



Attachment 8E: Hydrocarbon (and Chemical) Spill Management Procedure (950-EN-PRO-0007)



Hydrocarbon (and Chemical) Spill Management Procedure

All Sites

17/03/2022

950-EN-PRO-0007 Version 2.0

Hydrocarbon (and Chemical) Spill Management Procedure

All Sites



Authorisation

Version	Reason for Issue	Prepared	Checked	Authorised	Date
1.0	Transferred to ECMS – Supersedes 950-HSE-EN- PRO-0007	T. Sprenkels	T. Sprenkels	M. Goggin	11/04/2016
2.0	Transfer to new template – and renumbered	S. Mueller	M. Goggin	Theo Sprenkels	17/03/2022



Hydrocarbon (and Chemical) Spill Management Procedure

All Sites

Table of Contents

1	Purpose	1
2	Scope	1
3	Definitions	1
4	Responsibilities	2
5	Procedure	3
5.1	General	3
5.2	Train Personnel	3
5.3	Implement Controls	3
5.4	Spill Response	3
5.5	Clean-up	4
5.5.1	Spill to concrete (or other impermeable surface):	4
5.5.2	Spills to earth	4
5.5.3	Spills to water	5
5.6	Report the Spill	6
6	Documentation	6
7	References	6
7.1	Internal Document References	6
7.2	External references	6



Hydrocarbon (and Chemical) Spill Management Procedure

All Sites

1 Purpose

Hydrocarbons (and chemicals) are considered pollutants and deemed 'Schedule 1 Materials' under the Environmental Protection (Unauthorised Discharges) Regulations 2004, which must not be discharged into the environment. As such, any hydrocarbon (or chemical) spill that occurs on an Atlas site must be cleaned up promptly and thoroughly to minimise environmental harm.

The purpose of this procedure is to:

- Minimise the likelihood and consequence of a spill,
- Ensure appropriate clean-up is undertaken in the event of a spill, and
- Ensure compliance with the relevant legislation and standards. Ensure compliance with the relevant legislation and standards.

2 Scope

This procedure applies to all Atlas controlled sites and their activities, employees, contractors and visitors, and is subject to the requirements of the Atlas Health, Safety and Environment (HSE) Standards and applicable environmental legislation.

3 Definitions

Provide the definitions of terminology used in the document.

Term	Definition
Atlas	Atlas Iron Pty Ltd
Bioremediation	The process of using microorganisms to degrade and detoxify hydrocarbons to less toxic compounds such as carbon dioxide and water.
Bund	An impermeable wall or embankment with an impermeable floor that prevents the product(s) being stored from entering the environment.
Hydrocarbon	Organic compound consisting of only hydrogen and carbon (e.g. diesel, oil, grease).
Hydrophobic	Repels water. Insoluble in water.
INX	Incident and Hazard Reporting Management System
JSEA	Job Safety Environment Analysis
Licensed controlled waste contractor	A contractor licenced by the Department of Water and Environmental Regulation (DWER) to carry Controlled Waste, as listed under Schedule 1 of the Environmental Protection (Controlled Waste) Regulations 2004
DWER	Department of Water and Environmental Regulation
DMIRS	Department of Mines, Industry Regulation and Safety
DBCA	Department of Biodiversity, Conservation and Attractions
EMP	Environmental Management Plan
EPA	Environmental Protection Authority



Hydrocarbon (and Chemical) Spill Management Procedure

All Sites

4 Responsibilities

Environmental Superintendent

- Provide advice on hydrocarbon and chemical storage and management as required.
- Conduct ad-hoc inspections to assess compliance to this procedure.
- Provide solutions to manage non-compliance to this procedure.
- Undertake any external reporting.

Environmental Advisor

- Ensure spill management is addressed in the site induction and covered in toolboxes when required.
- Provide advice and guidance on hydrocarbon and chemical storage and management as required.
- Ensure all spills are reported in INX and investigated appropriately.
- Ensure that relevant spills are escalated to the Manager
- Environment, Heritage & Approvals and reported externally where required.
- Conduct regular inspections to assess compliance to this procedure.
- Document any non-compliance to this procedure.
- Liaise with Environmental Superintendent as required.

All employees, contractors and visitors:

- Report any spills to the Environmental Advisor.
- Adhere to this procedure.
- Adhere to advice issued by the Environmental Advisor (or nominated responsible person).



Hydrocarbon (and Chemical) Spill Management Procedure

All Sites

5 Procedure

5.1 General

All spills, irrespective of volume, shall be reported. Spills to ground / outside of a bund shall be reported as an environmental incident and cleaned up appropriately.

Spills inside a bund shall be reported as a hazard and cleaned up appropriately. Reporting shall involve the completion of an Unscheduled Liquid Discharge Form (950-EN-FRM-0007) and entry into INX (InControl). If the spill results in people, property or the environment being harmed, it needs to be reported externally to the Department of Mines, Industry Regulation and Safety (DMIRS) and the Department of Water and Environmental Regulation (DWER). See Section 3.5 for further details.

Please refer to the Hydrocarbon Management Procedure (950-EN-PRO-0008) for further information regarding hydrocarbon transport, storage, use and disposal.

5.2 Train Personnel

The Environmental Advisor shall present regular toolbox talks regarding spill prevention and spill response procedures.

Spill response and bioremediation poster (950-EN-CHT-0003) shall be displayed at key locations to provide personnel with a quick reference guide on the spill clean-up steps.

Spill response shall also be communicated via the Atlas Induction.

5.3 Implement Controls

Hydrocarbon (and chemical) management shall be considered and documented in risk assessments, JSEAs and Take 5s where applicable, with controls put in place to eliminate the potential for spills and reduce the impact should one occur.

The hierarchy of controls (Eliminate > Substitute > Isolate > Engineer > Administrate > PPE) shall be adhered to at all times.

Preventative controls include (but are not limited to):

- Bunds: in which to store hydrocarbons and chemicals. Sized appropriately (110% of the largest vessel or 25% of the total volume stored) and resistant to the product being stored.
- Double skinned tanks / double walled pipes: secondary containment should the inner skin / wall fail.
- Drip trays and trolleys: prevent planned spills going to ground. Corrective controls include (but are not limited to):
- Spill kits: available and stocked at all hydrocarbon storage areas and refuelling areas, including service trucks

5.4 Spill Response

The following Steps Shall be Adhered to in the event of a spill:

1. Check For Danger

Upon noticing a hydrocarbon (or chemical) spill, ensure you and those around you are not in harm's way.

Once you have checked for danger, you may commence spill clean-up.



Hydrocarbon (and Chemical) Spill Management Procedure

All Sites

2. Control

The Flow This can be achieved by:

- Closing a valve
- Stopping a pump
- Applying pressure
- Adjusting a vessel (standing up a drum or turning a tank)

3. Contain the Spill

Only contain the spill if safe to do so. Appropriate action may involve:

- Using absorbent booms
- Creating a windrow / sump / bund
- Closing any drains

4. Contact Your Supervisor

At this stage, it is time to contact your supervisor and report the spill (if not done already).

5. Clean Up the Spill (see Section 3.4 for more detail)

Assess the spill to determine the best method of clean up relative to the receiving environment. Use appropriate PPE (minimum of gloves and safety glasses).

Ensure an excavation permit is sought and approved if required. If you are unable to quickly and effectively contain or clean up the spill contact site HSE personnel or the Emergency Response Team immediately.

5.5 Clean-up

5.5.1 Spill to concrete (or other impermeable surface):

For small spills to concrete:

- Place absorbent pads or particulate (kitty litter) directly on the spill. In the event pads and/or particulate are not available, use soil to act as an absorbent.
- Leave in place for as long as possible to absorb the hydrocarbons, and then dispose in waste hydrocarbon bin.

For large spills on concrete:

- Use absorbent pads, booms and/or pillows around the edge of the spill to contain the substance and stop it from spreading further. In the event pads, booms and/or pillows are not available, use soil to create a barrier. Leave in place until the spill has been cleaned up completely.
- Try to prevent the spill from entering any drains or running off the hardstand area.
- Use absorbent pads or particulate to soak up the bulk of the substance. In the event pads and/or particulate are not available, use soil to act as an absorbent.
- Leave in place for as long as possible, and then dispose in waste hydrocarbon bin.

5.5.2 Spills to earth

For small spills to earth:



Hydrocarbon (and Chemical) Spill Management Procedure

All Sites

- Place absorbent pads or particulate (kitty litter) directly on the spill to soak up any excess.
- Leave pads or particulate in place for a few hours or overnight (ensure pads are secure to they don't get blown away).
- Recover any contaminated soil that remains after the initial clean up and take to the bioremediation facility (where present). If there is no bioremediation facility available, dispose of the contaminated soil into a waste hydrocarbon bin or bulk container for removal off-site by a licenced controlled waste carrier.
- Dispose of contaminated pads and particulate into a waste hydrocarbon bin.

For large spills to earth:

- Use absorbent pads, booms and/or pillows around the edge of the spill to contain the substance and stop it spreading further – leave in place until the spill has been cleaned up completely. If no absorbent materials available, create a barrier using earth.
- Try to prevent the spill from entering any drains or waterways, or spreading from the initial spill site.
- Use absorbent pads or particulate to soak up the bulk of the substance – leave in place for as long as possible. If no absorbent materials available, soil may be used.
- Recover any contaminated soil that remains after the initial clean up and take to the bioremediation facility (where present). If there is no bioremediation facility available, dispose of the contaminated soil into bunded bulk containers for removal off-site by a licenced controlled waste carrier.
- Dispose of contaminated pads and particulate into a waste hydrocarbon bin.

5.5.3 Spills to water

For small spills to water:

- Cease the flow of water if possible (to minimise the impact area).
- Place absorbent pads onto the water surface where the spill occurred (pads are hydrophobic and will not absorb water).
- Place booms downstream of the spill site to capture the substance if it mobilises.
- Replace the pads (and booms) as often as required until the substance has been cleaned up completely (for hydrocarbons, this equates to no 'sheen' on the water surface). If no additional pads are available, original pads can be squeezed out into a suitably sized container and re-used.
- Dispose of the pads and booms into waste hydrocarbon bins or bunded bulk containers for removal off-site by a licenced controlled waste carrier.

For large spills to water:

- Cease the flow of water if possible (to minimise the impact area).
- Place booms downstream of the spill site to capture the substance if it mobilises. Link or overlap booms together to act as a complete barrier.
- Place additional back-up booms further downstream.
- If possible, bale or pump out the bulk of the substance into suitably sized container (drums and pods are recommended). If not possible, obtain additional booms and drag across the water surface – tie booms together if required.
- Place absorbent pads onto the water surface to remove the remainder of the substance. Leave overnight.



Hydrocarbon (and Chemical) Spill Management Procedure

All Sites

- Dispose of the pads and booms into waste hydrocarbon bins or banded bulk containers for removal off-site by a licenced controlled waste carrier.

5.6 Report the Spill

All spills shall be reported.

Reporting shall involve the completion of an Unscheduled Liquid Discharge Form (950-EN-FRM-0007) and entry into INX (InControl).

In the event people, property or the environment are harmed as a result of the spill (generally spills of large volume or dangerous substances), the Atlas Environmental Superintendent shall report the incident to:

- Department of Mines, Industry Regulation and Safety (DMIRS) using their Dangerous Goods Incident Report Form, and
- Department of Water and Environmental Regulation using their Section 72 Waste Discharge Notification Form.

All correspondence and information shall be saved as appropriate and uploaded to INX.

6 Documentation

The following documentation shall be maintained and retained until the expiration of the site Department of Water and Environment Regulation Licence:

- Any controlled waste receipts.
- Any matters which affect the condition of the land and waters (this includes spills).

7 References

7.1 Internal Document References

Document Number	Document Title
950-EN-STA-0001	Environmental Standard
950-EN-PRO-0001	Bioremediation Management Procedure
950-EN-FRM-0007	Unscheduled Liquid Discharge Form
950-EN-PRO-0008	Hydrocarbon Management Procedure
950-EN-PRO-0013	Waste Management Procedure

7.2 External references

External Reference (Legislation, Guidelines, Standards and Codes of Practice)
Environmental Protection (Controlled Waste) Regulations 2004.
Environmental Protection (Unauthorised Discharges) Regulations 2004.



Attachment 8F: Waste Management Procedure (950-EN-PRO-0013)



Waste Management Procedure

All Sites

10/06/2021

950-EN-PRO-0013 v 2.0

Waste Management Procedure

All Sites



Authorisation

Document transferred to ECMS. New Document number, version and branding used.

Version	Reason for Issue	Prepared	Checked	Authorised	Date
1.0	Supersedes 950-HSE-EN-PRO-0023 Rev 2	T. Sprenkels	A. Slabber	M. Goggen	30/03/2020
2.0	Issued for use	J. Mtezo	E. Gibbens	H. Nielssen	10/06/2021



Waste Management Procedure

All Sites

Table of Contents

1	Introduction.....	3
1.1	Purpose.....	3
1.2	Scope.....	3
1.3	Definitions.....	3
2	Responsibilities	4
3	Procedure.....	5
3.1	Waste Stream Analysis.....	5
3.2	Waste Management Hierarchy	5
3.2.1	Avoid or Reduce	6
3.2.2	Reuse	6
3.2.3	Recycle	6
3.2.4	Recover	6
3.2.5	Treat	6
3.2.6	Dispose	6
3.3	Waste Segregation	7
3.4	Storage	7
3.5	Transport.....	7
3.6	Treatment.....	7
3.7	Disposal	8
3.8	Inspections.....	8
3.9	Reporting.....	8
4	Documentation.....	9



Waste Management Procedure

All Sites

1 Introduction

Waste management involves all activities and actions required to manage waste from its inception to its final disposal. The central principles of waste management include stewardship (avoiding unnecessary waste generation throughout the lifecycle of a product), the waste hierarchy (avoid, reduce, reuse, recycle) and resource efficiency (getting the most out of a resource) all of which aim to minimise waste generation, minimise pollution and maximise resource preservation. Effective waste management can also lead to considerable cost savings as spend is reduced on raw materials, treatment and disposal fees.

1.1 Purpose

The purpose of this procedure is to:

- Ensure waste minimisation and recycling opportunities are explored throughout the lifecycle of products used at Atlas sites;
- Ensure appropriate waste management practices are in place;
- Ensure compliance with applicable environmental legislation and standards and
- Ensure waste streams are reported.

1.2 Scope

This procedure applies to all Atlas controlled sites and their activities, employees, contractors and visitors, and is subject to the requirements of the Atlas Health, Safety and Environment (HSE) Standards and applicable environmental legislation.

This Waste Management procedure applies to the collection, storage, transportation, minimisation, reuse/recycling and/or disposal of all non-process waste typically generated at the Mine.

If a non-process waste item is not listed in this procedure, contact the Atlas Environmental Department.

1.3 Definitions

Term	Definition
Atlas	Atlas Iron Pty Ltd
Controlled waste	As listed in Schedule 1 of the <i>Environmental Protection (Controlled Waste) Regulations 2004</i> , including but not limited to medical waste, tyres, sewage, oily water
DWER	Department of Water and Environmental Regulation
Inert	Waste that does not decompose, or undergo biological, chemical, physical transformation
INX	Incident and Hazard Reporting Management System
Putrescible	Waste likely to become putrid / decay (generally organic matter)
Waste	Material that no longer serves a purpose or is superfluous
Waste Management Hierarchy	Nationally and internationally accepted guide for prioritising waste management



2 Responsibilities

Registered Manager / Construction Manager:

- Hold contractors accountable for waste management.
- Budget for ongoing waste management costs.

Senior Environmental Advisor:

- Investigate and promote preferable waste management options.
- Undertake ad-hoc inspections of waste facilities.
- Provide advice to manage non-compliance with this procedure.

Environmental Advisor (or nominated responsible person):

- Ensure waste management is addressed in the site induction and covered in toolboxes as required.
- Undertake regular inspections of waste facilities.
- Document any non-compliance to this procedure.

All employees, contractors and visitors:

- Adhere to this procedure.
- Adhere to advice issued from the Environmental Advisor (or nominated responsible person).



3 Procedure

3.1 Waste Stream Analysis

All waste generated onsite shall be identified and documented in the form of a waste stream analysis (950-HSE-EN-FRM-0015 Waste Stream Analysis)

3.2 Waste Management Hierarchy

The waste management hierarchy shall be used to prioritise waste management practises onsite.





Waste Management Procedure

All Sites

3.2.1 Avoid or Reduce

To avoid or reduce waste is the ultimate zero-waste goal. This has the greatest gains in terms of minimising environmental harm and involves investigating whether a waste stream can be eliminated altogether. Opportunities for avoidance or reducing waste can include:

- buying in bulk to reduce individually wrapped components;
- buying products with less packaging; or
- changing the process to eliminate an unnecessary waste stream (e.g. disposable plastic crib containers)

3.2.2 Reuse

Reuse requires less energy than recycling, although designs which are both adaptable and durable are essential to its success. Reuse extends the lifespan of a product or item by reusing it in a different form or using it several times prior to disposal. Opportunities for reuse of waste include:

- reusing used heavy vehicle tyres as barriers or delineators;
- refurbishing machinery parts; or
- reusing plastic bags, crib containers, wooden pallets and paper.

3.2.3 Recycle

Coordinate with the site contractors to have materials recycled. Opportunities for recycling waste include aluminium cans, glass, cardboard, steel, waste oil, batteries etc. to be sent off-site.

3.2.4 Recover

This involves recovering energy from waste generated. Opportunities for recovering waste include:

- harnessing landfill gases to use as energy (which cannot be practically implemented at Atlas sites); and
- harnessing gasses from air conditioners and fridges before disposal off-site.

3.2.5 Treat

Regulations may require waste to be treated prior to on-site or off-site disposal and may involve treating waste to convert it to a less harmful form prior to discharge to the environment. Waste treatment facilities that are currently implemented across Atlas sites include:

- an oily water separator to treat washbay water;
- bioremediation farm to treat hydrocarbon contaminated soil; and
- a wastewater treatment plant to improve effluent quality prior to irrigation.

3.2.6 Dispose

Disposal of waste should be the last resort and only considered when all other options have been eliminated.

- On-site waste disposal needs to be taken to an approved and licensed landfill facility.



Waste Management Procedure

All Sites

- All Atlas landfill facilities are managed under the Atlas Landfill Management Procedure; 950-EN-PRO-0010; and are licenced and regulated under Part V of the *Environmental Protection Act 1986* by DWER;
- Off-site disposal will require engagement of a licenced waste contractor.

3.3 Waste Segregation

All waste shall be segregated appropriately to enable effective reuse, recycling, transport and disposal as appropriate.

Waste shall be segregated so that substances with the potential to react have the required separation distance. Specific areas shall be dedicated to waste segregation.

3.4 Storage

All waste shall be stored in appropriately sized vessels, that are resistant to the contents held and clearly labelled.

Waste storage vessels shall be in good condition and free from cracks / leaks.

Waste storage vessels shall be appropriate to the work area (workshop, crusher, accommodation camp) and associated waste streams generated.

Hydrocarbon waste shall be stored within a suitable sized bund and managed in accordance with the Atlas Hydrocarbon Management Procedure (950-EN-PRO-0008).

Hazardous waste shall be stored within suitably sized bund.

All storage vessels (bins) containing putrescible waste shall be fitted with a lid that can be suitably secured to minimise fauna attraction and entry.

All storage vessels shall be secure and stable to minimise the likelihood of spillage / leakage.

All storage vessels shall be regularly emptied to minimise the likelihood of overflow.

3.5 Transport

All waste shall be suitably secured during transport.

Controlled waste shall only be transported using a licenced controlled waste carrier, in accordance with the *Environmental Protection (Controlled Waste) Regulations 2004*.

All waste transported offsite shall be recorded on consignment notes.

3.6 Treatment

Waste shall only be treated at approved facilities in accordance with the licence conditions.

Where waste is treated onsite:

- Regular inspections shall be undertaken to assess compliance.
- The volume and type of waste treated shall be recorded.
- Washpad facilities shall be managed in accordance with the Hydrocarbon Management Procedure (950-EN-PRO-0008).
- The bioremediation facility shall be managed in accordance with the Bioremediation Management Procedure (950-EN-PRO-0001).



Waste Management Procedure

All Sites

Where waste is treated offsite:

- The volume and type of waste sent off-site shall be recorded.
- The destination shall be licenced appropriately for the waste stream being treated.

3.7 Disposal

Waste shall only be disposed at approved facilities in accordance with the licence conditions.

Where waste is disposed onsite:

- The landfill shall be managed in accordance with the Landfill Management Procedure (950-EN-PRO-0010).
- Records shall be maintained including waste type, waste volume, disposal date and person responsible.
- Waste shall be compacted (where possible).
- Regular inspections shall be undertaken to assess compliance.

Where waste is disposed offsite:

- The volume and type of waste sent off-site shall be recorded.
- The destination shall be licenced appropriately for the waste stream being disposed.

3.8 Inspections

Area inspections using the Environmental Inspection Checklist (950-EN-FRM-0001) shall include checking waste management / facilities associated with the area.

3.9 Reporting

Any non-compliance to this procedure, failure of a treatment facility, or contamination to land / water as a result of poor waste management shall be entered into INX as an environmental incident, investigated and actioned appropriately.

All onsite waste disposal records shall be entered into INX as appropriate.

The types of waste disposed of at the landfill, corresponding total volumes, and volume of tyres disposed at the tyre burial area (where present) shall be included in the Annual Environmental Report submitted to the DWER.



4 Documentation

The following documentation shall be maintained and retained for at least 6 years from the date the records were made:

- Waste treatment and disposal records;
- Inspections of waste facilities; and
- Actions arising from inspections of waste facilities.

The following documentation shall be maintained and retained until the expiration of the site DWER Licence:

- Any controlled waste receipt; and
- Any matters which affect the condition of the land and waters (this includes spills).

Attachment 10: Proposed Fee for Licence

The proposed licencing fees have been calculated using the DWER online industry licencing tool as detailed in the Application Form, Table 3, and Figure 3.

Table 3: Proposed licencing fee

Proposed Licence Fee		
Part 1 – Premises Component		
Category 5	Crushing and Screening Facility	\$18,270.00
Part 2 – Waste Component		
Category 5	No emissions	\$0.00
Part 3 – Waste Discharges Component		
Category 5	No emissions	\$0.00
Total proposed licence fee		\$18,270.00

Industry Licensing System

Application Page 3 of 5
Licence Fees

Fee start date: 20/06/2022

Fees calculator

If you are applying for a licence or submitting your annual licence fee information you must provide the following details in accordance with the Environmental Protection Regulations 1987. Guidance on calculating licence fees is available on the DWER website.

All supporting information, workings, calculations and assumptions made in the fee calculations should be attached on Application Page 4. DWER officers may reject fee applications or request resubmissions if information is missing or incomplete, for example, if some of the prescribed waste components have not been appropriately considered. It is the applicant's or licensee's responsibility to ensure that their fee application is appropriate and complete. Rejected applications and resubmission requests could delay your application and may incur penalty fees.

Premises Component
Select the prescribed premises category undertaken

Premises Component(s)

Category	Capacity Range	Fee	
05 - Processing or beneficiation of metallic or non metallic ore	More than 5 000 000 tonnes per year	\$18270.00	Remove
<input type="text" value="Selection required"/>	<input type="text" value="Select capacity range"/>		<input type="button" value="Add"/>
Total Premises Component(s):		\$18270.00	

Part 2 Waste

Waste Type	Amount	Fee	
<input type="text" value="Selection required"/>	<input type="text" value="Select waste type first"/>		<input type="button" value="Add"/>
Total Waste Component(s):		\$0.00	

Part 3 Waste Discharges to Air:

Waste Type	Location / Qualifier	Units	Discharge	Fee	
<input type="text" value="Selection required"/>	<input type="text" value="Select waste type first"/>				<input type="button" value="Add"/>
Total Air Component(s):		\$0.00			

Discharges to Water:

Waste Type	Location / Qualifier	Units	Discharge	Fee	
<input type="text" value="Selection required"/>	<input type="text" value="Select waste type first"/>				<input type="button" value="Add"/>
Total Water Component(s):		\$0.00			

Discharges to Land:

Waste Type	Location / Qualifier	Units	Discharge	Fee	
<input type="text" value="Selection required"/>	<input type="text" value="Select waste type first"/>				<input type="button" value="Add"/>
Total Land Component(s):		\$0.00			

Total Fee

Total Licence Fee	\$18270.00
-------------------	------------

Figure 3: Proposed licencing fee for Category 5 (from DWER online industry licencing tool)