

Publication 865.15 | December 2024

Quality Branch

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| Environmental auditor guidelines for appointment and conduct |



Authorised and published by the Victorian Government, 1 Treasury Place, Melbourne

epa.vic.gov.au

Environment Protection Authority Victoria

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# Purpose of this guideline

## Introduction

This guideline has been issued under s203 of the *Environment Protection Act 2017* (‘the Act’) to provide information regarding the role of an environmental auditor, the process to appoint environmental auditors, reappoint environmental auditors and environmental auditor conduct. This guideline includes information on the process for initial environmental auditor applications, EPA approving or refusing an application, suspending or revoking appointments, applying additional conditions and environmental auditor reappointment.

These guidelines should be read in conjunction with the Act and other environmental auditor guidelines published by EPA.

## Legal purpose

Section 190(2) of the Act requires an environmental auditor to have regard to this guideline and other guidelines issued under s203, any relevant Environment Reference Standard (ERS), any relevant compliance codes and any prescribed matter when carrying out any function of an environmental auditor under this or any other Act.

Failure to give proper regard to these guidelines may:

* be considered by EPA in determining whether to reappoint a person as an environmental auditor
* provide grounds to review the appointment of an environmental auditor.

## Intended audience

This guideline has been prepared for environmental auditors and may also be useful for other parties who are required to engage an environmental auditor, including:

* planning and other statutory authorities
* recipients of a notice, direction or other instrument issued pursuant to the Act (requiring the recipient to engage an environmental auditor).

EPA may provide specific guidance to environmental auditors or duty holders as requested to clarify any provisions in these guidelines.

# Definitions

Unless the context requires otherwise, an expression or phrase that is used in these guidelines and in the Act has, in these guidelines, the same meaning as in the Act (whether or not a particular meaning is assigned to it in the Act).

Unless otherwise stated, the term:

1. **‘environmental auditor’** refers to a person appointed as an environmental auditor under Division 1 of Part 8.3 of the Act.
2. **‘environmental audit’** refers to an environmental audit undertaken in accordance with Division 3 of Part 8.3 of the Act.
3. **‘preliminary risk screen assessment’** refers to a preliminary risk screen assessment undertaken in accordance with Division 2 of Part 8.3 of the Act.

# Functions of environmental auditors

Under s190 of the Act, environmental auditors are appointed to carry out the following functions:

* conduct preliminary risk screen assessments and environmental audits
* prepare preliminary risk screen assessment statements and preliminary risk screen assessment reports
* prepare environmental audit statements and environmental audit reports
* perform any function conferred on an environmental auditor under this or any other Act[[1]](#footnote-2)
* perform any prescribed function of an environmental auditor (see sections 3.1 and 3.2 below).

When exercising functions and duties pursuant to the Act or any other Acts, an environmental auditor is expected to act in a manner consistent with the Act and any other legislation. The expected conduct of an environmental auditor is described in s10 of this guideline.

EPA may appoint individuals to one or more categories of environmental auditor, as described in the attached appendices.

EPA oversees the quality of environmental auditing as set out in these guidelines.

## Prescribed functions of environmental auditors

Regulation 164 of the Environment Protection Regulations 2021 (the Regulations) lists that for the purposes of s190(1)(d) of the Act, the prescribed functions of an environmental auditor are:

1. to verify actions and measures undertaken to comply with any of the following (including conducting any relevant tests and analysis):
	* 1. a notice issued under s271, 272, 273 or 274 of the Act[[2]](#footnote-3)
		2. an order issued under s275 of the Act[[3]](#footnote-4)
		3. a condition of a permission
		4. guidelines issued by EPA under the Act
			+ Example: To verify whether or not a monitoring plan required under an environmental action notice has been implemented in accordance with the plan, the environmental auditor may undertake a site inspection, assess sampling and analysis procedures against relevant guidelines issued by EPA and audit a representative sample of monitoring data
2. to undertake an independent assessment under s222 of the Act of a matter contained in the prescribed risk assessment criteria where the method for calculating financial assurance amounts published under s223 of the Act provides that the assessment may be conducted by an environmental auditor
3. to perform any function conferred on an environmental auditor under a legislative instrument made under any Act
4. any function approved by EPA in accordance with r165.

EPA may update or provide additional guidance in relation to verification functions. For example, in relation to permissions, Landfill licensing EPA publication (1323.3) details requirements for environmental auditors to conduct a variety of functions in relation to landfill permission requirements.

## Functions – pursuant to any other Act

Environmental auditors may be called upon to undertake functions or duties detailed in other legislation or legal instruments.

Prior to offering to undertake any of these functions, the environmental auditor must ensure:

1. that there is a legislative instrument that clearly confers the function to an environmental auditor, before engaging in that work
2. the function falls within the environmental auditor’s area of expertise or competency
3. their involvement will not result in a conflict of interest
4. they have all required approvals from the responsible Authority(ies)
5. they meet all requirements including any special requirements specified within EPA guidance, or any special requirements specified by the responsible Authority(s).

# Initial appointment – application process

Section 191 of the Act provides that a natural person may make an application to EPA for appointment as an environmental auditor. An application must be made in the approved manner and form, provide any required information and be accompanied by any prescribed application fee (unless the person has been exempted).

## Advertisements

EPA will advertise its intent to appoint environmental auditors and call for applications.

## Fees for applications

An application fee is required to be paid when submitting an application to become an appointed environmental auditor (unless the applicant has been granted an exemption).[[4]](#footnote-5) The application fee is not refundable in the case where EPA refuses to appoint the applicant as an environmental auditor. Refer to s191 of the Act and r206(1) of the Regulations for further information.

An additional fee must be paid under r206(2) of the Regulations if EPA approves the application for appointment. Refer to section 5.6 for further information.

## Applications

 The application forms will be published on the EPA website and will outline the manner and form for application and category of appointment. Information on different types of categories is provided in Appendices A-E. The applicant will be required to provide:

1. evidence of relevant qualification(s) (for example, a relevant bachelor’s degree awarded by a recognised tertiary institution)
2. current, detailed curriculum vitae
3. details and evidence of a minimum of three years training that demonstrates commitment to ongoing training and professional development relevant to the technical competencies of the category of appointment
4. demonstrated maintenance of up-to-date knowledge in the scientific, technical, regulatory, and legal fields relevant to the category of appointment
5. evidence of individual membership of and/or accreditation from one or more relevant professional associations
6. demonstrated knowledge and understanding of relevant provisions of the Act plus associated statutory policies, regulations, and guidelines relevant to the category of appointment
7. demonstrated thorough understanding of the principles of, and methods for, conducting environmental audits
8. demonstrated environmental ‘audit like’ experience (for example providing a supporting role to an environmental auditor, review of technical reports or a quality assurance function) relevant to the category of appointment
9. demonstrated proficiency, experience, and expertise of the applicant (and/or expert support team) in the areas listed in the attached appendices of these guidelines for the category of appointment
10. demonstrated evidence of the applicant’s ability to exercise professional judgment, reach opinions independently and have not been unduly influenced by views or actions of others
11. an undertaking from the applicant that they will obtain, or that their employer will obtain on the applicant’s behalf, adequate professional indemnity insurance prior to offering auditing services
12. full disclosure of any circumstances that may affect the applicant’s independence or objectivity in acting as an environmental auditor appointed pursuant to the Act
13. satisfactory referee checks from at least two referees, one of whom is not directly associated with the applicant or the company employing the applicant while the second one is to be directly associated. Referees are to have direct and recent (up to three years) knowledge of the applicant and can confirm the applicant’s experience and expertise
14. satisfactory National Police Records Check to be submitted with the application.

The applicant needs to demonstrate more than eight years’ experience relating to the category of appointment. This must include at least:

* + 1. five years’ experience in environmental or industrial facility assessment and ‘audit like[[5]](#footnote-6)’ work
		2. two years of relevant work in Australia
		3. experience as a project manager involving a multidisciplinary team approach in an area relevant to the category of appointment
		4. experience in the production of reports that demonstrate expertise in the category of appointment is sought.

The applicant must nominate an expert support team and specify for what areas outlined in the attached appendix that the expert support team will be drawn upon. The capabilities of expert support personnel must be demonstrated and available at any time at EPA’s request. Expert support team members should have relevant qualifications and a minimum of eight years expertise in the areas nominated. The applicant is to provide the following for each expert support team member:

1. a current, detailed curriculum vitae demonstrating expertise in the area(s) nominated including:
	* a degree and/or equivalent qualification relevant to an area of expertise claimed
	* have a thorough knowledge and understanding of relevant Australian guidelines and policies
	* clearly demonstrated and detailed description of relevant project experience in the area of expertise claimed
	* number of years of relevant experience in the expertise claimed
	* membership of a professional association relevant to the area of expertise claimed
	* be currently working in the field of expertise
2. listing of any relevant publications
3. a signed agreement to provide expert support from nominated team members who are not employed by the same company as the applicant. The area of expertise in which support will be provided must be clearly indicated.

## Other considerations

In addition to satisfying the requirements for the relevant category, the applicant must be able to demonstrate a sound understanding of all mandatory requirements of s190(2) of the Act. These are:

1. any guidelines issued by the EPA under s203
2. any relevant environment reference standard made under Part 5.2 of the Act
3. any relevant compliance code made under Part 5.3 of the Act
4. any matter prescribed in the Regulations.

## Submitting an application

Applications for appointment must be submitted through the EPA portal, with the inclusion of all required documents and payment of the application fee prescribed under regulation 206(1) of the Regulations.

EPA may request additional information or seek clarification in relation to the applicant’s submission.

## Advisory Panel

Under ss192 and 235 of the Act, EPA may appoint an advisory panel to advise on the appointment process. The function of an advisory panel is to:

* make recommendations regarding the suitability of an applicant for appointment as an environmental auditor
* provide any other advice to EPA as requested
* have regard to this guideline, and any other guidelines issued under s203 of the Act.

EPA may appoint any person to be a member of the advisory panel if satisfied that the person has the appropriate level of expert knowledge, skills or experience[[6]](#footnote-7), and will also appoint a chairperson. EPA must have regard to, but is not bound by, any advice provided by the advisory panel[[7]](#footnote-8).

# Initial appointment – selection process and appointment

The selection process will be a staged process in the following order:

1. written application
2. examination
3. interview
4. appointment of successful applicants.

The interview can be by an advisory panel[[8]](#footnote-9). EPA can request further information at any stage of the process and will decide at each stage whether an applicant will proceed further.

## Examination and interview

The examination and interview will focus on legislative, technical and policy aspects of environmental auditing. The applicant will be assessed based on their demonstrated understanding and knowledge, including, but not limited to, the following:

* legislative understanding
* auditing skills
* technical competencies.

## Appointment decisions

EPA may appoint or refuse to appoint an applicant in accordance with s191 of the Act. In determining whether to approve or refuse an application EPA will have regard to:

* the application provided by the applicant and that this is in accordance with the manner and form specified in the application form
* any information sought by EPA to be provided by the applicant at any stage of the appointment process
* that the prescribed application fee has been paid, unless there has been an exemption granted[[9]](#footnote-10)
* any recommendations made by an advisory panel
* examination and/or interview (if applicable)
* any relevant guidelines issued under s203 of the Act
* any prescribed matter.

## Notice of appointment

If EPA decides to approve an application for appointment the applicant will be notified by written Notice of Appointment.

Section 197 of the Act provides that EPA can appoint a person as an environmental auditor:

* unconditionally
* subject to conditions specified in the environmental auditor’s instrument of appointment
* subject to any prescribed conditions

The appointment will specify the category of appointment and is subject to all the below:

* compliance with the Act
* the Regulations
* any guidelines issued under s203 of the Act.

EPA may, at any time, by written notice impose conditions or further conditions on the appointment or revoke any conditions to which the appointment is subject[[10]](#footnote-11). When deciding whether to impose, vary or revoke conditions on the appointment of an environmental auditor EPA will have regard to any guidelines issued under s203 of the Act.

## Initial period of appointment

The period of appointment will not exceed 3 years and may, at EPA’s discretion, be less. The period of appointment will be included in the written Notice of Appointment[[11]](#footnote-12). Should the initial appointment be subject to any conditions these will take effect on the date specified by EPA or the date on which the environmental auditor is notified, whichever is the latter.

## Categories

EPA appoint environmental auditors in the following categories:

* **Contaminated land:** this is land that has been contaminated by historic or current activities that may present risks to human health and the environment. This may require remediation and clean-up of contaminants.
* **Industrial facilities:** this is activity-based and includes industrial processes, the storage of chemicals or wastes, and the management of commercial/industrial sites which may present risks to human health and the environment.

There are three subcategories for industrial facility auditors to perform audit functions. An auditor will be appointed in a set of subcategories based on their demonstrated skills, experience and expertise. The subcategories are:

* + activities related to industrial facilities (design, construction, commissioning, operation and decommissioning)
	+ wind energy facilities
	+ activities relating to landfills (design, construction, operation, closure and aftercare).
* **Natural resources:** this is activity-based, with the focus on assessing the risk of harm to human health or the environment from the management of natural resources (e.g., forestry and timber harvesting).

EPA may create future categories or remove categories as they are required. An environmental auditor can only conduct environmental audits within the category or categories specified in their Notice of Appointment.

## Appointment fees

Upon appointment a further fee of 512.99 fee units is payable, as per r206(2).

## Induction

EPA will conduct an induction session for successful applicants.

## Unsuccessful applicants

EPA will give unsuccessful applicants written notice of proposed refusal, including reasons. An applicant may, within 14 calendar days of receiving notice of proposed refusal, make submissions requesting reconsideration[[12]](#footnote-13), setting out grounds in terms of the assessment requirements contained in the appendices of these guidelines, examination and/or interview (if applicable) and the application form.

EPA may refuse an application for appointment when it has given the applicant written notice of proposed refusal, a reasonable opportunity to make submissions requesting reconsideration, and has taken any submissions made by the applicant into consideration. EPA will notify unsuccessful applicants of the final decision in writing[[13]](#footnote-14).

# Reappointment of environmental auditors

An environmental auditor appointment is for a finite period, not exceeding three years. Environmental auditors who want to continue their appointment as an environmental auditor must apply for reappointment as detailed below. In the reappointment assessment process, EPA will consider information presented within the application, review outcomes of the environmental auditor’s work and any issues or complaints.

## Application for reappointment

Applications for reappointment are to be submitted through the EPA portal.

The environmental auditor is to complete the [reappointment application form (form F1034)](https://www.epa.vic.gov.au/about-epa/publications/f1034) provided by EPA. The environmental auditor must also supply all the following information:

* an undertaking to maintain the environmental auditor’s expert support team in accordance with the expectations set out in these guidelines
* full disclosure of any circumstances that may affect the applicant’s independence or objectivity in acting as an environmental auditor appointed pursuant to the Act (the application form requires a signed declaration to this effect)
* an undertaking to maintain professional indemnity insurance (as set out in section 4.3 (xiv) of these guidelines)
* a current satisfactory National Police Records Check.

An application for reappointment is to also be accompanied by the prescribed application fee. See r207(1) of the Regulations for details of this fee.

A further fee is payable under r207(2) of the Regulations if EPA approves the application.

If the application is not complete and properly submitted, an appointment may lapse (refer to section 6.9).

## Provision of evidence of contribution to audit system – during previous appointment

When submitting an application for reappointment, the environmental auditor is required to provide evidence of work completed within the functions set out in s190 of the Act. Conducting environmental audits and the preparation of environmental audit statements and environmental audit reports remains a primary function of environmental auditors. Environmental audits are the main evidence an environmental auditor is contributing to the Victorian audit system and is the preferred indicator the environmental auditor can provide to prove their competency and understanding of Victorian environmental legislation.

The requirements for demonstrating sufficient evidence of contribution to the audit system is:

* evidence of completion of two or more environmental audit reports or preliminary risk screen assessments; or
* evidence of completion of one environmental audit report or preliminary risk screen assessment and additional information supplied as outlined below.

If an environmental auditor has completed only one environmental audit report or preliminary risk screen assessment during their last period of appointment they can identify one or more additional reports[[14]](#footnote-15) which demonstrate:

* 1. technical and environmental auditing competence through work of equivalent professional standing, including but not limited to environmental audits performed in another jurisdiction(s)
	2. formal justification of why there was no auditing work conducted during the appointment term, such as being outbid for work, personal reasons, travel commitments
	3. sufficient understanding of relevant Victorian environmental legislation, policy, regulations, and guidelines.

An environmental auditor who has not completed any preliminary risk screen assessments or environmental audits in Victoria in the preceding period of appointment may not be eligible for reappointment. Prior to proceeding with their application, they must contact the Manager Environmental Audit at EPA via environmental.audit@epa.vic.gov.au to schedule a meeting to discuss how to progress with their reappointment application. EPA may consider other work in relation to performing other functions conferred on them in their capacity as an environmental auditor and may request additional information in relation to that work. The applicant may be required to provide the following information:

* minimum of two reports of equivalent professional standing
* provide a written statement demonstrating understanding of the obligations of an environmental auditor and of Victoria’s legislation
* attend an interview
* provide referees who have direct and recent (up to three years) knowledge of the applicant and can confirm the applicant’s experience and expertise
* provide a statement outlining the reason for not completing any environmental audit or preliminary risk screen assessment reports during their last reappointment period.

## Assessment

To reappoint an environmental auditor, EPA must be satisfied that all work completed by the auditor is of a satisfactory standard, including environmental audits and any other statutory work conducted pursuant to the Act or any other Act.

In assessing a reappointment application, EPA will consider the information provided in support of the application and review all information compiled from quality assurance reviews carried out during the previous period of appointment. Where applicable, EPA will seek comments on the environmental auditor’s performance in other statutory work conducted pursuant to any other Act from the relevant government agencies and other jurisdictions. All assessments will be subject to an internal peer review.

If outstanding performance issues are identified, EPA will write to the environmental auditor to advise of the issues and invite written submissions for its consideration.

Where all matters related to the environmental auditor’s conduct and quality of work are deemed to be satisfactory – including resolution of any issues identified – EPA may reappoint the environmental auditor, subject to conditions where appropriate.

If one or more of the outstanding issues are not satisfied, EPA may refuse the application for reappointment as environmental auditor. Refer to section 6.5 of these guidelines.

## Timing

As prescribed by r166, applications for reappointment must be received within the period commencing 12 weeks prior to the expiry of the environmental auditor’s current appointment and ending 8 weeks prior to the expiry of the appointment. This is to allow time for assessment of the application. Applications submitted later than this may result in EPA refusing to assess the application or the environmental auditor’s appointment lapsing.

Applications received after an environmental auditor’s appointment has lapsed will not be accepted unless prior agreement with EPA is confirmed in writing. Where an environmental auditor’s appointment has lapsed and there is no prior agreement in place, a person may reapply through the initial appointment process.

## Decision

EPA may refuse an application for reappointment if not satisfied of the matters detailed in section 6.3 or other relevant considerations including but not limited to any formal disciplinary action taken against the environmental auditor under the Act.

EPA will provide written notice of intent to refuse an application for reappointment, including the reasons[[15]](#footnote-16), and will provide opportunity to make submissions in relation to the proposed refusal. Submissions received will be taken into consideration prior to making a final decision[[16]](#footnote-17). Any submission should be lodged within 28 days from the date of notice of intent.

## Conditions of reappointment

EPA may appoint a person as an environmental auditor either unconditionally or subject to conditions specified in the environmental auditor's instrument of appointment or to any prescribed conditions. At any time during appointment, EPA may by written notice either –

1. impose conditions or further conditions on the appointment
2. vary or revoke any of the conditions to which the appointment is subject.

EPA will formally discuss the grounds of the conditions with the environmental auditor. Prior to finalising the reappointment with special conditions, the Manager Environmental Audit will contact the environmental auditor via environmental.audit@epa.vic.gov.au to schedule a meeting to discuss the conditions.

## Reappointment fees

There are two fees associated with reappointments:

* a prescribed application fee, as described in r207(1) of the Regulations. The application fee invoice is generated when the application is submitted through the EPA portal, with applicants given the option to pay when the application is lodged, or to pay the invoice within 30 days. Please note that applications for reappointment cannot be approved until the fee is paid and as such it is recommended to pay the application fee when lodging the application
* an appointment fee is required as a condition of reappointment (see r207(2) of the Regulations). The appointment fee invoice is sent to the auditor with their newly generated instrument of appointment and cover letter, the appointment invoice must be paid within 30 days.

## Reappointment period

EPA may appoint environmental auditors up to 3 years where an environmental auditor:

* is actively participating in environmental audit system as provided for in part 8.3 of the Act
* consistently presents work of a high standard
* is not the subject of current conduct or quality concerns or formal complaints.

However, EPA may choose to appoint environmental auditors for a shorter period of appointment at its discretion.

## Appointment lapsing

If an environmental auditor’s appointment lapses, then they are no longer an environmental auditor appointed pursuant to the Act and they must not:

* act in the capacity of an environmental auditor appointed pursuant to the Act
* perform, or propose to perform, any function allowed for under s 190 of the Act
* hold themselves out to be an environmental auditor appointed pursuant to the Act.

# Mutual recognition

Under s17(1)(a) of the federal *Mutual Recognition Act 1992* (Commonwealth) (the MRA), a person who is registered in one state[[17]](#footnote-18) for an occupation can be entitled to be registered in an equivalent occupation in another state. Under the MRA, EPA is required to consider a written notice lodged by an environmental auditor appointed under equivalent systems in other jurisdictions who seek registration as an environmental auditor in Victoria.

A written notice lodged with EPA for appointment as an environmental auditor under the MRA must be made in writing, in accordance with s19 of that Act.

The written notice should be lodged, with a completed form through the EPA portal, with the inclusion of all required information.

EPA may permit the written notice and form to be amended after it is lodged.

The person who lodges the written notice will receive notification of EPA’s decision in accordance with these guidelines and s24 of the MRA.

An appointed environmental auditor will receive a Notice of Appointment as outlined in section 5.3 of these guidelines, the period of appointment will be as outlined in section 5.4 of these guidelines, and the requirement for the payment of fees will be as outlined in section 5.5 of these guidelines.

A person may also be entitled to automatic deemed registration under the MRA, as per s42D(3):

*The registration (or registrations) the person has because of subsection (2)* [of section 42D] *is automatic deemed registration, which has effect once the person: (a) meets any requirements covered by paragraphs (4)(f) to (h); or (b) if no such requirements apply–begins to carry on the activity in the second State.*

For the purposes of carrying on the activity in the second State, the person is taken to be registered in the second State for the second State occupation and to have any additional registration required to carry on the activity in the second State.

This does not authorise the person to carry on every activity in the second State covered by the second State occupation. Automatic deemed registration authorises in the second State only activities the person is authorised to carry on in their home State.

An environmental auditor who intends to carry on an activity in Victoria in reliance on automatic deemed registration must notify the EPA prior to beginning to carry on that activity.

Victorian environmental auditors wishing to take advantage of AMR in another state or territory will need to confirm if the state or territory they wish to work in has entered the AMR scheme. This information is available through the Australian Government web site at [Improving occupational mobility](https://www.regulatoryreform.gov.au/priorities/improving-occupational-mobility). Victorian environmental auditors who wish to rely on AMR in another state or territory are advised to confirm any specific requirements with the relevant authority for that state or territory.

Further general information about Victoria's implementation of AMR is available from the [Department of Treasury and Finance](https://www.dtf.vic.gov.au/funds-programs-and-policies/automatic-mutual-recognition-occupational-licensing).

# Revocation or suspension of appointment

EPA may suspend or revoke an appointment if the environmental auditor has not satisfied the requirements of these guidelines in relation to eligibility for appointment as an environmental auditor.

EPA may also suspend or revoke the appointment of an environmental auditor if any of the below occurs:

* the environmental auditor has contravened the Act, the Regulations; or a condition of the environmental auditor's appointment
* the environmental auditor is not carrying out a sufficient amount of preliminary risk screen assessments or environmental audits to justify continued appointment as an environmental auditor
* the environmental auditor is appointed as an environmental auditor in another jurisdiction and that appointment has been changed because of conduct that would (if it occurred in Victoria) authorise revocation or suspension of the environmental auditor's appointment under the Act
* the environmental auditor provided false or misleading information to EPA in an application for appointment or reappointment
* the environmental auditor has contravened a prescribed matter
* the suspension or revocation of the appointment is justified having regard to:
	+ the quality of the environmental auditor's work in relation to preliminary risk screen assessments or environmental audits conducted during the environmental auditor's appointment
	+ the quality of the environmental auditor's work in relation to any prescribed function of an environmental auditor
	+ any other matter that EPA considers to be relevant to the environmental
	+ auditor's suitability for appointment.
* a conflict of interest circumstance referred to in s200(1)(h) of the Act is present[[18]](#footnote-19).

EPA will not suspend or revoke the appointment of an environmental auditor without first giving written notice of intention and giving the environmental auditor a reasonable opportunity to make a submission[[19]](#footnote-20).

EPA may suspend an environmental auditor’s appointment for a specified period, until the fulfilment of specified conditions, or until further notice by EPA[[20]](#footnote-21). EPA may revoke the appointment of an environmental auditor who is suspended[[21]](#footnote-22).

The date the suspension or revocation takes effect is that specified on the notice, or the date on which EPA notifies the environmental auditor of the suspension, whichever is the later. If a period of suspension or revocation is not specified, the suspension or revocation ends on the date EPA notifies the environmental auditor that the appointment has been reinstated or revoked.

During the period of suspension an environmental auditor must not:

* act in the capacity of an environmental auditor appointed pursuant to the Act
* undertake, or propose to undertake, any environmental audit work
* hold themselves out to be an environmental auditor currently appointed pursuant to the Act.

# Maintenance of appointment

## Environmental auditor’s responsibilities – change in circumstances

An environmental auditor must notify EPA at least 10 business days in advance of any change in circumstances relevant to their appointment. Changes include the environmental auditor’s employment status such as a temporary change and any complaints or disciplinary action received while acting as an environmental auditor in other jurisdictions. The minimum advance notice of 10 business days may be exempted if the change is due to unforeseeable circumstances.

An environmental auditor is to provide appropriate supporting material when notifying EPA of a change in circumstances, which will then be assessed.

Where the change in circumstances is significant and/or is non-compliant with an environmental auditor’s appointment conditions, EPA may review an appointment. Alternatively, EPA may note that the change does not affect the environmental auditor’s appointment. EPA will then advise the environmental auditor of the assessment result.

Where EPA advises the environmental auditor that the notified changes are not acceptable and will result in non-compliance with the environmental auditor’s appointment conditions, the environmental auditor must either withdraw the changes or make further changes for re-assessment by EPA.

## Environmental auditor’s responsibilities – Annual Auditor Statements

By 30 September each year, environmental auditors are to submit to EPA an Annual Auditor Statement detailing their work carried out in the previous financial year, which may be used as evidence of contribution to the audit system and the Victorian community.This statement should also include professional development activities and any required self-assessment of compliance. The Annual Auditor Statement is to be completed on the form provided to environmental auditors. EPA uses the information contained in Annual Auditor Statements to assist with the ongoing development of the environmental audit system and to supplement the review of environmental auditors’ reappointment applications. The Annual Auditor Statement is to be submitted on the due date to the following email: EAappointments@epa.vic.gov.au

# Environmental auditor - conduct

EPA expects that environmental auditors work actively and carry out their statutory functions.

The requirements for demonstrating sufficient evidence of contribution to the audit system is done by either:

* evidence of completion of two or more environmental audit reports or preliminary risk screen assessments
* evidence of completion of one environmental audit report or preliminary risk screen assessment and additional information supplied as outlined in section 6.2 of this guideline.

EPA may also review the quality of work completed under other functions of an environmental auditor, such as verifications. An environmental auditor is expected to adhere to all statutory timeframes, for example the prescribed timeframe in relation to reappointment applications.

An environmental auditor, when carrying out any function under the Act or any other Act, must never do any of the following:

1. provide false or misleading information to EPA in an application for appointment or reappointment
2. issue an environmental audit statement that is false or misleading
3. issue a preliminary risk screen assessment statement that is false or misleading
4. issue any other document that is false or misleading
5. issue an environmental audit statement without first preparing an environmental audit report
6. issue a preliminary risk screen assessment statement without first preparing a preliminary risk screen assessment report.

An environmental auditor must do all the below:

1. notify EPA within five business days of receiving a request to conduct an environmental audit[[22]](#footnote-23)
2. before conducting an environmental audit, submit a proposed scope of the audit to EPA, refer to EPA Publication 2041 *Guidelines for conducting environmental audits[[23]](#footnote-24)*
3. provide EPA (and, if the environmental audit relates to a risk of harm to human health or the environment from contaminated land or potentially contaminated land or if required by EPA: the relevant planning authority and responsible authority within the meaning of the *Planning and Environment Act 1987*), with a copy of the environmental audit report and environmental audit statement within five business days of completion[[24]](#footnote-25)
4. provide EPA and the relevant planning authority and responsible authority within the meaning of the *Planning and Environment Act 1987* with a copy of the preliminary risk screen assessment statement and the preliminary risk screen assessment report within 5 business days of completion[[25]](#footnote-26).

In addition, an environmental auditor must:

1. employ assessment methods and approaches consistent with good practice for environmental auditing
2. exercise due care, diligence and professional judgment, to the standard which may be reasonably expected of qualified and experienced environmental professionals who are performing duties conferred upon them by the Act or any other Act, such as occupational health and safety
3. conduct environmental audits and other statutory works pursuant to the Act or any other Act in accordance with the guidelines for environmental auditors (s203 of the Act), other guidelines approved by EPA or by other government agencies
4. act always in a professional manner, upholding the independence and integrity of the environmental audit system
5. offer services only in areas of their competence and only perform environmental audits and exercise powers that are relevant to the category(ies) of environmental audit to which their appointment relates
6. utilise an expert support team in their respective fields of expertise and ensure that the auditor can verify that the expertise engaged is current
7. ensure that any reports, statements or documents which they provide pursuant to the Act or any other Act are an accurate record of soundly based observations and of logical deductions;
8. continue to develop relevant knowledge, skills and expertise and actively assist and encourage those under their direction to do likewise.

An environmental auditor may use the title of *‘Environmental Auditor (appointed pursuant to the Environment Protection Act 2017)’* to do the following:

* sign environmental audit reports, environmental audit statements, and documents prepared carrying out functions pursuant to the Act or any other Acts
* in marketing material or project proposals that directly relates to the functions of the Environmental auditor[[26]](#footnote-27).

An environmental auditor is not to use that title to sign any other documents or marketing of work not done in the capacity as an environmental auditor.[[27]](#footnote-28)

Note: An environmental auditor appointed pursuant to Part 8.3 of the Act who undertakes an environmental audit in a jurisdiction other than Victoria should make themselves familiar with the relevant legislation, regulations, and guidelines in that jurisdiction(s). EPA may consider environmental audit work performed in another jurisdiction in any future reappointment assessment of an environmental auditor.

## Independence of the environmental auditor

An environmental auditor carrying out any function under the Act or any other Act must be able to demonstrate a sufficient level of independence from their client to satisfy a reasonable person that the outcome of their work when performing any auditor function, including environmental audits and preliminary risk screen assessments, will not be influenced by the relationship with the client or potential benefits to the environmental auditor or the company for which they work. The environmental auditor must also consider the independence of any expert support team member(s) relied on when carrying out any function under the Act.

EPA expects environmental auditors to avoid any situation in which they (or their employer) have entered into any agreement or arrangement that may be reasonably perceived to constitute a conflict of interest. For example, an auditor must not be engaged by or through any company responsible for the site assessment or remediation works in their capacity as an auditor, even if that person is nominated by the site owner/occupier as project manager for the assessment, cleanup or redevelopment works.

An environmental auditor must not act as an advocate for the site or activity being audited as this compromises their independence and brings the audit scheme into disrepute. An environmental auditor is expected to be able to demonstrate a professional detachment from the subject of their work, in particular environmental audits, and preliminary risk screen assessments.

When an environmental auditor is conducting a preliminary risk screen assessment or an environmental audit there may be grounds for EPA to assess and implement suspension and/or revocation of appointment if any of the below circumstances apply:

* the environmental auditor is an associate of the person who is undertaking the activity or who owns or occupies any part of the site that is the subject of the environmental audit, or preliminary risk screen assessment
* the environmental auditor has a direct or indirect pecuniary or personal interest in any part of the activity or the site that is the subject of the environmental audit, or the preliminary risk screen assessment
* the environmental audit or the preliminary risk screen assessment conducted by the environmental auditor involves the environmental auditor reviewing any aspect of work previously carried out by the environmental auditor or an associate of the environmental auditor or a statement or report previously prepared by the environmental auditor or an associate of the environmental auditor[[28]](#footnote-29)

An ‘associate’ of the environmental auditor is a person who the environmental auditor is closely connected with including, but not limited to, colleagues at work, partners in business, friends, and family.

It is the responsibility of the environmental auditor to ensure that they maintain their own professional independence and must not enter into any agreement or arrangement that may reasonably be perceived as constituting a conflict of interest.

In addition to the above, further circumstances where a perceived or actual conflict of interest may arise, specific additional guidance may be provided; for example, EPA Publication 1323 *Landfill Licensing* includes discussion and expectations in addition to the above, in relation to multiple expected environmental auditor functions.

The environmental auditor may seek EPA guidance when it is considered unclear if their current circumstances may be reasonably perceived to constitute a conflict of interest.

## Imminent state of danger

Some contaminants can pose imminent or immediate risks of harm due to their toxicity, pathogenicity, flammability, or explosivity, particularly when present at higher concentrations.

In these instances, it may not be appropriate to follow the Preliminary Site Investigation, Detailed Site Investigation and risk assessment process to fully characterise the issue before acting. Instead, an ‘outside-in’ approach should be taken, where impacted receptors are identified and actions to mitigate exposure are prioritised.

When carrying out any function under the Act or any other Act, section 216 of the Act requires environmental auditors to notify EPA of an imminent state of danger to human health or the environment from pollution and waste as soon as practicable after becoming aware.

The above requirement also relates to any circumstance, which if not addressed, are likely to become an imminent state of danger to human health or the environment from pollution or waste.

EPA expect that an environmental auditor is familiar with and understands EPA’s information on responding to emergency and urgent situations: <https://www.epa.vic.gov.au/about-epa/what-we-do/emergency-information-and-support>

Determining whether an imminent state of danger exists is likely to require the environmental auditor to exercise their professional judgment.

EPA may, however, provide specific guidance to environmental auditors when requested.

Examples of circumstances that may indicate an imminent state of danger could include (but are not limited to):

* pathogenic materials and waste, dangerous goods, radioactive substances, unexploded ordinance in an uncontrolled state that may be accessible
* highly flammable or explosive substances in vapour or soils in accessible scenarios that may result in fire or explosion e.g., methane above the lower explosive limit
* groundwater or surface water where it is known to be abstracted for drinking water purposes and/or reports of contaminant concentrations at levels that could pose an acute health risk
* contamination in drinking water service lines that may ingress into water supply, particularly where it has corrosive properties, or acute toxicity
* vapour intrusion leading to indoor air concentrations above levels that could pose an acute health risk
* occupants or users of the impacted area have reported ill health associated with the contamination
* absence of adequate spill containment (for example, bunding) beneath bulk liquid storage vessels in the immediate proximity of waters (including a stormwater drain), where there is a potential to cause a discharge that may have toxic impacts on aquatic life (for example, fish kills or similar impacts), or an impact on human health
* discharge (or a high risk of discharge) of any substance, including polluted groundwater, to surface waters at concentrations that may have toxic impacts on aquatic life (e.g., fish kills), or potential impacts on human health
* friable asbestos in an uncontrolled environment, such that there is a significant risk that asbestos fibres may be released to the air environment and present a risk to people either on-site or off-site.

If an environmental auditor considers an event to constitute an imminent state of danger, they should immediately inform EPA’s 24-hour Pollution Watch Line (1300 372 842) and as necessary Emergency services (000).

Environmental auditors will need to provide details of the situation that is or may result in an imminent state of danger at the time of this call. They will receive a follow up email acknowledging their call and requesting further information in writing on the notification situation.

This further information should include (as a minimum):

* the time and date that the imminent state of danger was identified and the location of the site
* details regarding the imminent state of danger
* recommended actions including time frames
* circumstances in which the imminent state of danger occurred, including the function the environmental auditor was performing at the time the environmental auditor was aware of this state.

The environmental auditor needs to provide this further information in an email to EPA, copying this email to the EPA State Duty Officer and the Manager Environmental Audit (reply email addresses will be provided in the response provided by EPA).

This requirement for environmental auditors to notify EPA also applies in relation to transitioned audits which are continuing to be conducted under the now superseded *Environment Protection Act 1970* after 1 July 2021, due to the operation of section 478(3)(b) in Part 16.4 of the current Environment Protection Act 2017.

## Duty to notify of contaminated land

Section 40 of the Act outlines the duty to notify of contaminated land. This duty applies to a person in control or management of land that has been contaminated by notifiable contamination. Whilst the environmental auditor is an independent party and would not be in control of management of the audit site, EPA expect that an environmental auditor would be familiar with the contaminated land duties. EPA considers it appropriate for the environmental auditor to advise the person in control or management of the land they are auditing if notifiable contamination is discovered as part of any function undertaken by the environmental auditor under the Act. Environmental auditors are expected to understand all of the below:

* s40 of the Act
* r13 of the Regulations
* EPA Publication 1977 *Guide to the duty to manage contaminated land*
* EPA Publication 2008 *Notifiable Contamination Guideline*.

# Quality assurance program

EPA conducts a quality assurance program to uphold the integrity of the environmental audit system in Victoria, undertaking quality reviews on samples of work undertaken by environmental auditors when carrying out statutory functions.

## Compliance with the Act

The quality assurance program may include an assessment of a sample of statements of environmental audits, certificates of environmental audit and environmental audit reports provided to EPA under transition clauses in the Act. Further information about transitioned audits is available in EPA Publication 1978 *Transition guidance for environmental auditors*.

EPA may seek an explanation when documentation submitted to EPA does not appear to comply with the relevant legislation or other statutory requirement or appears to contain an error or inconsistency.

It is a requirement that environmental auditors provide timely responses to EPA enquiries (i.e., within 10 business days) so that EPA’s reviews can be completed in a reasonable timeframe. The environmental auditor should inform the EPA personnel responsible for the query, in writing, if additional time is required to provide a response.

## Compliance with guidelines

The quality assurance program may include an assessment of samples of documentation received by EPA for compliance with the most recent version of:

* EPA Publication 2001 - *Guidance for the cleanup and management of contaminated groundwater*
* EPA Publication 2021 - *Guideline for conduct of preliminary risk screen assessments*
* EPA Publication 2022 - *Environmental auditor guidelines – Provision of statements and reports for environmental audits and preliminary risk screen assessments*
* EPA Publication 2041 - *Guidelines for conducting environmental audits*
* other relevant guidelines that may be published by EPA from time to time.

Documents submitted by environmental auditors may be assessed for compliance with relevant guidelines and may be selected for targeted detailed assessment:

* following identification of a potential issue by EPA during the initial processing of an environmental audit report or related documentation, or preliminary risk screen assessment report or related documentation
* where EPA has been notified of relevant concerns or issues (via one or more complaints or other means) about the environmental auditor’s work, documents produced or other relevant factors in accordance with section 12 of these guidelines
* by other means including random selection.

This assessment may include a desktop review of the relevant documentation submitted, a review of the procedures used in preparing the relevant document or verification of the conclusions of the assessment on which the relevant document is based.

The quality assurance program may include conducting a verification of the environmental status of a site subject to environmental audit.

If EPA considers that the environmental audit documentation or preliminary risk screen assessment documentation does not comply with relevant guidelines, the environmental auditor will be contacted to provide an explanation, and further action may be taken.

## Performance in statutory works under other Acts

EPA maintains channels of communication with relevant government agencies to enable EPA to be notified of any issues regarding an environmental auditor’s conduct and performance in carrying out their statutory functions under any other Act.

EPA will investigate any relevant notified issues. EPA may require the environmental auditor to clarify or explain the issue or to provide copies of relevant documents for assessment. If the environmental auditor’s response fails to address the issue to the satisfaction of EPA, EPA may commence a review of appointment in accordance with section 12 of these guidelines.

# Complaints and environmental auditor appointment reviews

Where EPA receives a complaint about the conduct of an environmental auditor, EPA will take steps to:

1. thoroughly review the complaint and if needed seek further information from the complainant
2. notify the environmental auditor that a complaint has been received
3. where EPA believes that there are insufficient grounds to warrant an investigation, inform the complainant and the environmental auditor that no further action will be taken and the reasons for that decision
4. where EPA believes that there are grounds to warrant an investigation, notify the environmental auditor that an investigation has commenced and invite a submission from the environmental auditor to respond to the allegations
5. prepare an assessment of the complaint taking into consideration any submissions received in relation to the complaint
6. make recommendation(s) regarding the complaint, including any recommended further action (if applicable)
7. make a decision in relation to the complaint
8. reply to all parties outlining the outcome of the investigation.

EPA will seek to resolve complaints within three months of initially receiving them. EPA’s decision in relation to the complaint will be communicated to both the environmental auditor and the complainant.

In the event of a significant complaint, breach of EPA guidelines, the Act, the Regulations or one or more conditions of appointment, EPA may consider suspending or revoking the environmental auditor’s appointment.

Where EPA receives notification or otherwise becomes aware of criminal action, such as corruption, EPA may instigate an investigation without undertaking the complaint or review process in accordance with sections 12 of these guidelines.

## Overview of review(s) processes

The following provides an overview of the processes undertaken by EPA to review environmental auditor appointments. EPA must have regards to matters set out in s 201 of the Act when deciding to suspend or revoke the appointment of an environmental auditor.

EPA may conduct an investigation to determine whether a substantiated complaint has been made or further information is needed to determine issues that EPA becomes aware of in relation to an environmental auditor. The investigation may involve EPA seeking to obtain the views of relevant parties, including the environmental auditor. EPA will notify the environmental auditor and other relevant parties (including any complainants) in writing of its intention to undertake an investigation and the reasons for it.

If an investigation indicates that a substantive issue is present, further action may be taken. EPA will review all the available information about the complaint or issue, including any extenuating circumstances, and assess the information against the factors referred to in section 200 of the Act. EPA will notify an environmental auditor in writing of its intention to, and reasons for, initiating this assessment.

EPA will seek to notify the environmental auditor in writing of the outcome of this process.

# Contact details and further information

For further information please contact:

EPA’s Environmental Audit Unit

environmental.audit@epa.vic.gov.au

EPA Customer Service:

Level 3, 200 Victoria Street

Carlton, Victoria 3053

1300 372 842

EPA website:

[epa.vic.gov.au](http://www.epa.vic.gov.au)

EPA’s 24-hour Pollution Watch Line:

1300 372 842

# Appendix A – Requirements for contaminated land category

This appendix lists the areas of expertise required to fulfill the role of an environmental auditor for the contaminated land category.

Detail on the list of requirements listed below, can be found at Appendix D.

The environmental auditor is expected to have strong working knowledge in all areas listed but can rely on support from an expert support team. Mandatory requirements which the applicant must meet in their own right is listed below in **bold**. Environmental auditors must also note other matters that the EPA will consider at section 4.4 and further information on required expertise in [Appendix D](#_Appendix_D_–).

|  |  |
| --- | --- |
| Auditor Category | Required area of expertise – Technical  |
| Contaminated Land | * **ability to identify contaminants of concern from current or past land uses**
* **assessment of contaminated land and other contaminating facilities**
* **collection and interpretation of analytical data for a variety of media**
* **contaminant fate and transport**
* environmental chemistry
* environmental toxicology / ecotoxicology and risk assessment
* geology
* human toxicology and risk assessment
* hydrogeology
* remedial technologies and geotechnology
* soil science
* statutory and strategic land use planning
* waste management
 |

# Appendix B – Requirements for industrial facilities category

This appendix lists the areas of expertise required to fulfill the role of an environmental auditor for the industrial facilities category.

Detail on the list of requirements listed below can be found in Appendix E. Environmental auditors must also note other matters that EPA will consider at section 4.4 and further information on required expertise in Appendix E.

The industrial facilities category is broad, and environmental auditors are not expected to hold skills in all areas. There are four areas where the environmental auditor must hold core competency as outlined in the table below.

|  |  |
| --- | --- |
| Auditor Category | Core competencies - Technical |
| Industrial Facilities | * Application of the EP Act 2017 its subordinate instruments and guidance relating to risks posed by industrial facilities
* Application of pollution control systems, processes, plant and equipment (as applicable to industrial sectors)
* Application of risk assessment and environmental management systems and processes in relation to the General Environmental Duty s25(4) EP Act 2017
* Industrial processes and activities (in one or more specialised industrial sectors).
 |

The category for industrial facility auditors incorporates a set of subskills. These are updated by EPA from time to time where there is a need to engage an industrial facility auditor for further work. Currently there are three subcategories for industrial facility auditors to perform audit functions. An auditor will be appointed in a set of subcategories based on their demonstrated skills, experience and expertise.

**Subcategories** **include:**

1. Activities related to industrial facilities (design, construction, commissioning, operation and decommissioning)
2. Wind energy facilities
3. Activities relating to landfills (design, construction, operation, closure and aftercare)

The list below details the subcategories of areas industrial facilities environmental auditors may work in. Auditors must ensure that they and /or their export support team have suitable expertise related to the subject of the audit.

| Subcategory | Required area of expertise - Technical |
| --- | --- |
| Activities related to industrial facilities (design, construction, commissioning, operation and decommissioning) | 1) Design, construction and commissioning:* construction environmental management plans
* ecological risk assessments
* environmental impact assessments (environmental effects statements)
* hazard and operability studies
* human health risk assessments
* proof of performance testing.

2) Operational risks for an industrial activity (including environmental impact assessments, impacts and evaluation of risk mitigation measures):* air quality and odour
* assessment of industrial and other contaminating facilities and major hazards
* assessing noise and vibration emissions
* collection and interpretation of analytical data for a variety of media
* human health
* monitoring and management systems (refer to core skill on risk assessment and environmental management systems)
* waste management.

3) Decommissioning:* contaminated land assessments
* decommissioning plans
* suitability of land use audits
* waste management.
 |
| Wind energy facilities | * assessing noise and vibration emissions
* wind energy facility policies and regulations.
 |
| Activities relating to landfills(design, construction, operation, closure/aftercare) | 1) Landfill design and construction activity auditing:* landfill design and construction techniques and technologies
* landfill gas
* leachate
* legislation, guidance and other regulatory requirements.

2) Operational and closed landfill activity auditing:* air quality and odour
* assessing noise and vibration emissions
* landfill gas
* landfill management
* leachate
* legislation, guidance and other regulatory requirements
* monitoring.
 |

# Appendix C – Requirements for natural resources category

This section details the specific criteria that will be used to assess applicants for appointment to the Natural Resources Category of environmental auditor. These criteria are additional to the general criteria detailed in section 4 of these guidelines.

The applicant must be able to demonstrate extensive experience and a broad level of knowledge in all the following core areas:

legal and institutional frameworks, including codes of practice, used in the management of Victoria’s natural resources (for example water, land and ecosystems)

(ii) environmental management; practices, processes, planning and systems

composition, maintenance and protection of Victoria’s biodiversity

(iv) sampling and interpretation of analytical data for relevant environmental applications

(v) natural events and land and water uses and their potential impacts on natural resource and ecosystem condition and processes.

EPA are currently undertaking a review to explore the needs and requirements for natural resource audits and if there is a need for further categories. This review is expected to be completed 2024-25. Further information will be provided to environmental auditors once this work progresses.

|  |  |
| --- | --- |
| Auditor Category | Required area of expertise - Technical |
| Natural Resources | • aquatic ecology• environmental chemistry• environmental modelling• fluvial geomorphology• freshwater science• hydrogeology• marine water science• soil science• terrestrial ecology |

# Appendix D – Expertise required for contaminated land

This list details the skill and knowledge requirements for the contaminated land category. If you are applying to be appointed to the contaminated land category, you will need to refer to the summary in Appendix A, and then the more detailed information for the relevant skills and experience in this appendix.

Applicants may rely on the use of expert support teams in meeting these requirements, however they are still expected to have a working knowledge of the requirements that they might rely on the expert support team for assistance.

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of professional associations and certifications |
| Ability to identify contaminants of potential concern from current or past land uses | * Contaminated land investigations involving soil, soil vapour and groundwater across a wide range of industrial activities and other potentially contaminating land use activities
* Undertaking historical site assessments
* Understanding of changes in contaminant phases
* Knowledge in industrial plant processes and mechanisms.
 | Engineering (Chemical, Environmental)Science/Applied Science (Chemistry, Geology, Geography, Environmental Science)Any other relevant qualifications or experience | Australian Contaminated Land Consultants Association Australasian Land and Groundwater Association Certified Environmental Practitioner Certified Practicing EngineerGeological Society of AustraliaInstitute of Chemical EngineersInternational Association of Hydrogeologists |

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of Professional Associations and Certifications |
| Assessment of contaminated land and other contaminating facilities*Ability to assess contaminated land and extend investigation / interpretation to potential groundwater contamination.* | * Contaminated land including those with a wide range of previous uses i.e., industrial, petroleum industry, greenfield, etc
* Understanding of soil/groundwater/soil vapour/NAPL interaction
* Understanding of groundwater well installation, well construction, groundwater gauging and sampling
* Understanding of soil vapour bore installation, construction and sampling
* Assessing fate and transport of contaminants
* Understanding of chemical behaviours in the subsurface
* Understanding of emerging contaminants
* Understanding the up-to-date technologies in assessing contamination.
 | Engineering (Geological, Chemical, Environmental)Science/Applied Science (Chemistry, Geology, Geography, Environmental Science) or other suitably relevant degree | Australasian Land and Groundwater AssociationCertified Environmental PractitionerCertified Practicing EngineerInternational Association of Hydrogeologists |

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of professional associations and certifications |
| Collection and interpretation of analytical data for a variety of media*Detailed understanding of relevant sampling and testing guidelines.**Design and conduct of sampling and testing and data interpretation.* | * Detailed understanding of relevant sampling and testing guidelines for at least three of the following: soil, sediment, groundwater, surface water, marine water, gas / vapour, air (including odour), noise
* Design and conduct of sampling and testing for at least three of the following: soil, sediment, groundwater, surface water, marine water, gas / vapour, air (including odour), noise
* Data interpretation including quality assurance and quality control, statistical analysis of data, etc
* Multiple contaminant types and assessment methods.
 | Engineering (Chemical, Environmental)Science/Applied Science (Agricultural, Chemistry, Ecology, Biochemistry, Environmental, Hydrogeology and Geology) | Clean Air Society of Australia and New ZealandSociety of Environmental Toxicology and ChemistryThe Royal Australian Chemical Institute |

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of professional associations and certifications |
| Contaminant fate and transport*Ability to assess the impact posed by activities or contaminants identified onto human health and the environment through contaminant transport and exposure pathways assessment to all segments of the environment.* | * Assessment and management of contaminated land and groundwater in the context of a contaminated land assessment/audit
* Multiple contaminant types, assessment methods (refer to next point), geology and hydrogeology
* Soil, groundwater, surface water and soil vapour sampling design and method
* Broad understanding in the areas of environmental chemistry, soil science, hydrogeology, human health and ecological risk assessment (as noted above)
* Modelling
* Understanding of contaminant transformations.
 | Science/Applied Science (Environmental, Toxicology, Biochemistry, or related discipline) | Association for Environmental HydrologyAustralian Society Soil Science Incorporated International Association of HydrogeologistsNational Groundwater AssociationSociety of Environmental Toxicology and Chemistry  |

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of professional associations and certifications |
| Environmental chemistry*Ability to develop and implement analytical sampling programs for the purposes of environmental site assessments.**Review and interpretation of analytical laboratory data.**Fate and transport of chemicals in the environment and chemical speciation.**Demonstrated experience in at least two pollution emissions such as air, noise, soil, groundwater.* | * Detailed understanding of relevant sampling and testing guidelines (chemical and biological)
* Design and conduct of sampling and testing
* Fate and transport of chemicals in the environment
* Chemical speciation in the environment
* Data interpretation including quality assurance and quality control, statistical analysis of data, etc
* Robust conceptual site modelling
* Multiple contaminant types and assessment methods
* Identification and management of pollution inputs (for example, industrial wastewater, stormwater, soil wastes and sludge).
 | Engineering (Chemical, Environmental)Science/Applied Science (Environment, chemistry or related discipline) | National Association of Testing AuthoritiesClean Air Society of Australia and New ZealandRoyal Australian Chemical InstituteSociety of Environmental Toxicology and Chemistry American Society for Testing and MaterialsAssociation of Professional Engineers, Scientists and Managers |

| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of professional associations and certifications |
| --- | --- | --- | --- |
| Environmental toxicology / ecotoxicology and risk assessment*Ability to assess ecological hazards posed by various chemicals, biological and physical agents on living organisms. This is to enable an assessment of ecological risks.* | **Toxicology*** Evaluation of ecotoxicological data and dose-response information
* Assessing the ecological hazards posed by various chemicals, and identification of gaps in the science regarding a particular chemical.

**Ecological Risk Assessment**Application of risk-based approach for assessment and management of contaminated land, including the following:* Conduct of ecological risk assessment in the context of a contaminated land assessment/audit
* Understanding of relevant guidance documents for ecological risk assessment (for example, PFAS National Environment Protection Measure as well as international publications)
* Interpretation of findings from complex environmental investigations and ability to provide recommendations for further investigations
* Conduct of exposure assessment including the use of computational approaches and modelling for multi-pathway exposure
* Conduct of characterisation or interpretation of site-specific risk profiles
* Derivation of site-specific risk-based criteria for contaminants in various media (i.e., soil, groundwater, surface water, vapour / gas)
* Multiple contaminant types and geological/hydrogeological settings are highly preferable
* Ability to construct or evaluate detailed or complex risk assessment models (for example, fate and transport, plant / biota uptake, food web etc)
* Detailed understanding of exposure routes and pathways with respect to the derivation of site-specific guidelines values
* Development of conceptual site models to support ecological risk assessment
* Impacts of soil contamination on plants
* Impacts of soil and groundwater contamination on surface water.
 | Science/ Applied Science (Environmental Toxicology, Toxicology, Biochemistry, or related discipline)Engineering (in related discipline)  | Australian College of Toxicology and Risk Assessment (Registration of)Australasian Society of Clinical and Experimental Pharmacologists and ToxicologistsSociety of Environmental Toxicology and Chemistry International Board of Environmental Risk Assessors  |

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of professional associations and certifications |
| Geology*Ability to assess the geology of a site with respect to potential for contamination and the migration of contamination through soil and rock.* | * Geology investigations for the purposes of environmental assessment (geotechnical experience would also be considered beneficial)
* Geology in the Victorian region
* Understanding of geochemistry
* Understanding of weathering
* Understanding of structural geology
* Understanding of geophysical techniques and outcomes.
 | Science/ Applied Science (Geology, Engineering Geology, Earth science)Engineering (Geological, Environmental) | Australian Institute of GeologistsAustralasian Land and Groundwater Association  |

| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of professional associations and certifications |
| --- | --- | --- | --- |
| Human toxicology and risk assessment*Ability to assess health hazards posed by various chemicals, biological and physical agents to humans. This is to enable an assessment of risk to human health.* | * Understanding of the main concepts of risk assessments such tier 1 -3 human health risk assessments, toxicology and source pathway receptor model
* Essential to have expert support of items in the desirable experience requirements.

**Toxicology*** Evaluation of toxicity data and dose-response information
* Assessing the health hazards posed by various chemicals and identification of gaps in the science regarding a particular chemical.

**Health Risk Assessment**Experience in the application of risk-based approach for assessment and management of contaminated land, including the following:* Conduct of tiered human health risk assessments (1-3) in the context of a contaminated land assessment/audit
* Understanding of relevant guidance documents for human health risk assessment (for example, National Environment Protection (Assessment of Site Contamination) Measure and enHeaIth, as well as international publications)
* Interpretation of findings from complex environmental investigations and ability to provide recommendations for further investigations
* Conduct of exposure assessment including the use of computational approaches and modelling for multi-pathway exposure
* Conduct of characterisation or interpretation of site-specific risk profiles
* Derivation of site-specific risk-based criteria for contaminants in various media (i.e., soil, gas / vapour, groundwater, surface water)
* Multiple contaminant types and geological/hydrogeological settings are highly preferable
* Ability to construct or evaluate detailed or complex risk assessment models (for example fate and transport, vapour intrusion, etc)
* Detailed understanding of exposure routes and pathways with respect to the derivation of site-specific guidelines values.
 | Science/Applied Science (Environmental, Toxicology, Biochemistry, or related discipline) | Australian College of Toxicology and Risk Assessment (Registration of)Society of Environmental Toxicology and Chemistry |

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of professional associations and certifications |
| Hydrogeology *Ability to investigate and assess groundwater conditions, including well design and installation and sampling.**Ability to develop detailed and complex conceptual hydrogeological models.* | * Detailed understanding of the Environment Reference Standard 2021, Australian and New Zealand Guidelines for fresh and marine water quality, National Environment Protection (Assessment of Site Contamination) Measure and relevant EPA guidelines
* Development of detailed and complex conceptual hydrogeological models
* Assessment and understanding of various aquifer parameters, properties, chemistry and dependent ecosystems
* Quantification of aquifer hydraulic parameters. including hydraulic and pump testing and analysis
* Groundwater well design and installation (using multiple techniques)
* Groundwater sampling (using multiple techniques)
* Assessment and/or remediation of contaminated groundwater (including assessment of natural attenuation of petroleum hydrocarbons and chlorinated solvents)
* Multiple contaminant types and hydrogeological settings preferable. Less weight is given to salinity and resource-based experience (but some experience preferred)
* Groundwater contaminant plume modelling (including fate and transport).
 | Science/Applied Science (Hydrogeology, Geology, or related discipline) | Association for Environmental HydrologyAustralian Institute of GeoscientistsAustralasian Land and Groundwater AssociationInternational Association of HydrogeologistsNational Groundwater Association  |

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | * Description of Experience
 | Qualifications not limited to bachelor or higher degree | Examples of professional associations and certifications |
| Remedial technologies and geotechnology*Experience in remediation of contaminated land and groundwater including design, construction, and performance monitoring.* | * Remediation of contaminated land and groundwater in the context of a contaminated land assessment/environmental audit
* Design, construction and performance monitoring of remediation systems is preferred
* Remediation of multiple contaminant types, remediation methods, and different geological and hydrogeological settings
* Geotechnology and engineering techniques and the application in the design and operation of remediation systems
* Remediation feasibility/options assessment and comparison of sustainability of remedial options
* An understanding of AS ISO 18504:2022 and relevant guidance from organisations such as crcCARE and ITRC.
 | Engineering (Chemical, Civil, Mechanical, Geological)Science/Applied Science (Chemistry, Environmental, Hydrogeology, Geology) | Australian Contaminated Land Consultants AssociationAustralasian Land and Groundwater AssociationCertified Environmental Practitioner Certified Practicing EngineerEngineers AustraliaInstitution of Chemical EngineersInternational Association of Hydrogeologists |

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of professional associations and certifications |
| Soil science*Understanding soil chemistry, soil properties, assessment of soil contamination and its impact upon flora and fauna associated with that element.**Understanding of natural and background concentrations of metals/analytes in the environment.* | * Detailed understanding of the relevant standards and guidelines
* Contaminated land site assessment, sampling design and method
* Understanding of how physical and chemical properties of soil influence contaminant fate, transport and exposure
* Detailed understanding of soil chemistry and soil properties including the following:
* soil formation (i.e., mineralogy, physical and chemical composition)
* classification/properties
* biological properties of soils
* fertility properties of soils
* natural vs. anthropogenic chemical concentrations.
 | Science/ Applied Science (Soil Science, Agriculture or related discipline) | Australian Institute of Agricultural Science and Technology Australasian Land and Groundwater Association Certified Professional Soil Scientist – Soil Science Australia |

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of professional associations and certifications |
| Statutory and strategic land use planning*Knowledge of law and associated processes in relation to environment and land use planning* | * Interacting with Victoria’s planning system with specific experience in addressing contaminated land through the planning system
* Strong understanding of relevant local, state and Commonwealth legislation, policies and guidance
* A strong understanding of Ministerial Directions No. 1 and 19 and relevant guidance from the planning authority.
 | **(Desirable)** Urban and Regional Planning, Environments, Environmental Science, Geography, Public Policy or Transportation  | Certified Environmental Practitioner Environmental Institute of Australia and New Zealand Planning Institute of AustraliaVictorian Planning and Environmental Law Association |

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of professional associations and certifications |
| Waste management*Knowledge of law, policies and best practice processes in relation to waste* | * Strong understanding of and interaction with the industrial waste duties under the Actand all relevant EPA waste policies and guidance
* Understanding of best practice waste management processes.
 | Environmental engineering or similar (i.e., hydrogeology)  | Waste Management Association of AustraliaVictorian Waste Management Association |

# Appendix E – Industrial facilities skills

## E1 Core competencies

| Core competency area | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of Professional Associations and Certifications[[29]](#footnote-30) |
| --- | --- | --- | --- |
| Application of the EP Act 2017 and subordinate instruments and guidance relating to risks posed by industrial facilities | * Demonstrated experience in assisting duty holders and authorities to understand if they likely comply with requirements of the EP Act 2017 and subordinate legislation for industrial facilities
* Demonstrated experience in environmental systems auditing
* Demonstrated experience in risk management systems auditing.
 | Engineering (Process, Mechanical, Manufacturing, Chemical, Environmental)Science/Applied Science (Chemistry, Biochemistry, Environmental, Risk Assessment, Risk Management or related discipline) | Certified Environmental PractitionerAuditing an Environmental Management System ISO 14001:2015Auditing Integrated Management SystemsRisk Management and compliance / ISO31000 |
| Application of pollution control systems, processes, plant and equipment (as applicable to industrial sectors) | * Understanding of functional design, installation, selection, and/or operation of pollution prevention and pollution control equipment/strategies for at least two of the following: air emissions, stormwater, wastewater, groundwater, noise, vibration and solid waste. Examples include:
	+ air and dust pollution control systems (for example, scrubbers, bio-filters, bag filters, cyclones, etc.)
	+ noise barriers and other attenuation mechanisms or processes
	+ industrial and municipal wastewater treatment systems
	+ recycled water quality management systems and beneficial end use
	+ biosolids treatment and beneficial end use
	+ pollution source reduction measures/technologies
	+ odour (biofilters or other odour control)
	+ acoustic insulation
	+ engineered lagoon systems for wastewater treatment
	+ waste minimisation, reduction and recovery technologies.
* Maintenance, monitoring, testing and performance of pollution control devices.
 | Engineering, Instrumentation, control systems, Science etcEngineering (Chemical, Civil, Manufacturing, Mining, Mechanical)Science/Applied Science (Acoustics, Chemistry, Environmental, Physics) | American Institute of Chemical Engineering Engineers AustraliaInstitute of Chemical EngineersAustralasian Land and Groundwater Association Certified Professional Soil Scientist – Soil Science Australia Australian Acoustical Society Delegate – Association of Australian Acoustical Consultants |
| Application of risk assessment and environmental management systems and processes in relation to the General Environmental Duty s25(4) EP Act 2017*Application of risk assessment approaches to hazardous / industrial activities and development of risk mitigation and monitoring actions**The ability to identify mitigation and management measures to address risks identified.* | * Demonstrated experience in determining and applying the most appropriate risk assessment approach for a variety of industrial processes and facilities
* Strong understanding of [Implementing the general environmental duty | Environment Protection Authority Victoria (epa.vic.gov.au)](https://www.epa.vic.gov.au/for-business/find-a-topic/environment-protection-laws-and-regulations/implementing-the-general-environmental-duty---a-guide-for-licence-holders?p=1)
* Strong understanding of compliance with licence condition OL\_G5 and EPA guidance relating to Risk Management and Monitoring Programs (RMMP) development
* Understanding environmental management systems and understanding of reporting frameworks (e.g., National Energy and Greenhouse Reporting Scheme, National Pollutant Inventory, Global Reporting Initiative, etc)
* Understanding of root cause analysis techniques (incident investigation)
* Demonstrated understanding of relevant guideline documents such as AS/NSZ ISO31000:2009 (Risk Management). ISO 14000 Series, EMS, etc
* Good working knowledge of the Occupational Health and Safety Act 2004 and its regulations.
 | Engineering (Process, Mechanical, Manufacturing, Chemical, Environmental)Science/Applied Science (Chemistry, Biochemistry, Environmental, Risk Assessment, Risk Management or related discipline) | Engineers AustraliaRisk Engineering SocietyAmerican Public Health AssociationAustralian College of Toxicology and Risk Assessment (Registration of)Society of Risk Analysis |
| Industrial processes and activities (in one or more specialised industrial sectors) | * Experience in one or more specialised industrial sectors such as power and energy, wastewater treatment, recycling, petroleum, manufacturing, automotive, printing, textiles, composting, waste disposal, etc
* Understanding of sector operational aspects and impacts, including consideration of air emissions, odour, dust and leachate, stormwater and groundwater management from site activities
* Knowledge of sector best available technologies and techniques
* Site decommissioning.
 | Engineering (Chemical, Environmental, Mining, Process, Civil or related discipline)Science/Applied Science (Chemistry, Biochemistry, Environment, Physics) | Engineers AustraliaRoyal Australian Chemical Institute |

## E2 Subcategories skills

#### Activities related to industrial facilities

#### Design, construction and commissioning

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of professional associations and certifications |
| Design, construction and commissioning of industrial facilities | Demonstrated experience and application of at least two of the following:* Construction environment management plans
* Ecological risk assessments
* Environmental impact assessments (environmental effects statements) for air, water, land and / or noise
* Hazard and operability studies (e.g. Bowtie analysis, hazard identification, quantitative microbial risk assessment, etc)
* Human health risk assessments
* Proof of performance testing.
 | Engineering (Process, Mechanical, Chemical, Environmental)Science/Applied Science (Chemistry, Biochemistry, Environmental, Risk Assessment, Risk Management or related discipline) |  |

#### Operational risks for an industrial activity (including environmental impact assessments, impacts and evaluation of risk mitigation measures)

* **Monitoring and management systems:** refer to core competency ‘Application of risk assessment and environmental management systems in relation to the General Environmental Duty s25(4) EP Act 2017’ above for the description of experience required.

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of Professional Associations and Certifications |
| Air quality and odour*Ability to assess pollution sources and their impacts to air quality.* | **Auditor minimum competency:*** Demonstrated understanding of air and/or odour pollution sources, impact assessment and risk mitigation in an industrial sector
* Understanding of approaches to air sampling design and methodology, and air modelling.

**Auditor or expert support team experience:*** Detailed understanding of relevant sections of Environment Reference Standard 2021, National Environment Protection (Air Toxics) Measure, and relevant EPA guidelines
* Assessment of pollution sources and the impacts to air quality, air sampling design and methodology, and air modelling
* Assessment of gas, volatile emissions and airborne particles
* Dispersion modelling
* In-field odour surveillance methods and guidance ([1881: Guidance for field odour surveillance | Environment Protection Authority Victoria (epa.vic.gov.au)](https://www.epa.vic.gov.au/about-epa/publications/1881).

Experience in one or more of the following: * Air emissions (sources, monitoring, modelling)
* Air pollution management, controls and mitigation
* Air sheds (meteorological effects, pollution formation, fate and transport etc.)
* Amenity (odours, dust)
* Human health risk assessment due to air pollutants.
 | Engineering (Chemical, Environmental, Civil) Science/Applied Science (Chemistry, Biochemistry, Environment, Physics) | Air & Waste Management Association (USA)Clean Air Society Australia and New Zealand Royal Meteorological Society |

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of Professional Associations and Certifications |
| Assessment of industrial and other contaminating facilities and major hazards*Ability to assess the environment, hazards and risks*  | **Auditor minimum competency:*** Demonstrated understanding of the application of conceptual site models to the identification of risks to land and groundwater from industrial and other contaminating activities, and risks from contaminated land and groundwater
* Use of the Environment Reference Standard 2021 in the assessment of impacts and risks to human health and the environment.

**Auditor or expert support team experience:*** Completion of site history assessments
* Understanding of the National Environment Protection (Assessment of Site Contamination) Measure
* Understanding of soil/groundwater/soil vapour/NAPL interaction
* Understanding of site investigation techniques and best practices:
	+ soil characterisation
	+ soil gas / vapour
	+ groundwater
	+ surface water
* Understanding up-to-date technologies in assessing contamination
* Development of site conceptual models
* Assessing fate and transport of contaminants in different media.
* Understanding of chemical behaviours in the subsurface
* Understanding of emerging contaminants.
 | Engineering (Geological, Chemical, Environmental)Science/Applied Science (Chemistry, Geology, Geography, Environmental) or other suitably relevant degree | Australasian Land and Groundwater Association Certified Environmental PractitionerCertified Practicing Engineer Certified Professional Soil Scientist – Soil Science Australia Australasian College of Toxicology and Risk Assessment Inc  |

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of Professional Associations and Certifications |
| Assessing noise and vibration emissions*Ability to assess noise and vibration impacts on people and the environment, management, and mitigation.* | **Auditor or expert support team experience:*** Detailed understanding of ‘unreasonable noise’ under the Act, including the factors of unreasonable noise and aspects prescribed in the Environment Protection Regulations 2021
* Detailed understanding of *EPA publication 1826.4: Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues* and relevant sections of Environment Reference Standard 2021 and relevant EPA guidelines
* Assessment of environmental noise and vibration impact (non-occupational noise assessments)
* Noise and vibration measurement and modelling
* Noise and vibration management and mitigation.
 | Science/Applied Science (Acoustics, Physics) | Australian Acoustical Society Delegate – Association of Australian Acoustical Consultants  |

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of Professional Associations and Certifications |
| Collection and interpretation of analytical data for a variety of media*Detailed understanding of relevant sampling and testing guidelines.**Design and conduct of sampling and testing programs and data interpretation.* | **Auditor minimum competency:*** Interpretation of monitoring / analytical data to inform assessment of impacts and risk to air, water, land or the noise environment (auditor to demonstrate experience in at least one media).

**Auditor or expert support team experience:*** Detailed understanding of relevant sampling and testing guidelines for at least three of the following: soil, sediment, groundwater, surface water, marine water, gas / vapour, air (including odour), noise and vibration
* Design and conduct of sampling and testing approaches for at least three of the following: soil, sediment, groundwater, surface water, marine water, gas / vapour, air (including odour), noise and vibration
* Data interpretation including quality assurance and quality control, statistical analysis of data, etc
* Installation and analysis of real time continuous monitoring systems.
 | Engineering (Chemical, Environmental)Science/Applied Science (Acoustics, Agricultural, Biochemistry, Chemistry, Ecology, Environmental, Geology Hydrogeology and Physics) | Clean Air Society of Australia and New ZealandSociety of Environmental Toxicology and ChemistryThe Royal Australian Chemical InstituteAustralian Acoustical Society Delegate – Association of Australian Acoustical Consultants |

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of professional associations and certifications |
| Human health *Ability to assess the impacts from industrial activities to human health* | * Understanding of human health impacts from industrial activities, e.g. air contaminants, chemical exposures, pollution and waste
* Understanding of risk assessment fundamentals (such as tiered human health risk assessment and risk characterisation and when to use qualitative vs quantitative approaches).
 | Science/Applied Science (Agriculture, Chemistry, Biochemistry, Environmental, Environmental Toxicology, Geology, Hydrogeology, Risk Assessment, or related discipline) | American Public Health AssociationAustralian College of Toxicology and Risk Assessment (Registration of)Society of Risk AnalysisSociety of Environmental Toxicology and Chemistry  |

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of professional associations and certifications |
| Waste management*Knowledge of law, policies and best practice processes in relation to waste* | * Strong understanding of and interaction with the industrial waste duties, priority waste duties and reportable priority waste duties under the Actand all relevant EPA waste policies and guidance
* Understanding of best practice waste management processes (e.g., avoidance, minimisation etc) in accordance with the waste management hierarchy
* Understanding of management and classification of different waste streams (e.g. solids, sludges and liquids)
* Understanding soil designations.
 | Environmental engineering or similar  | Waste Management Association of AustraliaVictorian Waste Management Association |

#### 3) Decommissioning

* **Waste management**: refer to 2) Operational risks for an industrial activity above for the description of experience required
* **Contaminated land assessments** and **suitability of land use audits**: refer to the core skills required for contaminated land auditors in appendix A and D.

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of professional associations and certifications |
| Decommissioning plans | * Demonstrated experience in creation of decommissioning plans in accordance [Decommissioning Guidelines for licences](https://www.epa.vic.gov.au/for-business/permissions/licences/operating-licences/decommissioning-guidelines) relevant for EPA licence condition OL\_G7.
 |  |  |

#### Wind energy facilities

* **Assessing noise and vibration emissions**: refer to 2) Operational risks for an industrial activity above for the description of experience required.

|  |  |  |  |
| --- | --- | --- | --- |
| Area of Expertise | Description of Experience | Qualifications not limited to bachelor or higher degree | Examples of professional associations and certifications |
| Wind energy facility policies and regulations | * Understanding of the noise and vibration assessments for wind energy facilities in accordance with the NZS6808:2010 and NZS6808:1998
* Understanding of Division 5 of Part 5.3 of the Environment Protection Regulations 2021
* Understanding of Clause 52.32 of the Victorian Planning provisions
* Noise and vibration management plans preparation, review and implementation
* Understanding of the wind energy facility, pre-construction noise assessments (also known as predictive measurements), post-construction noise assessments and five yearly monitoring.
 | Environmental Engineer or similarAcoustician or similar Sound engineeringEnvironmental Noise and Planning | Registered Professional EngineerClean Energy CouncilAustralian Acoustical SocietyAssociation of Australasian Acoustical Consultants |

#### Activities relating to landfills (design, construction, operation, closure/aftercare)

#### Landfill design and construction activity auditing

| **Area of expertise** | **Description of expertise** | **Qualifications not limited to bachelor or higher degree** | **Examples of professional associations, certifications** |
| --- | --- | --- | --- |
| **Landfill design and construction techniques and technologies** | **Auditor minimum competency:*** Understanding of containment performance of liner designs typically used in landfill cells, caps and ponds
* Types, material properties, relevant standards of natural, geosynthetic and composite design elements used in landfill cell, cap and pond construction
* Construction quality assurance and construction quality control practices for construction of landfill cells, caps and ponds
* Geotechnical engineering for the design of landfill cells, caps and ponds
* Understanding of typical waste properties
* Understanding of the geotechnical characteristics of compacted clay liners including factors that affect their performance
* Understanding of the factors that affect veneer and global slope stability for landfills and best practice design to ensure stability
* Performance and design of capping technologies including phytocapping
* Understanding of operational matters that affect the performance of the landfill liners, capping systems and ponds
* Leak detection technologies
* Ability to assess alternative (equivalent) designs to those prescribed in the landfill BPEM (788)
* Awareness of safety in design requirements
* Best practice content for a design report, technical specifications, construction quality assurance (CQA) plan and design drawings for the design of landfill cells, caps and ponds
* Roles and responsibilities for those involved in construction and CQA of landfill cells, caps and ponds.

**Auditor or expert support team experience*** Working knowledge of relevant test methods for natural, geosynthetic and composite materials used in landfill cell, cap and pond construction
* Water balance models used for the design of landfill cells and caps
* Factors influencing erosion and designs to control erosion.
 | Engineering (Chemical, Environmental, Civil, Geological, Materials)Science / Applied Science (Chemical, Environmental, Civil, Geological, Materials) | Engineers Australia |

|  |  |  |  |
| --- | --- | --- | --- |
| **Area of expertise** | **Description of expertise** | **Qualifications not limited to bachelor or higher degree** | **Examples of professional associations, certifications** |
| **Landfill gas** | **Auditor minimum competency:*** Generation estimation
* Landfill gas extraction and management systems including venting, flaring and energy generation estimation
* Sampling techniques, tools and methodologies
* Monitoring data interpretation and recommendations for action
* Landfill gas perimeter monitoring and walkover surveys
* Understanding of landfill gas issues that affect dwellings and other buildings either above or adjacent to landfills and appropriate mitigation and venting systems
* Regulatory requirements for landfill gas management
* Landfill gas remediation action plans.
 | Engineering (Chemical, Environmental, Civil)Science / Applied Science (Chemical, Environmental, Civil) | Engineers AustraliaClean Air Society |
| **Leachate** | **Auditor minimum competency:*** Generation estimation (water balance)
* Hydrogeological assessment
* Understanding the linkages and effects between leachate and groundwater on leachate generation and its management
* Extraction, treatment / management, storage systems and disposal options
* Ability to identify and assess operational issues, as well as recommend solutions
* Regulatory requirements for leachate management
* Leachate chemistry and indicators.

**Auditor or expert support team experience:*** Water balance modelling
* Hydraulic evaluation of landfill performance modelling.
 | Engineering (Chemical, Environmental, Civil)Science / Applied Science (Chemical, Environmental, Civil, Hydrogeological) | Engineers AustraliaAssociation for Environmental Hydrology |
| **Legislation, guidance and other regulatory requirements** | **Auditor minimum competency:*** Best Practice Environmental Management (Siting, Design, Operation and Rehabilitation of landfills) (788)
* Landfill licensing guidelines (1323)
* Closed landfill guidelines (1490)
* Best practice guidelines for landfills accepting category C prescribed industrial waste (1208)
* Landfill gas fugitive emissions monitoring guideline (1684)
* Hydrogeological Assessment (668)
* Separation distance guideline (1949)
* Landfill buffer guideline (1950).
 |  |  |

#### 2) Operational and closed landfill activity auditing

* **Air quality and odour**: refer to 2) Operational risks for an industrial activity above for the description of experience required
* **Assessing noise and vibration emissions**: refer to 2) Operational risks above for an industrial activity for the description of experience required.
* **Landfill gas**: refer to 1) Landfill design and construction activity auditing above for the description of experience required
* **Leachate:** refer to 1) Landfill design and construction activity auditing above for the description of experience required
* **Legislation, guidance and other regulatory requirements:** refer to 1) Landfill design and construction activity auditing above for the description of experience required.

| **Area of expertise** | **Description of expertise** | **Qualifications not limited to bachelor or higher degree** | **Examples of professional associations, certifications** |
| --- | --- | --- | --- |
| **Landfill management** | **Auditor minimum competency:*** Understanding of landfill operational aspects and impacts, including consideration of litter, fires, vermin, leachate, landfill gas, odour, dust and stormwater management
* Post closure planning and management
* Monitoring systems and programs including frequency, infrastructure, groundwater, landfill gas, atmospheric, odour, noise, vibration, surface water, leachate
* Ability to determine monitoring locations depending on site locations and parameters based on waste streams
* Ability to assess proper implementation of landfill environmental management plans and RMMPs.

**Auditor or expert support team experience:*** Calculation of financial assurance for landfills
* Ability to identify odour and noise and vibration emission sources and assess emission impacts
* Fire and hotspot risk management.
 | Engineering (chemical, environmental, civil)Science / applied science (geology, hydrogeology, chemical, environmental, civil) | Engineers AustraliaCertified Environmental Practitioner Environment Institute of Australian and New Zealand |
| **Monitoring** | **Auditor minimum competency:*** Monitoring systems and programs including frequency, infrastructure, leachate, groundwater, ground and landfill gas, atmospheric, odour, noise, vibration, surface water
* Ability to determine monitoring locations depending on site locations and parameters based on waste streams
* Infrastructure design / appropriateness (to obtain representative data)
* Monitoring bore construction
* Interpretation of monitoring data
* Regulatory reporting requirements.
 | Engineering (chemical, environmental, civil, geological, hydrogeological)Science / applied science (chemical, environmental, civil, geological, hydrogeological) | Engineers AustraliaAustralian Institute of Geologists |

# Appendix F – Legislation and guidance documents

Environmental auditors must have strong working knowledge of the legislative framework in Victoria. A non-exhaustive list of legislation and guidance documents are listed below:

**Victorian Legislation:**

* Environment Protection Act 2017
* Environment Protection Regulations 2021
* Environment Reference Standard

**Guidelines issued under Section 203 of the Act:**

* EPA Publication 865: Environmental auditor guidelines for appointment and conduct
* EPA Publication 2001: Clean up and management of contaminated groundwater
* EPA Publication 2021: Guideline for conducting preliminary risk screen assessments
* EPA Publication 2022: Environmental auditor guidelines – Provision of statements and reports for environmental audits and preliminary risk screen assessments
* EPA Publication 2041: Guidelines for conducting environmental audits

**EPA publications:**

* EPA Publication 604: Guideline for environmental management (GEM) – Rapid bioassessment methodology for rivers and stream
* EPA Publication 668: Hydrogeological Assessment (Groundwater Quality) Guidelines
* EPA Publication 669: Groundwater Sampling Guidelines
* Industrial Waste Resource Guidelines (IWRG) 701: Sampling and analysis of waters, wastewaters, soils and wastes
* Industrial Waste Resource Guidelines (IWRG) 702: Soil sampling for waste soils
* EPA Publication 788: Siting, design, operation and rehabilitation of landfills
* EPA Publication 865: Environmental auditor guidelines for appointment and conduct
* EPA Publication 788: Siting, design, operation and rehabilitation of landfills
* EPA Publication 1208: Best practice guidelines for landfills accepting category C prescribed industrial waste
* EPA Publication 1287: Guidance for environmental and human health risk assessment of wastewater discharges to surface waters
* EPA Publication 1323.3 Landfill Licencing
* EPA Publication 1490: Closed landfill guidelines
* EPA Publication 1684: Landfill gas fugitive emissions monitoring guideline
* EPA Publication 1698: Liquid storage and handling guidelines
* EPA Publication 1739: Urban stormwater management guidance
* EPA Publication 1826.4: Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues
* EPA Publication 1827.2: Waste classification assessment protocol
* EPA Publication 1828.2: Waste disposal categories – characteristics and thresholds
* EPA Publication 1856: Reasonably practicable
* EPA Publication 1883: Guidance for assessing odour
* EPA Publication 1915: Contaminated land policy
* EPA Publication 1936: Proposed methodology for deriving background level concentration when assessing potentially contaminated land
* EPA Publication 1940: Contaminated land: Understanding section 35 of the Environment Protection Act 2017
* EPA Publication 1946.1: How to establish lawful place
* EPA Publication 1949: Separation distance guideline
* EPA Publication 1950: Landfill buffer guideline
* EPA Publication 1961: Guideline for assessing and minimising air pollution
* EPA Publication 1968.1: Guide to classifying industrial waste
* EPA Publication 1977.1: Guide to the duty to manage contaminated land
* EPA Publication 1992: Guide to the Environment Reference Standard
* EPA Publication 1996: Noise guidelines: Assessing low frequency noise
* EPA Publication 1997: Technical guide: Measuring and analysing industry noise and music noise
* EPA Publication 2008: Guide to the duty to notify of contaminated land
* EPA Publication 2010: Potentially contaminated land – A guide for business
* EPA publication 2033: Background Levels Methodology guidance
* EPA Publication 2048: Guideline for minimising greenhouse gas emissions
* EPA Publication 2061: Wind Energy Facility Turbine Noise Regulation Guidelines
* Risk Management and Monitoring Programs (EPA Guidelines [Implementing the general environmental duty | Environment Protection Authority Victoria (epa.vic.gov.au)](https://www.epa.vic.gov.au/for-business/find-a-topic/environment-protection-laws-and-regulations/implementing-the-general-environmental-duty---a-guide-for-licence-holders?p=1)

**Other key guidelines:**

* Environmental Management Systems – Requirements with Guidance for Use (AS/NZS ISO 14001: 2015)
* Guidelines for Quality and/or Environmental Management Systems Auditing (AS/NZS ISO 19011: 2019)
* Vic Gov Gazette S301: EPA Determination – Specifications acceptable to EPA for receiving fill material
* Australian & New Zealand Guidelines for Fresh & Marine Water Quality
* crcCARE: National Remediation Framework
* Ministerial Direction No. 1 under Section 12(1A) of the Planning and Environment Act 1987
* National Environment Protection (Assessment of Site Contamination) Measure
* PFAS National Environmental Management Plan (PFAS NEMP)
* Planning Practice Note 30 - Potentially contaminated land
* Waste Management Association of Australia – Guidelines for the Assessment, Design, Construction and Maintenance of Phytocaps as Final Covers for Landfills

Other international guidelines or reference standards where appropriate.

Accessibility

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Please telephone 1300 372 842 or email contact@epa.vic.gov.au

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Authorised and published by the Victorian Government, 1 Treasury Place, Melbourne

1. ‘Other Act’ means legislation other than the Act, for example, the *Port Management Act 1995* and the *Mineral Resources (Sustainable Development) Act 1990*. [↑](#footnote-ref-2)
2. Section 271, 272, 273 and 274 of the Act refers to Improvement Notices, Prohibition Notices, Notice to Investigate and Environmental Action Notices issued by EPA, respectively. [↑](#footnote-ref-3)
3. Section 275 of the Act refers to Site Management Orders issued by EPA [↑](#footnote-ref-4)
4. Section 191(3)(c) of the Act [↑](#footnote-ref-5)
5. Examples of ‘audit like work’ include but are not limited to providing a supporting role to an environmental auditor, review of technical reports or a quality assurance function [↑](#footnote-ref-6)
6. Section 235(3) of the Act [↑](#footnote-ref-7)
7. Section 235(8) of the Act [↑](#footnote-ref-8)
8. Section 191 of the Act [↑](#footnote-ref-9)
9. Section 196(2) of the Act [↑](#footnote-ref-10)
10. Section 197(2) [↑](#footnote-ref-11)
11. Section 195(3) of the Act [↑](#footnote-ref-12)
12. Section 194 of the Act [↑](#footnote-ref-13)
13. Section 194(2) of the Act [↑](#footnote-ref-14)
14. EPA may request a copy of such reports [↑](#footnote-ref-15)
15. Section 199(3) of the Act [↑](#footnote-ref-16)
16. Section 199(10) of the Act [↑](#footnote-ref-17)
17. “state” includes the Australian Capital Territory or Northern Territory. [↑](#footnote-ref-18)
18. Section 200(3) of the Act describes that EPA must not suspend or revoke the appointment of an environmental auditor under S203(1)(h)(iii) of the Act, if the preliminary risk screen assessment or the environmental audit was conducted in accordance with guidelines issued under section 203 or with the approval of EPA [↑](#footnote-ref-19)
19. Section 201(3) of the Act [↑](#footnote-ref-20)
20. Section 201(4) of the Act [↑](#footnote-ref-21)
21. Section 200(2) of the Act [↑](#footnote-ref-22)
22. Section 209 of the Act [↑](#footnote-ref-23)
23. Section 208(3) of the Act [↑](#footnote-ref-24)
24. Section 210(2) of the Act [↑](#footnote-ref-25)
25. Section 205(2) of the Act [↑](#footnote-ref-26)
26. As outlined in s190 of the Act [↑](#footnote-ref-27)
27. The fact a person may be appointed as an environmental auditor can be used in marketing material, but it should be clear when a signature is or is not a sign-off of an audit by an auditor [↑](#footnote-ref-28)
28. EPA must not suspend or revoke an appointment due to Section 200(1)(h)(iii) if the auditor was conducting the work in accordance with guidelines issued under s203 [↑](#footnote-ref-29)
29. These are examples, not mandatory requirements [↑](#footnote-ref-30)