system which should be defined in the QMS.

The Approved Laboratory shall ensure that Staff who supervise or carry out PAS 100 or PAS 110 tests must be able to follow the relevant SOP that is based on the relevant test method and carry out the tests without errors while following the procedure.

The Approved Laboratory shall ensure that Staff who supervise or carry out PAS 100 or PAS 110 tests are;

I. provided with inhouse training and/or resources about the scheme(s) to understand the context, meaning and consequences of interim and final test results; and

II. to apply the relevant control measures for each test and understand the output from such measures, such as results of quality control samples and interpreting quality control charts, in order to identify errors during the test and prevent the reporting of incorrect results to Producers.

The Approved Laboratory shall encourage Staff to participate in specialist webinars provided by REAL (e.g., PC&S analyst webinars).

5.6 Validation of test methods

Each test method carried out by an Approved Laboratory (and by any of its sub-contracted laboratories) must be validated for the specific test matrix (compost/digestate). The responsibility for validating a test method and using appropriate validation approaches lies with the Approved Laboratory. Suitable approaches for method validation can be found in BS EN ISO/IEC 17025.

The Approved Laboratory shall document the validation procedure and produce it to REAL when requested at the time of an audit or at any time during the Term.

An Approved Laboratory may seek advice from REAL regarding the validation of non-standard methods.

5.7 Re-validation of test methods/procedures

An Approved Laboratory must re-validate the specified test methods it uses as necessary. For example, a change to the test method specified in PAS 100 / PAS 110, an improvement to the test method made by the method owner or test performance monitoring an Approved Laboratory. The responsibility for validating the test method and using an appropriate validation method lies with the Approved Laboratory. See recommended procedures described in section 5.6.

An Approved Laboratory must inform REAL every time it changes the analysis approach it uses to carry out a test method and, in such circumstances, it may be required to re-validate the test method.

An Approved Laboratory may be required to take part in inter-laboratory trials as part of the re-validation of the test method or new equipment or, if appropriate, to take part in one or more PT programme testing rounds, as may be defined by REAL from time to time.

6. SAMPLE MANAGEMENT

6.1 Sample transportation and storage

When an Approved Laboratory arranges the collection of samples from the Producer's premises, it must provide appropriate containers to facilitate sufficient storage and handling of the sample during transit to the Approved Laboratory's premises.

If a sample is to be tested for pathogens, the Approved Laboratory shall use a courier service that will deliver to the laboratory within 24 hours* – the exception to this being extreme geographical locations where a 48-hour service shall be used with samples dispatched on the same day as sampling. Samples not scheduled for pathogen testing may use a 48-hour courier service.

*NOTE This requirement relates to courier services provided by the laboratory (internal or third party) for Producers. *The requirement is for selection of the appropriate service rather than of guaranteeing delivery within this timeframe.*

Approved Laboratories shall arrange for samples to be transported under such conditions that minimise any changes in sample characteristics over transit. The container used for transportation must be air-tight and protect the sample from contamination.

The Approved Laboratory shall ensure that any courier transporting animal by-product ("ABP") derived samples to be tested for *Salmonella* spp. and *E. coli* must be registered AB117 for the transport of ABP material, unless the Producer is approved under Article 24 of Regulation (EC) No. 1069/2009 with APHA. (https://www.gov.uk/government/publications/approval-of-sites-using-animal-by-products-registration).

When the Approved Laboratory arranges the collection of a sample on behalf of a Scheme Producer, it shall agree with the Producer in writing the timescales for compost/digestate sample collection in compliance with this clause and agree actions in the event the compost/digestate sample collection has been missed or has not taken place within the agreed timescales. Such actions need to be documented in the Approved Laboratory's QMS and made available when requested during an audit or requested by REAL during the term of the appointment.

Following transit, the Approved Laboratory shall ensure that the following storage requirements are met:

I. Digestate samples must be kept at low temperatures (1-5 °C as per BS EN ISO 13040) prior to testing.

II. Compost samples must be kept at low temperatures (1-5 °C as per BS EN ISO 13040) prior to testing.

6.2 Sample reception

The Approved Laboratory shall;

Prepare a SOP in writing, which must be identified in the QMS that describes the procedure for sample reception, including inspections carried out on the sample at reception. Inspections must cover the documentation and the integrity of the sample / container.

Ensure that the correct documentation was received with the sample and that the documentation is appropriately completed. The documentation must identify the sample correctly and must be confirmed by visual inspection the nature of the material matches the description (e.g., compost/mulch, liquid digestate or separated fibre)

The Approved Laboratory shall confirm receipt of the sample, and the requested testing, to the Producer. To meet specified testing start times, the Approved Laboratory is authorised to start testing on receipt of samples.

In the event that any issues are identified at sample reception e.g., with documentation, sample quality or transport conditions, contact the Producer to inform them about the issues found.

In the event that sample quality is potentially affected, e.g., due to broken containers or transportation problems, or the sample cannot be identified e.g., due to missing information or contradicting findings from the visual inspection of the sample and documentation, stop processing the sample and contact the Producer to inform them about the issues.

In the event that issues with a sample are not resolved by contacting the Producer, stop processing the sample and contact REAL and send information about the nature of the issue.

6.3 Laboratory sample storage

Store samples in a refrigerator (1-5 °C as per BS EN 13040) or in cool conditions (1-5 °C as per BS EN 13040) in a contained, dark space in order to minimise any changes to the characteristics of the sample prior to preparation and testing. An Approved Laboratory must not freeze samples.

Comply with the maximum fresh storage time before testing is defined in section 6.5.

6.4 Laboratory sample preparation

The Approved Laboratory shall;

Save for microbiological parameters, undertake sample preparation for test parameters in accordance with BS EN 13040, “Soil improvers and growing media –Sample preparation for chemical and physical tests, determination of dry matter content, moisture content and laboratory compacted bulk density”.

In respect of its laboratory sub-sampling and sample preparation procedures ensure that the sample on which the analytical procedure is being carried out is representative of the original sample.

Ensure that its QMS describes sub-sampling and sample preparation procedures and demonstrate that these meet the objectives stated above.

Test samples within specific timeframes after arrival for stability, plant response, weed seeds, *E. coli* and *Salmonella* spp. parameters, to ensure that the quality of the sample is not compromised and minimise the effect of storage on the quality of results. Specific timeframes are defined in section 6.5.

6.5 **Timescales for testing**

Salmonella spp. and *E. coli* and microbial pathogens:

Approved Laboratories must ensure that the time between the test samples arriving at the Approved Laboratory and the start of the test procedures does not exceed 48 hours.

All other PAS 100 and PAS 110 parameters:

Approved Laboratories shall endeavour to start the test procedures within 48 hours from the time the test samples arrive at the Approved Laboratory. In no circumstances shall the time between the test samples arriving at the Approved Laboratory and the start of the test procedures exceed one week.

7. **ADDITIONAL REQUIREMENTS FOR APPROVED LABORATORIES**

7.1 **Accreditation by United Kingdom Accreditation Service ("UKAS")**

An Approved Laboratory (and laboratory to which the Approved Laboratory sub-contracts the Services) shall either hold UKAS accreditation in line with ISO/IEC 17025:2017 for minimum quality criteria methods (i.e., *Escherichia coli*, *Salmonella* spp. and potentially toxic elements (PTEs) as listed in the PAS standards) or shall meet the requirements for non-UKAS accredited laboratories in the clause below. UKAS accreditation shall be held for relevant matrices namely compost, growing media, digestate or sludge (depending on the Scheme).

Non-UKAS accredited laboratories can be Approved Laboratories; however, testing for such laboratories will be restricted to a maximum 10% of suites uploaded to the relevant database, as calculated using the number of full suite routine samples (sample type 2) tested in the last 12 months prior to REAL issuing the draft contract to the laboratories.

If an Approved Laboratory (including subcontractor) loses UKAS accreditation for matrix specific *E. coli*, *Salmonella* spp. or PTEs testing they must find alternative comparable UKAS accredited testing to ensure considered service. If this cannot be achieved the Approved Laboratory maybe reclassified as a non-UKAS accredited Approved Laboratory and subject to testing restrictions (see section 2.1).

NOTE – the restriction for non-UKAS accredited laboratories is designed to uphold scheme testing rigour whilst attracting new laboratories which will increase the possibility for inter-laboratory trials and provide producers with more choice.

7.2 **Pre-arranged inter-laboratory trials**

REAL may establish out inter-laboratory comparison at any time to monitor the Approved Laboratories' performance, in particular, to check systems and/or test result repeatability, reproducibility, and trueness. Participation in inter-laboratory comparison will be compulsory.

An Approved Laboratory must implement at its cost and within the prescribed timescales any recommendations or corrective actions identified as a result of inter-laboratory comparison. The Approved Laboratory must record any corrective action or improvement made.

7.3 Compost or digestate sampling and analysis requests

The Approved Laboratory shall ensure that the Producer uses the most recent version of the PAS 100 Compost Analysis Request Form or PAS 110 Digestate Analysis Request Form as appropriate. The most recent version is available from the relevant Scheme website.

The Approved Laboratory shall not report results to the Producer unless the sample has got an Analysis Request Form correctly completed. Approved Laboratories may need to get in contact with the Producer to clarify the information on the Analysis Request Form.

An Approved Laboratory may occasionally receive spot or independent samples which are accompanied by a clearly identified Independent Sampling and Analysis Request Form or a Spot Sampling Analysis Request Form.

For any clarification on spot or independent samples and associated analysis request forms, the Approved Laboratory should contact REAL. An Approved Laboratory should not seek such clarification or any instructions from the Producer that is the subject of independent sampling or spot sampling.

NOTE: Spot sampling is carried out by the Certification Body in the event of a complaint or if they have any concerns about the sampling procedure, and independent sampling is carried out by an independent sample taker appointed by REAL (requirements for independent sampling may be introduced into the new version of the CCS and BCS Scheme Rules).

7.4 Charges for spot samples

An Approved Laboratory will charge the organisation indicated in the spot sampling and request form at their standard rate. This may be either REAL or the compost/digestate Producer that was the subject of the spot sampling.

NOTE: Spot samples will normally be tested as a part of an investigation into a complaint concerning the quality of the compost or digestate sampled.

7.5 Re-testing at Approved Laboratories

Samples must not be re-tested unless the Approved Laboratory is confident that a failure in the analytical procedure has occurred, resulting in an invalid result.

Even when the Approved Laboratory is confident that a failure in the analytical procedure has occurred, the sample shall only be re-tested if this has been stored according to the conditions and the maximum timescales specified in section 6.5.

Reasons for invalid tests and repeat test runs must be recorded along with any corrective actions that have been made before re-testing. These records shall be made available upon request by REAL or by the Independent Auditor during independent audits.

8. REPORTING

8.1 Reporting to compost/digestate Producers and report format

The Approved Laboratory shall report all laboratory data as soon as the suite of analyses is complete. Interim reports may be issued to avoid waiting for results from those tests that are carried out over an extended period of time (i.e., plant response test (CCS) and residual biogas potential test (BCS)).

An Approved Laboratory may offer Producers rapid turnarounds on tests which can accommodate this i.e., prioritising samples sent following a test failure over other samples. Premium charges for rapid test turnarounds are at the discretion of Approved Laboratories.

If a problem is identified with any of the tests, it must be communicated to the Producer as soon as it is identified (e.g., invalid test).

The Approved Laboratory shall use the latest version of REAL's 'Analysis Report - Composted Material / Digestate' template document, or to modify its reporting system in such a way that all information in the relevant REAL reporting template is replicated.

Approved Laboratories using laboratory information management systems (LIMS), rather than the REAL reporting template, shall report results in a format that matches the template as closely as possible.

Analytical methods used for testing must be correctly referenced on the reports supplied to Producers.

The Approved Laboratory must always provide test results in a PDF format alongside any other format requested by the Producer or REAL (e.g., '.xls' or '.csv' for inclusion in bespoke databases).

For any parameter test not carried out on a sample but shown on the report template, the report's corresponding result cell should display N/D, meaning 'not determined'. N/D should not be used for any other purposes. 'To follow' or similar should be used on interim reports where parameters are requested but not yet ready for reporting e.g., interim report with pathogen test results only. N/A, meaning 'not applicable' is used in cells where there is missing prerequisite information e.g., in pass/fail cells where a test result is missing.

An Approved Laboratory must retain test reports supplied to Producers for a minimum of three years.

Those tests that were subcontracted to another laboratory must be identified on the test report.

If an Approved Laboratory identifies that incorrect results were reported for any of the parameters, it must inform the Producer as soon as possible. The laboratory should carry out an investigation to identify the causes of the error and identify corrective actions. The outcome of the investigation and the corrective action must be recorded. In the event that the nature of the error does not require the sample to be retested (e.g., calculation error), the Approved Laboratory shall implement the corrective action and re-issue the test report as soon as possible. For those errors (e.g., SOP/method deviation or instrument error/failure) where a re-test is required, re-tests shall only be carried out in accordance with instructions found in section 7.6.

8.2 **Reporting test results to REAL**

Approved Laboratories must report test results of samples sent for certification purposes to the certification database maintained by REAL. A single upload of final results should be made to the database i.e., Approved Laboratories should avoid uploading interim results or duplications of the same results. These uploads may include test results obtained for:

i. For initial validation purposes;

ii. On-going testing to verify the continued efficacy of the PAS 100/PAS 110 quality management system and compost/digestate compliance with PAS 100/PAS 110 minimum quality criteria and any other criteria specified and agreed with the customer; and

iii. Re-sample test results that have been tested to verify corrective actions efficacy.

When joining either Scheme, Participants agree that the Approved Laboratories may disclose all the above sample results to REAL, their Certification Bodies, the relevant environmental regulator and such other regulator to which it would be reasonable to disclose the samples (see also BCS and CCS Scheme Rules).

Customers who participate in the CCS and BCS must have their results available in the certification database for inspection by their Certification Bodies. Instructions on reporting to the certification database can be requested from REAL. Reporting to the certification database must happen within a maximum two weeks of reporting of results to the customer in order to avoid potential delays in the certification process.

If the sample was not sent for certification purposes, then the test results must not be uploaded to the REAL CCS/BCS database.

An Approved Laboratory must always provide test results in a PDF format alongside '.csv' for the REAL database(s) and can also provide test results in another format requested by Producers, if achievable.

If an Approved Laboratory identifies that incorrect results were reported for any of the parameters, it must carry out an investigation, taking any corrective action, and inform REAL as soon as possible by email (info@realschemes.org.uk), including the cause or explanation of the incorrect result.