

# **Australia Pacific LNG Project**

Narrows Crossing Pipeline

Environmental Management Plan

Attachment 9 Weed Management Procedure  
and Vehicle Hygiene Procedure

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# Procedure

## Weed Management

13<sup>th</sup> November 2009

This procedure covers all the facets of Weed Management on Origin Energy Work sites.



## 1. Purpose

The Upstream Business Unit's aim in relation to declared weeds is to:

- Identify in operational areas, areas where declared weeds currently exist
- Identify in operational areas, areas where declared weeds may exist
- Assist with the eradication and the prevention of the spread of weeds into clean areas
- Record and monitor identified infestations of declared weed(s)

The company achieves this aim through a process of identification, control, and monitoring. Critical to the control process is the practice of washing down plant and equipment.

The implementation of the following procedures,

- OEUP-1000-PRO-ENV-005 - This document
- OEUP-1000-PRO-ENV-025 - Vehicle Hygiene

assists and provides direction on the process.

Further guidance is provided by the Shire (QLD) Pest Management Plans, relevant copies of which are held at each production operations site as well as the Brisbane office.

Ultimately it is the responsibility of every field based employee, employees who travel to the field, and contractors, to alert the Asset Superintendent or the environmental group of any sighting of suspected declared weeds.

Training on:

- Weed identification
- Washdown of plant and equipment

can be provided by the company, however the procedures provide adequate direction if they are followed.

The company has approved 'washdown persons' who are approved by the company to certify that a piece of plant or equipment has been adequately cleaned.

The environmental group will review and revise if necessary the procedures and philosophy relating to weed control at least annually from date of publication of these weed management procedures.

## 2. Scope

This procedure applies to all Upstream areas of activity.

## 3. Responsibility

These personnel are responsible for the following activities:

Manager HSE&NT	Procedure issue and maintenance
Managers/Supervisors	Implementation of this procedure
	Field Superintendents/Supervisors are to ensure that corrective action is taken.



All Employees

Responsibility to report to their one up manager any weeds that they may observe during the day to day operations.

#### 4. Requirements

Weed is reported to Field Superintendent. A Health, Safety and Environment (HSE) Alert is written.

Weed information and photographs are sent to the Environment Group for confirmation of weed species.

*Note: See Weed Notification Form OEUP*

Weed control is determined and a plan of action sent to Field Superintendent.

1. A Plan of Action will be issued by the Environment Group. This document will be sent to the relevant Field Superintendent/ Supervisors; it will state the control methods to be used.
2. A Chemical Notification form is submitted and signed off.
3. A letter of "Intension to Spray" is sent to the landholder/s. A response date should be noted on the letter. If no response is received by the given date a telephone call should be made to the appropriate landholder/s. if no response is received within 1 week of the call the local council should be notified of the "Intention to Spray".
4. Control method has been incorporated into everyday working operations and assigned to trained field staff member.
5. Control methods of chipping/spraying/ employing a contractor will depend upon the type of weed identified and the degree of the outbreak. The appropriate method/s will be stated in the Plan of Action prepared by the Environment Group.

*Note: The Company prefers to minimise the use of chemicals.*

a) Chipping:

The prescribed methods of weed removal from an infested site are:

- i) Always work from areas with good native plants/grass cover towards weed-infested areas.
- ii) Where weeds are minimal, weed seeds are minimal. Where the number of native plants/ grasses is the maximum, so is the soil seed bank of native plants/grasses. As you work towards more degraded areas, the native plant seeds follow you into the areas you have weeded.
- iii) Try to create minimal soil disturbance.
- iv) Remove weeds by hand. Carefully replace soil in its original layers. Weeds are encouraged by disturbance of the ground layer.
- v) Minimal handling of weeds that have seed present should be undertaken to reduce the potential for spreading additional seed.

vi) Weeds that are removed should be placed into a plastic rubbish bag, securely sealed and transported to the local Council rubbish dump for appropriate disposal.

vii) Let the rate of regeneration of native plants determine the rate of weed removal. During the removal of weeds local climate and vegetation growth should be noted. Rapidly removing weeds from an area may allow the faster growing weed species to recolonize that cleaned area and not the desired natives/pasture grasses.

b) Spraying:

The prescribed methods of weed removal using registered chemicals are:

- i) All chemicals must be approved by the Environment Group.
- ii) All chemicals must be registered and applied strictly in accordance with the directions on the label- data sheets should be consulted.
- iii) The key to affective chemical use is correct timing. The optimum time to spray is when:
  - (1) the weed is young, prior to going to seed;
  - (2) the plant has not matured;
  - (3) a good profile of soil moisture is present;
  - (4) air temperature is less than 30C.
- iv) Weather conditions also affect the success of spraying. The success of spraying will depend on the environmental conditions on the particular day (wind, temperature and humidity). The label on the chemical should be consulted to determine the ideal spraying conditions.

c) Employing a Contractor

The Field Superintendent/Supervisor will organise for a contractor to conduct the prescribed works.

The contractor must be a registered certified Spraying contractor.

6. Field notes and photographs are forwarded to the Environment Group.

Note: The procedure for engaging a contractor is found on the OCA Intranet- Facilities/ Project Management and Administration.

1. Field inspections of the weed outbreak area are incorporated into everyday working operations. Observations are noted and photographs taken of the method adopted to control the outbreak.
2. Field notes and photographs are forwarded to the Environment Group.

## 5. Records

- Health, Safety and Environment Alert Booklet. (to be held on site).
- Weed Notification Form.
- Pest Management Programs- completed for each operational area.



## 6. References

- Pestfacts- DNRM (Qld)
- OEUP-1000-PRO-ENV-025 - Vehicle Transit

Weed Management Flow Diagram

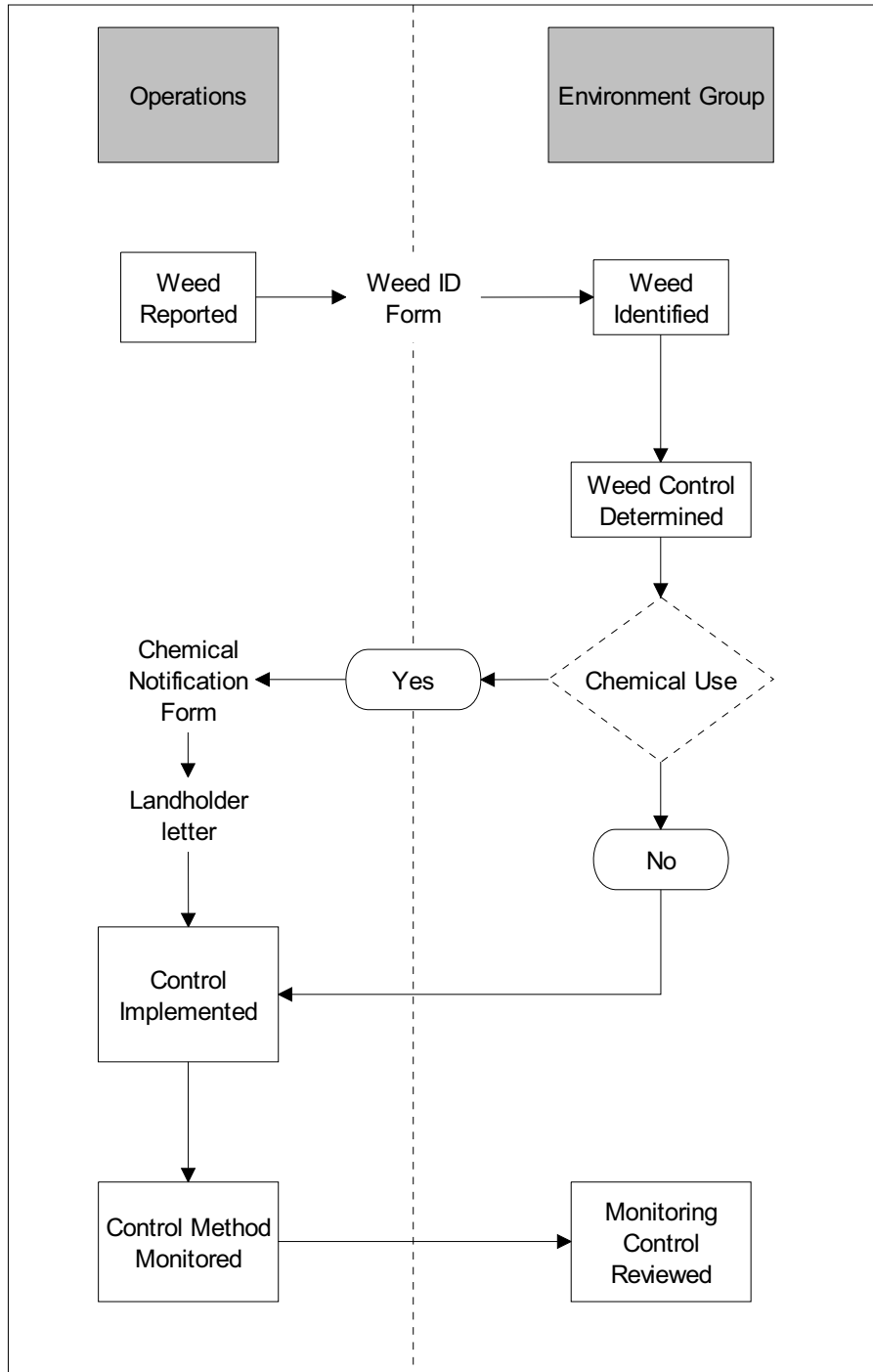


Fig 1: Flowchart of Weed Control Process





Notification of Weed Growth		
Date:	Name: (By whom) HSE Alert No:	
Location: PL/ATP: Property: GPS Location (if possible):	Species: -Parthenium <input type="checkbox"/> -Giant Rat's Tail Grass <input type="checkbox"/> -Harrisia Cactus <input type="checkbox"/> -Mother of Millions <input type="checkbox"/> -Noogoora Burr <input type="checkbox"/>	If weed is not identified complete Plant Identification Form.
Method of Management		
Chipping	Spray	Contractor
Date:	Date:	Date:
Landholder Notification Completed: Yes/No	Landholder Notification Completed: Yes/No	Landholder Notification Completed: Yes/No
Authorized by:	Authorized by:	Authorized by:
Property Name:	Property Name:	Property Name:
Equipment Used:	Weather Conditions:	Weather Conditions:
	Equipment Used:	Equipment Used:
Comments:	Chemicals Used: (ml/L)	Chemicals Used: (ml/L)
	Volume: (Liters used)	Volume: (Liters used)
	Calibration Check:	Calibration Check:
	Comments :	Comments :
Signed:	Signed:	Signed:
Follow Up Check		
Date check required by:	Name:	
Effectiveness and Comments:		
Further Monitoring of site required: Yes/No	If Yes, Monitoring required by:	



PLANT IDENTIFICATION		
Details:		
Date:	Collector:	
Collection details:		
Locality (Distance and direction from nearest well/pipeline/facility) and property name:	GPS location (if possible) Latitude: Longitude: Datum:	
Occurrence:		
Habitat:	Soil type:	Abundance/ Number of plants:

1. Submit a separate form in duplicate for each specimen.
2. Send only email colour photographs of required plant or specimens pressed flat between newspaper sheets and dried.

Remember to:

- Select representative specimens with flowers or fruits
- Eucalypts: It is not possible to identify most eucalypts unless the sample includes buds and fruit as well as adult and juvenile leaves if present. A description of the bark is essential. Information on the habit (eg. single or multi-stemmed) and habitat is important. A photograph of the plant, showing the base of the tree, can be very useful if buds and fruits are scarce.
- Small plants, grasses and sedges: For identification of small plants, grasses and sedges, send the photos of the whole plant. Plants which have underground runners, stems, bulbs or tubers should be sent with a photo of this still attached to the specimen. Both mature flowerheads (and the base of the plant) are essential for identification.



## Weed Control Audit Checklist

Ref	Requirement	Compliance Notes	Status
	There is evidence that a Plan of Action is issued by the Environment Group to the relevant Field Superintendent/ Supervisors stating the weed control methods to be used.		
	There is evidence that a Chemical Notification form is submitted and signed off.		
	There is evidence that a letter of "Intension to Spray" is sent to the landholder/s and if response from the landholder is not received the local council is notified of the "Intention to Spray" .		
	There is evidence that control methods have been incorporated into everyday working operations and assigned to trained field staff member.		
	There is evidence that control methods of chipping/spraying/ employing a contractor depend upon the type of weed identified and the degree of the outbreak. These are in accordance with method/s stated in the Plan of Action prepared by the Environment Group.		
	There is evidence that contractors who conduct the prescribed works are registered certified Spraying contractor.		

OK - Evidence of requirement in place	NC - Non-conformance
IO - Improvement opportunity	NA - Not applicable at this site



## Procedure

# Vehicle Weed Hygiene

24<sup>th</sup> June 2010

This procedure covers all the steps in having a vehicle or plant certified as clean and authorised to access Origin Energy Upstream work sites



## 1. Purpose

There is a risk of spreading weeds/weed seeds through on ground operations and associated earthworks. This procedure details the steps to be taken to prevent declared weeds spreading to operational areas. The objective of this procedure is to define, by way of utilisation of a risk based assessment approach, when an inspection of vehicles/equipment is required and the relevant documentation needed. The procedure also defines by way of washing down, a method to remove weeds/weed seeds from vehicles and equipment.

## 2. Scope

Implementing this procedure will assist in controlling the spread of all declared weeds between Origin Energy's exploration, development and operational areas. A separate site specific weed management plan and/or site specific vehicle weed hygiene procedure may be developed to compliment this procedure.

### 2.1 Exemptions

The following activities do not require a vehicle/equipment to undergo an inspection or to be issued a vehicle/equipment inspection report.

- Any vehicle/equipment travelling exclusively to a major facilities admin area.
- Emergency vehicles when responding to an emergency.
- Private Landholders that are moving around on their own properties and where Origin Energy maintains an asset.
- Guests of Landholders that are visiting a property on non Origin Energy business and where Origin Energy maintains an asset.
- Where an emergency has been declared on an Origin Energy site all authorised vehicles are exempt.

## 3. Responsibility

These personnel are responsible for the following activities:

Environment and Sustainability Manager	Procedure issue and maintenance
Managers/Supervisors	Implementation of this procedure
Drivers/Operators	Ensure their vehicle/machinery unless exempt has a valid Inspection report.

## 4. Definitions

**Approved facility admin area** - *The carpark of either the office or camp of a major facility such as a gas plant, water treatment facility, warehouse complex, head office or other approved facility and which is clearly defined through either signage or written notification.*



**Authorised Person** - Any Origin Energy employee or other person(s) who has been specifically nominated by Origin Energy to inspect vehicles/plant on site to ensure compliance with this procedure.

**Trained Staff Member or Authorised 3<sup>rd</sup> Party Inspector** - A trained staff member or authorised 3<sup>rd</sup> party inspector who has documented proof of assessed competency in RTD2312A - Inspect machinery for plant, animal and soil material and RTD2313A - Clean machinery of plant, animal and soil material or equivalent.

## 5. Requirements

### 5.1 Risk Assessment

1. Declared weeds are identified for all exploration, development and operational areas and personnel are notified of declaration control requirements

*Note: It is the responsibility of the Field Superintendent, Supervisor or Nominated person to ensure all personnel are aware of declared/environmental weeds*

### 5.2 Travelling to site

- 5.2.1 Vehicles/Equipment will undergo inspection at an agreed location prior to entry to the location. Inspections of vehicles/equipment are to be conducted by a trained staff member or an authorised 3<sup>rd</sup> party inspector. It is the responsibility of the driver or machine operator to organise this inspection prior to travelling to site. Drivers and machine operators may inspect their own vehicle/machinery if they are a trained staff member or authorised 3<sup>rd</sup> party inspector. A risk assessment using the risk matrix in Appendix B is to guide the inspector on an appropriate level of inspection. A register of trained staff members is to be kept at each site. Vehicles/Plant **are not** to proceed to site without an inspection unless they fall under an exemption category (see section 2.1). Vehicles/Equipment may be directed to leave site immediately if they are found without a valid inspection report.
- 5.2.2 Vehicles/Equipment will be issued with a vehicle/equipment inspection report once the inspector is satisfied that it is free of organic material; this process may or may not require a washdown to be preformed. If a washdown is required then the inspector should use the techniques as described in Appendix B: Risk Matrix and cleaning techniques. The washdown should occur at either a council provided washdown facility, a permanent facility that has been built in accordance to the *Queensland guideline for the construction of Vehicle and Machinery Washdown Facilities 2000*, a commercial car cleaning facility, or a temporary facility built within an area of infestation.

- 5.2.3 The Vehicle/Equipment inspection report will remain valid as long as the vehicle/equipment complies with the conditions on that report. These conditions describe how the vehicle/equipment can maintain a low risk profile for acquiring organic matter.

Figure 1. Vehicle/Equipment Inspection Report Conditions

***This report remains valid as long as the following conditions are met***

- \* The vehicle/equipment does not travel off formed up roads*
- \* The vehicle/equipment does not come into direct contact with declared weeds*
- \* The driver/operator does not operate the vehicle/equipment after coming into direct contact with declared weeds*
- \* The vehicle/equipment if operating off road, stays within the designated work area and does not cross a property boundary or other designated boundary*

*Note: An individual site may develop a site specific procedure that requires fresh inspections of vehicles/equipment every time they move into that area which will override section 5.2.2. Also at anytime an authorised person may declare an inspection report void if they deem the vehicle/equipment to be no longer clean.*

- 5.2.4 The vehicle/equipment inspection report must be kept in the vehicle/equipment at all times and must be produced upon request by any Origin Energy employee or authorised person. A duplicate copy of the vehicle/equipment inspection report must be retained by the inspector and these copies handed over to Origin Energy admin staff when a new book of vehicle/equipment inspection reports is issued. Administration staff will be required to keep a record of the vehicle/equipment inspection report form numbers, against which inspector these reports were issued to. All copies of vehicle/equipment inspection reports are to be kept for a period of no less than 5 years as required by the Queensland Land Protection Act (Pest and Stock Route Management) Act 2002

*Note: Any other Weed Hygiene Declaration **will not be** accepted for vehicles or equipment entering site. These forms will only be used when procuring materials that may contain organic material.*



## 6. Records

- Vehicle/Equipment Inspection Report Booklets. (To be held on site).

## 7. Attachments & Appendices

- Appendix A: Vehicle/Equipment Inspection Report
- Appendix B: Risk Matrix and cleaning techniques
- Appendix C: Process flow diagram





## Appendix A: Vehicle/Equipment Inspection Report



### Vehicle/Equipment Inspection Report

Company	_____	Date	_____
Location of Inspection	_____		
Inspectors Name	_____		
Model	_____	Make	_____
Registration/ Chassis Number	_____		
Odometer reading	_____		

*Is the vehicle/equipment clean and free of organic material upon initial inspection?* \_\_\_\_\_  
*If the answer is no, what measures have been taken to ensure the vehicle/equipment is free of organic material before being issued this report.* \_\_\_\_\_

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*Is the vehicle/equipment carrying a load that may contain organic material, if so is there a weed hygiene declaration for this load?* \_\_\_\_\_

*Please complete the next part when the vehicle/equipment is deemed to be free of any organic material*

Inspection and or Washdown conducted at	_____		
Inspectors signature	_____	Name	_____
Drivers Signature	_____	Name	_____

*On successful completion of this report the driver/operator is authorised to enter worksites as long as a copy of this report is kept within the vehicle/equipment. The report must be available to view upon request.*

*This report remains valid as long as the following conditions are met*

- \* The vehicle/equipment does not travel off formed up roads*
- \* The vehicle/equipment does not come into direct contact with declared weeds*
- \* The driver/operator does not operate the vehicle/equipment after coming into direct contact with declared weeds*
- \* The vehicle/equipment if operating off road, stays within the designated work area and does not cross a property boundary or other designated boundary*

**This report may be declared void if an authorised person declares that the Vehicle/Equipment can no longer be deemed to be clean and free organic materials**

## Appendix B: Risk Matrix and Cleaning techniques\*

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### Potential contact with weeds

Operators actions		Potential contact with weeds		
		Dense infestations. Contact with weeds unavoidable	Large numbers of scattered plants or clumps of weeds that can be driven or walked around. Contact probable	Small patches of weeds or individual plants. Easily avoided. Contact with weeds feasible
Risk		High	Medium	Low
Drove off road through vegetation. Walked extensively through vegetation. Worked in muddy and wet conditions. Worked amongst plants where seed are visibly present.		High Full Clean	Medium Full Clean	Low Wash Down
Drove on unsealed roads*. Pulled on to the road shoulder. Had some contact with vegetation either on foot or with the vehicle.		High Full Clean	Medium Wash Down	Low Wash Down
Travelled on sealed roads only*. Did not walk off designated paths.		Low Visual Inspection	Low Visual inspection	Low Visual inspection

\* Formed up roads commonly found in gas fields and in some shires are to be treated as sealed roads for the purpose of this risk assessment.

### Definitions:

#### Visual inspection -

- A visual inspection of the vehicle is made, including the radiator, wheel wells, running boards and particularly the carpets, floor mats and seats within the cab.
- Any suspicious seeds are brushed blown or washed prior to leaving a site.
- If seeds or vegetative materials are found and cannot be easily removed and disposed of, the vehicle is taken to a designated clean down facility within the



core infestation area and procedures under the “wash down” recommendation are followed.

- The operator must ensure that all personnel effects including toolboxes, equipment and clothing are free of contaminants prior to moving off site.

#### Washdown -

Follow all the steps under the aforementioned Visual inspection and brush down in addition to those below.

- All exposed areas of the vehicle are cleaned using compressed air, vacuum, brush or a high pressure spray.
- Particular attention is paid to the carpets, floor mats and seats within the cab, wheel wells, running boards and radiator.
- Operator must ensure that prior to leaving a contaminated area all clothing (boots, socks, pants, pockets, laces, and shirts), toolboxes and storage compartments are free of contaminants.
- Wash down should be conducted at a designated wash down facility.

#### Full Clean -

Follow the steps under the aforementioned Washdown in addition to those below.

- Vehicle is cleaned from bumper to bumper using appropriate methods which may include hosing down, vacuuming or compressed air blowers. Vehicle components that can harbour vegetative material are removed and cleaned. Careful attention is required when washing the undercarriage of the vehicle to ensure all areas are cleaned.
- The operator is obliged to take all necessary steps to ensure that no contaminants are attached to clothing including boots, laces, sock, trouser turnups, seems, shirt cuffs or pockets all these must be visually inspected.
- Contaminated clothing to be removed, shaken out, cleaned and thoroughly inspected prior to leaving site.
- Particular attention should be paid to storage areas on the vehicle including tool boxes.

\*This section sourced from the *Petroleum Industry - Pest Spread Minimisation Advisory Guide, June 2008*

### Appendix C: Process Flow Diagram

