# Skills Assessment

**Assessment event 3 of 3**

# Trainer & Assessor Marking Guide

## Criteria

### Unit code, name and release number

MSL972001 - Conduct routine site measurements (1)

### Qualification/Course code, name and release number

MSL30118 - Certificate III in Laboratory Skills (1)

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Hamilton Campus

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This assessment can be found in the: [Learning Bank](https://share.tafensw.edu.au/share/access/searching.do?doc=%3Cxml%2F%3E&in=P7ac4831b-430a-4b8d-8b56-f7b32ed5b9cf&q=&type=standard&sort=rank&dr=AFTER)

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## Assessment instructions

Table 1 Assessment instructions

| Assessment details | Instructions |
| --- | --- |
| **Instructions for the trainer and assessor** | This is a skill based assessment and will be assessing the student on their ability to demonstrate skills required in the unit.  This assessment is in 2 parts:   1. Practical (4 Demonstrations) 2. Observation Checklist   The student is required to complete each demonstration three (3) times, with each of these three (3) times being conducted on a different date.  Part of this Assessment draws on the Onsite Field Measurements Checklist prepared in the Project Assessment by the student. You should have this ready to provide back to the student.  **PLEASE NOTE:** You will have to provide the Student with a Sampling Plan containing the following information:   * tests/measurements * location of sample site * location of sample point   The Sampling Plan that you provide to the student **must** be attached to the students completed assessment. This will verify that the answers the student provided match the information in the Sampling Plan provided to them.  Model answers, sample responses or a criteria for each task or activity is provided below.  Use these to support your judgement when determining a satisfactory result.  The student’s response to each question must contain the information indicated in this marking guide in order for their response to be correct. However, if a student provides information other than indicated below, and in the professional opinion of the assessor it is appropriate and meets the intent of the question, it may be considered correct.  Complete the Observation Checklist for each task and activity and the Assessment Feedback to the student. Ensure you have taken a copy of the assessment prior to it being returned to the student.  The Assessment Feedback page must be signed by both the student and the assessor so the student displays that they have received, understood and accepted the feedback.  Ensure the students name appears on the bottom of each page of the submitted assessment. |
| **About this marking guide** | The student’s response to each task or activity must contain the criteria indicated in this marking guide in order for their response to be correct.  All tasks and activities must be completed correctly in order to satisfactorily complete this assessment event.  Assessors will need to make a judgement call as to whether each response meets the criteria based upon the:   * Rules of Evidence:   + Validity – does the answer address the skill required and does the evidence reflect the four dimensions of competency?   + Sufficiency – is the task or activity sufficient in terms of length and depth?   + Currency – has the work been done so recently as to be current?   + Authenticity – is this work the student’s own authentic work? * Principles of Assessment   + Fairness – individual student’s needs are considered in the assessment process   + Flexibility – assessment is flexible to the individual student   + Validity – any assessment decision is justified, based on the evidence of performance of the student   + Reliability – evidence presented for assessment is consistently interpreted and assessment results are comparable irrespective of the assessor conducting the assessment * Dimensions of competency   + Task skills   + Task Management Skills   + Contingency Planning Skills   + Job Role Environment Skills |
| **Student must provide** | Calculator, pens, PPE (sunglasses, enclosed footwear, long sleeves and long pants, sun hat). |
| **Assessor must provide** | Assessment task.  Student checklist from Assessment Project  PPE (sunglasses, enclosed footwear, long sleeves and long pants, sun hat)  Laboratory and manufacturer’s procedures for equipment used in testing identified  Sampling plan for the Assessment. (Contains the tests/measurements, location of sample site/point). The sample plan must be attached to the students completed assessment. |
| **Due date/time allowed/venue** | 3 hours for the preparation, measurement and clean-up, not including travel time. |

## Specific task instructions

The instructions and the criteria in the tasks and activities below will be used by you to determine whether the tasks and activities have been satisfactorily completed by the student. Use these instructions and criteria to ensure the student has demonstrated the required skills and knowledge.

The task (made up of 4 demonstrations) is be undertaken **three times** and observed by you.

Completion of this task will require the student to refer to the Onsite Field Measurements Checklist they prepared in the Project Assessment for the preparing, conducting and finalising of onsite measurements for:

1. Field pH
2. Field electrical conductivity
3. Wind speed using an anemometer

The student is required to complete, for each occasion, the paperwork included in the assessment including:

* Checklist (they prepared)
* JSEA
* Onsite Measurement Record (progressively during the task)

The sites for measurements will be allocated by you and will be sites where the student has previously conducted measurements. You will provide the student with the exact locations on the first occurrence of the task.

## Part 1: Practical

To complete this part of the assessment, the student is required to participate in a practical demonstration of how to complete a task or activity.

These demonstrations will be observed by you, or the student can digitally record them and submit them as evidence.

Their responses will be used as part of the overall evidence requirements of the unit.

You should refer to the list of criteria in the Observation Checklist to understand what you need to demonstrate in this section of the assessment. This Checklist outlines the assessment criteria used to assess your performance.

Once completed the student will need to submit this assessment and the tasks and activities to you for marking.

**Demonstration 1: Maintain a safe work environment (conducted throughout the entire assessment)**

1. Complete one JSEA that will cover each date you visit a site for this assessment. You have been provided with the template to use as part of this assessment.
2. Make sure you consciously minimise environmental impacts throughout the task.
3. Make sure you control generation of any wastes.
4. Dispose of wastes according to workplace procedures.

**Demonstration 2: Prepare for measurements (Record all information on the Onsite Measurement Record progressively as you move through the task)**

1. Confirm the test measurements required by referring to the daily sampling plan.
2. Confirm the location for test measurements, site access and transportation required as indicated in the sampling plan.
3. Use the field checklist you prepared in Assessment 2 to assemble and check equipment for the onsite measurements. Your Assessor will return your prepared checklist to you at the start of the session.
4. Safely stow assembled equipment for travel.

**Demonstration 3: Perform measurements (Record all information on the Onsite Measurement Record progressively as you move through the task)**

1. Locate measurement points ensuring safe access to site, including covers and locks as indicated in JSEA.
2. Operate equipment for the three tasks (A, B, C) required following laboratory and manufacturer procedures.
3. Take at least duplicate readings at each of the allocated sites.
4. Record data neatly and legibly, noting obvious errors if present.
5. Repeat measurement if atypical data or error is obvious.
6. Secure and return site to operation at the end of measurements.

**Demonstration 4: Finalise measurements**

1. Clean equipment on site where appropriate.
2. Check all equipment back and stow ready for transport.
3. On return equipment returned in working order for storage.

**Job Safety & Environment Analysis Demonstration 1 Occurrence 1**

**Activity/ Task:** \_Skills Assessment MSL972001\_\_\_\_\_\_\_\_\_\_\_\_\_ **Location:\_\_\_\_Field** site 1 & 2 & 3 (Assessor will have provided this detail to the student

**Conducted by:XXXXXXXXX** **In Consultation with:**\_\_\_YYYYYYYY\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ D**ate Conducted:** xx/xx/20xx

**Reviewed by**: **Comments:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**Date Reviewed:**

**Reason for this risk assessment**– *refer to the* [*Procedure for WHS Risk Management*](https://staff.tafensw.edu.au/employee-essentials/work-health-and-safety/policies-and-procedures/)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Workplace Change  Work task / activity  New building/ facility | | Procure new plant  Commission new plant  Decommission plant | | | | New chemical or storage  Maintenance activity  Lease or contract | | | Staff work travel  Remote or lone working  Public event | Student excursion  Student off-site activity  Student work placement | | Other *(specify)* - Student Assessment | |
| **RISK ASSESSMENT SUMMARY** | | | | | | | | | | | | | |
| **Plant / vehicles / substances involved**  Travel by car to test site | | | | **licenses / permits**  Driver’s licence  High Risk Work License  Plant operators license  Work at heights  Confined space entry permit  Hot work / permit to work  Other - | | | *What are the top 5 risks for this activity / task?*  1. Falling in creek  2. Snakes in summer  3. Car accident  4. Trip hazards  5. exposure to the elements | | | | *What are the top 5 safety controls?*  1.Students will work in groups  2. first aid kit available  3. site inductions  4. student training in onsite measurements  5. short duration for task | | |
| **Required Protective Clothing and PPE** | | | | | | | **Other documents needed to manage the risks** | | | |  | | |
| T:\ADMINISTRATION OH&S UNIT\Safety Symbols\%OH&S Safety Symbols Australian\Mandatory symbols\Eye.jpg | T:\ADMINISTRATION OH&S UNIT\Safety Symbols\%OH&S Safety Symbols Australian\Mandatory symbols\Foot.jpg | | **T:\ADMINISTRATION OH&S UNIT\Safety Symbols\%OH&S Safety Symbols Australian\Mandatory symbols\Head.jpg** | | T:\ADMINISTRATION OH&S UNIT\Safety Symbols\%OH&S Safety Symbols Australian\Mandatory symbols\Hearing.jpg | | *e.g. Procedure / SOP / work instruction, safety data sheet (SDS), inspection checklists, health declarations etc*  *Task instruction, equipment manuals* | | | | | | |
| T:\ADMINISTRATION OH&S UNIT\Safety Symbols\%OH&S Safety Symbols Australian\Mandatory symbols\Protective clothing.jpg | T:\ADMINISTRATION OH&S UNIT\Safety Symbols\%OH&S Safety Symbols Australian\Mandatory symbols\Respiratory.jpg | | T:\ADMINISTRATION OH&S UNIT\Safety Symbols\%OH&S Safety Symbols Australian\Mandatory symbols\Apron.jpg | | T:\ADMINISTRATION OH&S UNIT\Safety Symbols\%OH&S Safety Symbols Australian\Mandatory symbols\Hand.jpg | | **Arrangements for First Aid and Emergencies**        Emergency contacts available with each group | | | | | | |
| **Other** *(specify) Sun protection* | | | | | | |
| HAZARD CHECKLIST | | | | | | | | RISK ASSESSMENT MATRIX | | | | |
| **Environment**  Weather  Hot or cold conditions  Air quality  Noise  UV exposure  Slip/trip hazards  Drowning  **Substances**  Hazardous chemicals  Explosives  Flammable substances  Toxic substances/ pesticides  Inhalable / respirable dust  Exhaust or other fumes  **Physical**  Pressure  Stored energy – mechanical  Stored energy - electrical  Stored energy – chemical  Confined spaces  Fall from height  Manual tasks / ergonomic  **Electrical**  Overhead power lines  Underground power lines  Arc welding  Power tools / leads  Electrical work  Portable power generators  Wet environments | | | | **Psychological and Social**  Stress  Fatigue  Violence / aggression  Drugs and alcohol  Isolation  Bullying and/or harassment  Communication barriers  **Biological**  Animal or insect bite  Riding or handling  Zoonosis  Infectious agents  Needle-stick / sharps  Bodily fluids  Contaminated waste  **Mechanical**  Traffic  Driving  Forklifts, Cranes etc.  Rotating / moving parts  Crushing  Shearing, cutting, stabbing  Vibration  **Environmental**  Air emissions  Release to stormwater  Chemical spill  Soil/groundwater contamination  Asbestos  Radioactive waste  Waste disposal | | | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | **CONSEQUENCE** | | | | | | ***LIKELIHOOD*** | **Negligible** | **Minor** | **Medium** | **Major** | **Severe** | | ***Almost Certain*** | **9** Medium | **15** High | **18** High | **23 Critical** | **25 Critical** | | ***Likely*** | **7** Low | **12** Medium | **17** High | **20** High | **24** **Critical** | | ***Possible*** | **4** Low | **10** Medium | **13** Medium | **19** High | **22** High | | ***Unlikely*** | **2** Very low | **5** Low | **11** Medium | **14** Medium | **21** High | | ***Rare*** | **1** Very low | **3** Very low | **6** Low | **8** Low | **16** Medium |  |  |  | | --- | --- | | Likelihood description | | | Almost certain | Expected to occur in most circumstances. | | Likely | Can be expected to occur several times in the life of the particular work practice. | | **Possible** | Might occur occasionally in the life of the particular work practice. | | **Unlikely** | Not likely to occur, but could happen at some time. | | **Rare** | May happen but only in exceptional circumstances. | | **Consequence description** | | | **Severe** | Fatality and/or severe injury resulting in amputation or life support. | | **Major** | Hospital admission, and / or long periods off work and/or permanent impairment. | | **Medium** | Injury/illness requiring minor medical treatment, short duration lost time. | | **Minor** | First Aid treatment only. No lost time. | | **Negligible** | Does not require first aid. Minor discomfort. | | | | | |
|  | | | | |

**Risk Assessment**

| Activity / Situation / Location | Hazards | Risk Score | Controls | New Score |
| --- | --- | --- | --- | --- |
| pH value /creek/ site 1, 2, 3 | Snakes, slips and trips, fall in water | Med | Training, observer present, | Low |
| Driving between sites | Car accident | Med | Student has licence | Low |
| Electrical conductivity /creek/ site 1, 2, 3 | Snakes, slips and trips, fall in water | Med | Training, observer present, | Low |
|  |  | Choose an item. |  | Choose an item. |
|  |  | Choose an item. |  | Choose an item. |
|  |  | Choose an item. |  | Choose an item. |



Onsite Measurement Record 1

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Date: | Site 1 | | | Site 2 | | | Site 3 | | |
| Location | Throsby Creek (1) | | |  | | |  | | |
| Measurements required | pH, EC, Wind speed | | | pH, EC, Wind speed | | | pH, EC, Wind speed | | |
| Environmental conditions | Fine, 10% cloud, 28oC | | | Fine, 10% cloud, 28oC | | | Fine, 10% cloud, 28oC | | |
| Checklist completed | Yes  No | | | Yes  No | | | Yes  No | | |
| Transport arranged | Yes  No  NA | | | Yes  No  NA | | | Yes  No  NA | | |
| Transport type (circle) | Walk / drive/ boat | | | Walk / drive/ boat | | | Walk / drive/ boat | | |
|  | 1 | 2 | Ave | 1 | 2 | Ave | 1 | 2 | Ave |
| pH | 7.4 | 7.2 | 7.3 | 4.4 | 7.1 | OL | 6.8 | 6.9 | 6.8 |
| Electrical conductivity | 58 | 62 | 60 | 51 | 53 | 52 | 3 | 4 | 4 |
| Wind speed (m/sec) | 3 | 5 | 4 | 2 | 6 | 4 | 6 | 8 | 7 |
| Atypical value/Action taken |  | | | Repeat pH 6.9/ 7.0 | | |  | | |
| Site returned to operation/secured | Yes  No  NA | | | Yes  No  NA | | | Yes  No  NA | | |
| Equipment cleaned/ decontaminated | Yes  No  NA | | | Yes  No  NA | | | Yes  No  NA | | |
| Wastes minimised | Yes  No  NA | | | Yes  No  NA | | | Yes  No  NA | | |
| Checklist completed | Yes  No | | | Yes  No | | | Yes  No | | |
| Equipment returned and stored appropriately | Yes  No | | | Yes  No | | | Yes  No | | |
| Comments: (You should note here any equipment problems, outliers, incident, overview of site if necessary | All values as expected | | | pH probe required cleaning | | | All values as expected. | | |
| Technician Signature: XXXXX  *All information contained on this sheet is confidential and available only to authorised representatives of AllSci* | | | | | | | | | |

## Part 2: Observation Checklist

The Observation Checklist will be used by you to mark the students’ performance in any of the previous three event types. Use this Checklist to understand what skills the student is required to demonstrate in this section of the assessment. This Checklist outlines the Performance Criteria, Performance Evidence and Assessment Conditions you will be marking the student on. All the criteria must be met. The student’s demonstration will be used as part of the overall evidence requirements of the unit. You may ask questions while the demonstration is taking place or if appropriate directly after the task/activity has been completed.

Table 2 Observation Checklist

| Demo | Task/Activity Performed | Occurrence 1  Date: ………….. | | Occurrence 2  Date: ………….. | | Occurrence 3  Date: ………….. | | Assessor Comments (Describe the student’s ability in demonstrating the required skills and knowledge)  The Assessment will be stopped for any breach of safety |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S | US | S | US | S | US |
|  | Student: Benchmark responses are provided in the documentation for one occurrence of the JSEA, Checklist and the onsite Measurement Record. | | | | | | | |
| 1 | Maintain a safe work environment | | | | | | | |
| 1. Completes a JSEA for the onsite measurements for each occasion |  |  |  |  |  |  | *There should be 3 JSEA’s by the 3rd occurrence. Student should complete individually each form* |
| 1. Minimises environmental impacts throughout the task |  |  |  |  |  |  | *Effort made to limit damage to vegetation when walking through bush. All rubbish removed. Wash off probes collected.* |
| 1. Controls generation of wastes |  |  |  |  |  |  | *Cleaning gear, tissues etc. all removed* |
| 1. Disposes of wastes according to workplace procedures |  |  |  |  |  |  | *Removed and taken back to laboratory* |
| 2 | Prepares for measurements (Recording all applicable information on the Onsite Measurement Record) | | | | | | | |
| 1. Confirms the test measurements required |  |  |  |  |  |  | *Notes the tests required by checking the sampling plan that you have provided them with at the commencement of the task. They are not asked to perform a test/measurement at any location unfamiliar to them in this Assessment* |
| 1. Confirms the location for test measurements, site access and transport required |  |  |  |  |  |  | *Notes the location advised for each site, seeks information regarding site access and transport required by:*  *Checks location against sampling plan*  *Checks expected site access with site supervisor/trainer or from sampling plan*  *Checks with trainer requirements for transport to the site* |
| 1. Uses field checklist to assemble and check equipment for the onsite measurements |  |  |  |  |  |  | *Equipment assembled using checklist (student may have additional items not previously on the list) and packed ready to depart* |
| 1. Safely stows assembled equipment for travel |  |  |  |  |  |  | *Equipment stored to minimise damage during transport. Look to see the student has capped any containers to prevent spillage, that things can’t fall over,* |
| 3 | Perform measurements: (Recording all applicable information on the Onsite Measurement Record) | | | | | | | |
| 1. Locates measurement points ensuring safe access to site as indicated in JSEA |  |  |  |  |  |  | *Measuring sites identified and confirmed by checking again the location recorded on their Onsite measurement record or with the person accompanying them. Access checked for hazards including those in the JSEA and others that may have arisen for example rising water if after rain or on an incoming tide.* |
| 1. Operates equipment for the three tasks (A, B, C) required following laboratory and manufacturer procedures |  |  |  |  |  |  | *Equipment for the three tasks used according to manufacturer’s instructions* |
| 1. Makes at least duplicate readings at each of the allocated sites |  |  |  |  |  |  | *More than one reading taken for each task. Averaged. Outliers identified and checked* |
| 1. Records data neatly and legibly, noting obvious errors or atypical results if present |  |  |  |  |  |  | *Paperwork completed ready for submission. Outlier results reported* |
| 1. Repeats measurement if atypical data or error is obvious |  |  |  |  |  |  | *Checking of atypical results noted* |
| 1. Secures site at the end of measurements |  |  |  |  |  |  | *Site returned to normal at conclusion of tasks. No rubbish left behind, gates are closed etc.* |
| 4 | Finalise measurements | | | | | | | |
| 1. Cleans equipment on site where appropriate |  |  |  |  |  |  | *Equipment cleaned on site and readied for transport back to laboratory.* |
| 1. Checks all equipment back and stow ready for transport |  |  |  |  |  |  | *Checklist used to ensure all equipment is returned.* |
| 1. Stores equipment on return in working order |  |  |  |  |  |  | *Equipment stored or isolated if damaged.* |