ENVIRONMENTAL

EMERGENCY

RESPONSE

PROCEDURE
### Medite Europe Limited: Application for a revised IPPC Licence:

**Attachment J: ACCIDENT PREVENTION & EMERGENCY RESPONSE**

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<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Description</th>
<th>Prepared by</th>
<th>Approved by</th>
</tr>
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<tr>
<td>2</td>
<td>01.07.2010</td>
<td>Update procedure sect.8 and 9</td>
<td>AOM</td>
<td>AOM</td>
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A.  -Control and Revision of Emergency Response Procedure
B.  -List of Emergency Services Contact Numbers
EMERGENCY RESPONSE PROCEDURE
Ref. Condition 13.2 of IPPC Licence No. P0027-02

INTRODUCTION

Medite Europe Ltd is a medium sized manufacturing facility located in Clonmel, Co. Tipperary. It manufactures a composite wood based product Medium Density Fibreboard (MDF) from native softwood timber and employs approx 150 people. The plant operates a continuous production process on a 24/7 basis using a continuous rotating 12 hour shift system. Auxiliary & support operating processes operate either on a 2 shift cycle system or on day work pattern.

The operations within the plant broadly come under the following headings:-

- Materials intake and preparation
- Production L1 process
- Production L2 process
- Warehouse and Shipping
- Maintenance and Auxiliary Services
- Office Support

MANAGEMENT SYSTEMS

Environment
Medite Europe Ltd operates to IPPC Licence No. P0027-02. An Environmental Management System (EMS), required under Condition 2.1 of the operating IPPC Licence, facilitates the management of the environmental impacts of Medite’s activities. The company’s Environmental Management System is externally certified to the IS014001 Environmental Standard by SGS Ireland Limited.

Process/ Quality
Medite’s process operates to I.S. EN ISO 9001:2000 Quality Management System certified by the National Standards Authority of Ireland. Product Certification for different countries also specifies ISO9001 registration as part of the certification requirements. Process control equipment used and product produced are compliant to CE marking standard.

Safety
Details of Safety Management procedures are outlined in the Company’s Safety Statement.
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TRAINING

Training procedures / schedules are described in:

ISO 9001 Quality Manual
Annual Training Plan
Environmental Management System
Safety Statement

PLANNED PREVENTATIVE MAINTENANCE (PPM)

Principally, PPM at Medite comprises:

Maintenance programmes are established and on going at the facility for the following equipment systems:
- process equipment
- environmental process equipment
- continuous monitors
- laboratory equipment
- sampling equipment

At present there is:
- routine round the clock maintenance programme for plant equipment
- routine 8-hour planned maintenance shutdown
- annual maintenance shutdown for one week per production line

SECURITY

Medite process is a 24-hour operation. Therefore, outside office hours, there is always an operations crew (Emergency Response Team) on-site, headed by the supervisor (Emergency Response Team Leader) for that particular shift.

The entry gate is manned by a weighbridge operator from 06:00 to 22:00, Monday to Thursday and from 06:00 to 20:00 on Friday.
During night hours, the entry gate is closed and operated from press control room with 24-hour camera surveillance and intercom communication.
Medite’s boundary is secured by fence and there are regular patrols of general site production area by production personnel. Observation is further enhanced by the presence of cameras in process areas, used for continuous monitoring.
SITE WATER DRAINAGE SYSTEM

Storm water from developed area of the site is collected by two open channel drainage systems.

Northern Discharge SW1
This emission point reference no. SW1 is known as the ‘northern discharge’, as surface water from the northern part of the site is directed to a dedicated settlement pond and then discharged to the River Anner. This drains internal roads in the northern half of the site, the logyard, the area around the debarker/chipper building and most of the warehouse building roof.

Southern Discharge SW2
Medite are licensed to discharge a combined stream of process effluent and southern run-off to the River Anner.
This surface run-off drains internal roads in the southern part of the site, the car park, the fuel storage area, the chip storage area, paved areas to the west of the production building and the roofs of the boiler / refiner house, production building, the blender building and part of the warehouse building.

This surface water discharges to a system of three interceptor settlement lagoons, one of which is retained empty as an Emergency Holding Lagoon.
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DANGEROUS SUBSTANCES – STORAGE AND USE

Bulk Harmful Substances

Mineral thermal oils- this oil is an integral component of the closed-circuit press heating system.

Natural gas- used to heat the thermal oil for Line 1.

Hydrochloric acid- used in the treatment of boiler feedwater.

LPG- used as a fuel for boilers, energy plants and forklift trucks.

Smaller quantities stored in drums

Black, red, green dyes.

Water / Effluent Treatment Chemicals (supplier formulations)

Other materials comprise oils, and resins / additives used in manufacture of the product.

TRANSPORT ON-SITE

Bulk Materials

Hauliers contracted by suppliers make deliveries to site. Where hazardous chemicals are involved, the drivers have been trained by the suppliers in safe handling and emergency procedures, reference site unloading procedures.

Drum Containers

Hauliers contracted by suppliers deliver these to site. Delivery normally comprises drums secured on pallets. Medite’s forklifts are used to offload drums and transport them on pallets from storage area to point of use. All drums not for immediate use are stored in the bunded chemical store.
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SPILLAGE CONTAINMENT

Bunding

Bulk liquid storage is bunded – refer to Drawing EN000-IPPC-010 for tank capacities. Exceptions are LPG and Natural Gas due to potential for gaseous rather than liquid release.

Interceptor Lagoons

The main site area where all bulk liquids are stored and where the drum storage is located drains to a settling system comprising three lagoons. One of these lagoons is retained empty as a holding tank in the event of an emergency, such as a rupture of road tanker, process line or individual drums / IBCs.

The two lagoons, which are in operation, are used alternately so that in the event of a sudden unnoticed spillage, the lagoon in use will intercept the spillage. While one lagoon is in use, the other lagoon is discharging. This aids settlement as well as providing an interceptor system for sudden spillage. However as soon as a spillage is discovered, the flow can be directed to the emergency lagoon.

The volume of each settlement lagoon is 425m³.

Required Retention Capacity

The largest bulk storage tank on-site is 100m³. Retention capacity required is as follows:

- Largest storage tank: 110m³
- Very high rainfall: 246m³
- Total: 356m³ (Lagoon = 425m³)

The capacity of the emergency lagoon is many times larger than the delivery tankers coming on site. In the event of some unlikely catastrophic failure of a bulk storage tank and surrounding bund, the capacity of the emergency lagoon is almost four times greater than the largest storage tank.
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SPILLAGE CONTAINMENT

Diversion of Contaminated Surface Water

The first containment point of all liquids is the tank bund.

In the unlikely event of a spillage going to surface run-off, there is a quick and ready system for diversion of flow to the emergency lagoon. This comprises manual placement of sliding baffles to block off the route to normal discharge and to divert to the emergency lagoon.

As soon as an emergency / spillage are detected, the production supervisor (emergency response team leader) directs a team member to slide baffle in place.

Disposal of Emergency Spillages

In the event of a spillage of a material, Medite would determine the total amount spilled and the concentration in the bund or emergency lagoon. Based on on-site analysis and advice from the material supplier the company would decide what should be done with the material – e.g.

- used on-site for its original intended purpose
- returned to the supplier
- treated on-site or off-site prior to disposal or recovery.

Composition of Used Firewater

If a fire occurs on process fibre and end product, wood solids may be at a concentration, which would require removal. There is some risk of contamination with oil, i.e. due to a press fire, but the method of fire containment at these points minimises water usage and therefore the risk of loss of oil to surface water is low. However, any oil lost would be trapped at oil interceptor and booms placed in surface water treatment.

There is also a slight risk of raw material additive storage tanks being involved in a fire, i.e. the occurrence of a fire in this area with the potential to damage storage tanks. As already outlined, the first point of containment is the tank bund. The risk therefore of discharge with the firewater is minimal.
SPILLAGE CONTAINMENT

In an instance of a fire, the used firewater currently would pass through a system, comprising run-down screen and solids compactor before lagoon entry point. Because the significant contamination of the used firewater would be wood solids, this system for solids removal is appropriate for treatment of used firewater.

In the event of any fire it is policy for the emergency response team leader to divert firewater to the emergency holding lagoon, however minimal the risk of contamination.

The disposal of this retained firewater would be as above (disposal of emergency spillages), and where appropriate with the prior approval of the EPA.

The solids removed from the run-down screen and compactor would be disposed of in the normal manner for compacted wood solids from rundown screens, i.e. reuse as a wood fuel in the boilers and energy plant.
FIRE FIGHTING AND GENERAL FIRE PROCEDURES

POLICY STATEMENT

It is the policy of the Company to provide and maintain sufficient fire protection & prevention equipment, and methods to protect the safety of its employees and Company operations. Notwithstanding such provision and maintenance of equipment the Company recognises that due to the nature of the process, it is not always possible to prevent fires occurring. However, the Company will always insist that where fire is concerned, the safe-guarding of life takes precedence over all other matters. The Company will provide sufficient and adequate ERT training to the core ERT team members.

FIRE ZONES

The Company is divided into six FIRE ZONES as shown below:-

<table>
<thead>
<tr>
<th>FIRE ZONE NO</th>
<th>AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The Debarker area</td>
</tr>
<tr>
<td>2</td>
<td>The Boilers, the Refiners &amp; the Dryers Area</td>
</tr>
<tr>
<td>3</td>
<td>L1 Fibre handling, blending &amp; fibre bins, L1 press and Aux. Rooms</td>
</tr>
<tr>
<td>4</td>
<td>Workshops, Old L1 forming &amp; Press, Laboratories and Offices</td>
</tr>
<tr>
<td>5</td>
<td>The Warehouse, include Finishing Sanding &amp; Shipping areas.</td>
</tr>
<tr>
<td>6</td>
<td>L2 Dryer, Energy Plant, L2 Production Line</td>
</tr>
</tbody>
</table>

Continuous Alarm Main Office Building

THE FIRE ALARM SIGNAL / CODE

When the Fire Alarm is activated for any area the distinctive alarm signal or code emitted is readily recognisable.

The alarm emits 5 short distinctive 'Bleeps', then a short pause, followed by either one, two, three, four, five or six further distinctive bleeps, depending on whether the activation is in Zone 1, 2, 3, 4, 5 or 6, i.e. For a fire alarm activation in Zone 2, five bleeps will sound followed by two bleeps.

Note: A continuous alarm will sound in the Offices when the fire alarm is activated in this location.

EVACUATION ALARM

In the event of evacuation the fire alarm system emits a continuous signal throughout the zone to be evacuated or may be used in all zones simultaneously if total evacuation of the site is necessary. The evacuation alarm can only be activated from the panel in the meeting room (old press control room L1).

FIRE ALARM TEST

The Fire Alarm system is tested each Monday morning at 10.00 am except on Public Holidays which fall on a Monday. On each Monday morning one zone is tested plus the evacuation alarm for that zone.
EMERGENCY RESPONSE TEAM MEMBERS

EMERGENCY RESPONSE TEAM CHIEF (PRODUCTION MANAGER)
The emergency response team chief (ERT chief) has the following duties and responsibilities:

- Ensure that the ERTs’ have adequate and necessary equipment
- Ensure that the ERTs’ are suitably staffed and trained on an on-going basis.
- Decide, in liaison with the ERT leader the strategy during a fire or other emergency.
- Decide, in liaison with the ERT leader / Fire Brigade Chief Officer, if evacuation is necessary and if so, set off the evacuation alarm.
- Liaise with the Fire Brigade Chief Officer at the scene of fire.
- Advise Fire Brigade Chief Officer of potential risks.

EMERGENCY RESPONSE TEAM LEADER (PRODUCTION SUPERVISOR)
The Emergency response team leader (ERT leader) has the following duties and responsibilities:

- Ensure that his ERT has adequate and necessary equipment.
- Ensure that his ERT is suitably staffed and is satisfactorily trained on an on-going basis.
- Act as ERT chief in the absence of the Production Manager
- Decide on fire fighting or search & rescue strategy during the incident
- Direct the Press Operator or other nominated persons to call the Emergency Services, if deemed necessary. Advise him to follow the procedure posted at his desk.
- Insure that the person who has been assigned to call the Emergency services confirms back to you “that the required services have been notified”
- Organise to have an employee go to the weigh bridge area to await the arrival of the emergency service and direct them to the fire incident.
- Assign an employee to act as Fire Pump Operator, normally the shift fitter
- Assign personnel to divert fire water and spillages into the emergency lagoon
- Ensure the safety of personnel.
- Secure the property against damage where possible.
- Decide in liaison with the ERT chief if evacuation is necessary and if so, set off the evacuation alarm by following the activation procedure.
- Notify the Environmental Protection Agency by following the notification procedure for environmental incidents.
- Complete Fire / Environmental Incident Report Form.
EMERGENCY RESPONSE TEAMS (ERT) MEMBERS
The ERT members are made up mainly of production shift personnel, refer to table:

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<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Press area OP L1</td>
</tr>
<tr>
<td>2</td>
<td>Press area OP L2</td>
</tr>
<tr>
<td>3</td>
<td>Refiner area OP</td>
</tr>
<tr>
<td>4</td>
<td>Boiler/Utility area OP</td>
</tr>
<tr>
<td>5</td>
<td>Sander/Saw OP</td>
</tr>
<tr>
<td>6</td>
<td>Packaging OP L1</td>
</tr>
<tr>
<td>7</td>
<td>Packaging OP L1</td>
</tr>
<tr>
<td>8</td>
<td>Forklift driver L1</td>
</tr>
<tr>
<td>9</td>
<td>Shift Electrician</td>
</tr>
<tr>
<td>10</td>
<td>Shift Fitter</td>
</tr>
</tbody>
</table>

When the fire alarm is activated, the ERT must:-

- Report to the Press Control L1 and establish contact with the ERT leader
- Act on the instructions of the ERT leader, and at all times have due regard for your own safety and the safety of others
- Carry out fire fighting/emergency rescue as per training
- After the event, check all equipment used and report any defective parts to the ERT Leader
- Return all other fire fighting equipment back to its correct place after the fire

FIRE PUMP / SPRINKLER CONTROL VALVE OPERATOR – NORMALLY SHIFT FITTER

- The assigned person must
- First go to the activated sprinkler control valve location and check that the valve is fully open.
- Then proceed to the fire pump house and check that the fire pump is running when required. He must remain here for the duration of the fire incident unless otherwise directed by the ERT leader.
GENERAL FIRE/EMERGENCY PROCEDURES
The following general fire/emergency procedures apply to all employees of the Company. It is the responsibility of every Department Director and every Manager and Supervisor to ensure that all of his staff is adequately trained in this Procedure.

General Fire/Emergency procedures include:-
• Action to be taken on discovering a fire or other emergency incident
• Action to be taken on hearing the alarm
• Knowing the Alarm zone code and your work area.
• Action to be taken in the event of evacuation alarm
• Knowing the Assembly Point

ACTION ON DISCOVERING A FIRE OR OTHER EMERGENCY INCIDENT
• Raise the Alarm by breaking the nearest RED Break Glass Box which is positioned inside and adjacent to all EXIT doors from plant buildings
• Shout for assistance or warn other employees nearby
• Fight the fire or assist in an emergency incident only if safe to do so
• Do not endanger your own safety or that of others

ACTION ON HEARING THE ALARM - If not an ERT member
• Remain at your place of work if safe to do so.
• Prepare to shut-down equipment
• Leave the building on hearing the EVACUATION ALARM or on being told to do so by a manager, supervisor or ERT member
• Go to the Assembly Point

EVACUATION
• Go immediately to the Assembly Area by the safest route
• Do not Stop to collect personal belongings
• Last person leaving a room / hallway, should close the door behind them
• Do not re-enter the building until directed to do so
• Do not leave Assembly until directed to do so
EMERGENCIES

Liquid Petroleum Gas (L.P.G)

L.P.G, which is used for a fuel to both boilers, is stored on site in 55m³ tank located at the side of the chemical store. L.P.G, which is used for Forklift fuelling, is stored on site in 15m³ tank located to the East of the warehouse.
The tanks, which are the property of Calor-Kosangas Ltd. are fitted with all of the required Safety valves, control valve and gauges and are constructed, inspected, maintained and filled in accordance with L.P.G Codes of Practice.

The potential for emergency situations arising through the use of L.P.G is:
- Leakage from the storage tanks or at the Forklift re-fuelling station.
- Fire arising from leak
- Explosion, arising from fire tracing back to the source of a leak from the tanks.

In the event of leak or fire the Emergency Response Team Leader on duty should be notified immediately, by telephone or by use of the Fire Alarm System. The Leader will decide on what action is necessary:

- Shutting off the leak at source and seeking mechanical advice or assistance.
- Seeking Calor-Kosangas expert advice. 01-2694800
- Summoning the Local Fire Brigade.
- Tackling the fire, if evident.
- Keeping the Tank(s) cooled with water.
- Turning off/removing sources of ignition in the vicinity and/or down wind.
- Deciding in liaison with management of evacuation of the area, if deemed necessary.
- Diverting firewater to the Emergency Lagoon if necessary.
- Complete Fire / Environmental Incident Report Form and copy to the relevant personnel.
- The EPA will be notified according to the Notification Procedures for an Environmental Incident.
EMERGENCIES

General Employees

In the event of an emergency arising at the L.P.G tanks or refuelling station, employees other than the Emergency Response Team should:

- Follow all direction given by the Emergency Response Team Leader
- Stay well clear of the incident and remain indoors
- Be prepared to shut down equipment or evacuate as deemed necessary by the Emergency Response Team Leader.
EMERGENCIES

Natural Gas

The Natural Gas is transported on-site by means of high-pressure transmission pipelines and low-pressure distribution pipe networks. Qualified skilled staff under professional supervision carries out all works on these systems.

The main constituent of Natural Gas is Methane (chemical formula CH₄).

The Natural Gas is used in Line One process to heat the thermal oil.

Fire Fighting Measures and Accidental Release Measures

In the event of a fire or accidental release, the Emergency Team Leader on duty should be notified immediately, by telephone or use of Fire Alarm System. The Leader will decide on what course of action is necessary:

- If possible the flow of gas is stopped by isolation of source; extinguishing gas flames without isolation may cause an explosion. The gas burning freely in air will not produce hazardous products of combustion.

- A leaking gas flame should not be extinguished unless absolutely necessary.

- Expert advice should be sought from Bord Gáis. Tel. 021-4534000, Emergency No.1850 205050.

- The Local Fire Brigade should be summoned.

- Other fires in the area of the leak should be extinguished by suitable means and the area cooled using water fog.

- In confined spaces self-contained breathing apparatus should be used.

- Decide in liaison with management of evacuation of the area, if deemed necessary.

- Divert firewater to Emergency Lagoon, if necessary.

- Complete Fire / Environmental Incident Report Form and copy to the relevant personnel.

- The Agency will be notified according to the Notification Procedure for an Environmental Incident.
Accidental Release (additional measures)

- If possible isolate the supply of gas and ventilate the area.
- Eliminate all sources of ignition.
- Evacuate people from the area.
- Wear self-contained breathing apparatus when entering the area, unless atmosphere has been tested and declared safe.
EMERGENCIES

EMERGENCY INCIDENTS INCLUDING FIRE
Medite Europe Ltd will provide and maintain sufficient fire protection & prevention equipment, and methods to protect the safety of its employees and Company operations. Safe-guarding life must take precedence over all other matters when dealing with a fire incident. Emergency response teams will be drawn from the production crews and trained to deal with emergency incidents including fire, rescue and chemical spills.

The fire alarm system is tested each Monday morning at 10:00 am except on Public Holidays which fall on a Monday.

In the event of a fire or uncontrolled release of bulk storage material held on site, the risks associated with the physical & chemical properties of the material during an emergency incident are greatly magnified by the volume. The following materials held in bulk storage:

TOTAL BULK STORAGE CAPACITY

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>MAX CAPACITY</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPG</td>
<td>55M3</td>
<td>Effluent DAF building</td>
</tr>
<tr>
<td>LPG</td>
<td>15m3</td>
<td>Shipping Entrance door</td>
</tr>
<tr>
<td>UF resin</td>
<td>316,000 L</td>
<td>Adjacent to refiner and fibre handling buildings</td>
</tr>
<tr>
<td>MUF resin</td>
<td>264,000 L</td>
<td>Adjacent to refiner and fibre handling buildings</td>
</tr>
<tr>
<td>Paraffin wax</td>
<td>126,000 L</td>
<td>Inside the refiner and fibre handling buildings L1</td>
</tr>
<tr>
<td>MDI</td>
<td>45,000 L</td>
<td>Dryer building L1</td>
</tr>
<tr>
<td>Thermal oil</td>
<td>42,000 L</td>
<td>Energy plant L2 &amp; Thermal oil heater L1</td>
</tr>
<tr>
<td>Diesel oil</td>
<td>24,750 L</td>
<td>Chip yard</td>
</tr>
<tr>
<td>HCL</td>
<td>15,000 L</td>
<td>West side of boiler house</td>
</tr>
</tbody>
</table>
Objectives In The Event Of Fire or Spillage

In the event of a fire or a spillage, the primary objectives are extinguishment and containment. Emergency Response Teams are trained to deal with flammable liquid incidents and/or spillages:

- Containment using fog / foam systems
- Avoiding contact with ignition sources
- Diverting spillage to Emergency Holding Lagoon
- Use of spill kits, pig tails
- Cleaning up using sand or earth.
- All other procedures relating to ensuring the safety of all personnel in the area
- Complete Fire / Environmental Incident Report Form and copy to the relevant personnel.
- Notifying the EPA as per Notification Procedures for an Environmental Incident.
- Disposal or use of materials after prior approval of EPA and following the safety procedures outlined in the Material Safety Data Sheets (MSDS) located on the Health and Safety shared folder and desktop on each screen in all control rooms.
EMERGENCIES

Emissions to Atmosphere

In the event of an emission of Dust / Fibre from any of Medite’s potential emission points the following action will be taken.

The Emergency Response Team Leader on duty should be notified immediately, by telephone or by use of the internal communication system. The Leader will decide on what action to take:

- Identifying the source of the Emission.
- Shutting down Production if necessary.
- Contacting relevant members of staff and management.
- Contacting the Local Authority and the EPA.
- Deciding in liaison with management what corrective action is deemed necessary.
- Complete Fire / Environmental Incident Report Form and copy to the relevant personnel.
- Notifying the EPA as per Notification Procedures for an Environmental Incident.

A tour by Medite personnel beyond the site boundary may be necessary to access any damage caused to amenities or the environment by the Emission and to take corrective action as deemed necessary.

It will be the responsibility of the Technical & Environmental Manager or Environmental Officer to liaise with the general public if affected by such an Emission.

A similar procedure and corrective action will be taken if any air emissions and/or odours from the plant result in significant impairment of, or significant interference with amenities or the environment beyond the site boundary.
EMERGENCIES

Emissions To Water

In the event of an emission to water, which does not comply with the requirements of the IPPC Licence, the following action will be taken. This action is also relevant in the event of a problem with the wastewater treatment plant operations, e.g. rupture of a pipe, uncontained spillage, and operational difficulties.

The Emergency Response Team Leader should be notified immediately by telephone or by use of the internal communication system. The Leader will decide on what action to take:

- Identifying the source of the Emission.
- Shutting down access of the emissions to the water stream if necessary.
- Contacting relevant members of staff and management.
- Deciding in liaison with management what corrective action to take.
- Contacting the Local Authority and the Southern Regional Fisheries Board.
- Notifying the EPA as per Notification Procedures for an Environmental Incident.
- Complete Fire / Environmental Incident Report Form and copy to the relevant personnel.
NOTIFICATION PROCEDURE OF ENVIRONMENTAL INCIDENT:

Medite shall notify the EPA by telephone and facsimile to the Agency’s office in Kilkenny or such Agency as may be specified by the Agency, as soon as practicable after the occurrence of:

Any incident with the potential for environmental contamination of surface water or groundwater, or posing an environmental threat to air or land, or requiring an emergency response by the Local Authority. Medite shall make a record of any incident as set out above, the notification given to the Agency and all actions taken to minimise the effect on the environment and minimise waste generated.
(Note: EPA document ‘Guidance to licensees on the Notification, Management and Communication of Environmental Incidents’).

During OFFICE HOURS, as soon as practicable after the event, either the Environmental Officer or Technical & Environmental Manager will inform the EPA by telephone, followed by a fax message using the EPA Emergency Incident Notification Form. It is not appropriate to email or leave a telephone message for an inspector.

Agency Contact: Tel: 056-7796700; Fax: 056-7796798

Outside OFFICE HOURS, the Environmental Officer or Technical & Environmental Mgr will communicate the details of the incident by telephone and by fax using the EPA Emergency Incident Notification Form. Notifications of environmental incidents outside normal work hours can be made by telephone to EPA headquarters on telephone number 053-9160600, or by telephone to any of the ‘Regional Inspectorates’. Callers are given the option to record message or an urgent environmental pollution incident message.
(Note: EPA document ‘Guidance to licensees on the Notification, Management and Communication of Environmental Incidents’).
ENVIROMENTAL MANAGER OR DEPUTY RESPONSIBILITIES FOR AN ENVIRONMENTAL INCIDENT:

The Environmental Manager or deputy is required to ensure that at a minimum the following action is taken in the event of an emergency occurring on-site:

- Contact all the Emergency Response Agencies and the EPA to communicate the incident details
- Keep appraised of the ongoing situation in order to determine the appropriate level of response from staff;
- Provide and support the technical response to the emergency;
- Ensure that suitable safety precautions are in place regarding any on-site response;
- Provide and support the monitoring and analytical response;
- Advice on notification to the public and other Agencies;
- Advice on remedial action necessary including preventative action i.e. potable water supplies;
- Ensure compliance with the incident notification conditions of the licence.
APPENDIX A

CONTROL AND REVISION OF EMERGENCY RESPONSE PROCEDURE

An e-copy of the Company Emergency Response Procedure will be available through the following offices to any employee who wishes to refer to it.

<table>
<thead>
<tr>
<th>REFERENCE No.</th>
<th>OFFICE LOCATED</th>
<th>PERSON RESPONSIBLE</th>
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<tr>
<td>01</td>
<td>Environmental Officer</td>
<td>Andrew O’Meara</td>
</tr>
<tr>
<td>02</td>
<td>Production Supervisor</td>
<td>Shift Supervisor</td>
</tr>
<tr>
<td>03</td>
<td>Shipping Supervisor</td>
<td>S Brackett</td>
</tr>
<tr>
<td>04</td>
<td>Mechanical</td>
<td>T Coleman</td>
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<tr>
<td>05</td>
<td>Electrical</td>
<td>A Doyle</td>
</tr>
<tr>
<td>06</td>
<td>Utilities Engineer</td>
<td>N. Sutcliffe</td>
</tr>
</tbody>
</table>

An Electronic copy of this Emergency Response Procedure will also be available on the Company server (ISO14001 EMS Shared folder) and maintained by the Environmental Officer.

Revision of Emergency Response Procedure

The Emergency Response Procedure will be reviewed and updated as necessary to reflect legislative changes or changes to the Company’s operation. These changes will be communicated to all employees through directors, managers, supervisors or environmental communications.
APPENDIX B

LIST OF EMERGENCY SERVICES CONTACT NUMBERS

<table>
<thead>
<tr>
<th>Contact Agency</th>
<th>Telephone No.</th>
<th>Fax No.</th>
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<td>Emergency Call Centre</td>
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<tr>
<td>Fire Brigade Service</td>
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<tr>
<td>EPA Regional Inspectorate (Kilkenny)</td>
<td>056-7796700</td>
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<tr>
<td>EPA Headquarters</td>
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<td>Local Authority</td>
<td>052-6134455</td>
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<td>Southern Regional Fisheries Board</td>
<td>052-6123624</td>
<td>052-6123971</td>
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<td>Bord Gais – Natural Gas</td>
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<td>Calor Kosangas - LPG</td>
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LIST OF EMERGENCY SERVICES CONTACT NUMBERS

(24 Hour Service)

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Medite Europe Limited: Application for a revised IPPC Licence:

Attachment J: ACCIDENT PREVENTION & EMERGENCY RESPONSE
The Fire Alarm Signal/Code

When the Fire Alarm is activated for any area the distinctive alarm signal or code emitted is readily recognisable.

The alarm emits 5 short distinctive 'bleeps', then a short pause, followed by either one, two, three, four, five or six further distinctive bleeps, depending on whether the activation is in Zone 1, 2, 3, 4, 5 or 6, i.e. for a fire alarm activation in Zone 2, five bleeps will sound followed by two bleeps.

Note, a continuous alarm will sound if the fire alarm is activated in this location.

Fire Zone #1 - The Debarker area
Fire Zone #2 - The Boilers, Refiners & Line 1 Dryer Area
Fire Zone #3 - Line 1 Fibre Handling, Blending & Fibre Bins, L1 Press and Aux. Rooms
Fire Zone #4 - Workshops, Old Line 1 Forming & Press, Laboratories and Offices
Fire Zone #5 - Warehouse, Including Sanding, Sawing, Packaging & Shipping areas
Fire Zone #6 - Line 2 Dryer, Energy Plant & Production Line

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RMP Update
Residuals Management Plan

02 April 2007
Final
Issue No 2
45078719
# RMP Update

## Residuals Management Plan

**Project Title:** RMP Update  
**Report Title:** Residuals Management Plan  
**Project No:** 45078719  
**Report Ref:**  
**Status:** Final  
**Client Contact Name:** Andrew O'Meara  
**Client Company Name:** Medite Europe Ltd.  
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## Document Production / Approval Record

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<th>Signature</th>
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<td>Klara Kovacic</td>
<td></td>
<td>02 April 2007</td>
<td>Environmental Scientist</td>
</tr>
<tr>
<td></td>
<td>Checked by</td>
<td>Danny Ward</td>
<td>02 April 2007</td>
<td>Senior Engineer</td>
</tr>
<tr>
<td></td>
<td>Approved by</td>
<td>Peter Hassett</td>
<td>02 April 2007</td>
<td>Department Head, Transactions and Compliance Group, Ireland</td>
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<td>3</td>
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LIMITATION

URS Ireland Limited (URS) has prepared this Report for the sole use of Medite Europe Ltd. in accordance with the Agreement under which our services were performed. No other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by us. This Report may not be relied upon by any other party without the prior and express written agreement of URS. Unless otherwise stated in this Report, the assessments made assume that the sites and facilities will continue to be used for their current purpose without significant change. The conclusions and recommendations contained in this Report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested. Information obtained from third parties has not been independently verified by URS, unless otherwise stated in the Report.

Where assessments of works or costs required to reduce or mitigate any environmental liability identified in this Report are made, such assessments are based upon the information available at the time and are subject to further investigations or information which may become available. Costs may therefore vary outside the ranges quoted. No allowance has been made for changes in prices or exchange rates or changes in any other conditions which may result in price fluctuations in the future. Where assessments of works or costs necessary to achieve compliance have been made these are based upon measures which, in URS’s experience, could normally be negotiated with the relevant authorities under present legislation and enforcement practice, assuming a pro-active and reasonable approach by site management.

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1. INTRODUCTION

1.1. Requirement for A Residual Management Plan

Medite Europe Limited (Medite, previously known as Weyerhaeuser Ireland Ltd.) operate a manufacturing plant at a site in Redmonstown, on the outskirts of Clonmel town in Co. Tipperary. The company specialises in the manufacture of medium density fibreboard (MDF) through the processing of wood chips and impregnation with binding resins. A site location map is presented in Figure 1.1 and a Site Layout Map is presented in Figure 1.2 (See Appendix A).

Environmental management of the site is regulated by the conditions described in the site Integrated Pollution Prevention and Control Licence (IPPC Licence) P0027-02 (Old Ref No 593), issued in November 2001 by the Environmental Protection Agency (EPA). Prior to the IPPC licence review, the site was regulated under IPC Licence No. 27, issued in April 1996.

Medite is currently licenced for the following activity:

the manufacture of fibre-board in installations with a production capacity equal to or exceeding 25,000 tonnes of product per year

Environmental management of the site is regulated by the conditions prescribed in the site revised IPPC Licence Register No IPPC P0027-02.

Condition 14 of the IPPC Licence requires the preparation and submittal to the Agency of a Residuals Management Plan (RMP). The specific requirements are as follows:

Condition 14. Decommissioning and Residuals Management

14.1 Following termination, or planned cessation for a period greater than six months, of use or involvement of all or part of the site in the licensed activity, the licensee shall, to the satisfaction of the Agency, decommission, render safe or remove for disposal/recovery, any soil, subsoils, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may result in environmental pollution.

14.2.1 The licensee shall prepare, to the satisfaction of the Agency, a fully detailed and costed plan for the decommissioning or closure of the site or part thereof. This plan shall be submitted to the Agency for agreement within six months of the date of grant of this licence.

14.2.2 The plan shall be reviewed annually and proposed amendments thereto notified to the Agency for agreement as part of the AER. No amendments may be implemented without the written agreement of the Agency.

14.3 The Decommissioning and Residuals Management Plan shall include as a minimum, the following:
14.3.1  A scope statement for the plan.

14.3.2  The criteria which define the successful decommissioning of the activity or part thereof, which ensures minimum impact to the environment.

14.3.3  A programme to achieve the stated criteria.

14.3.4  Where relevant, a test programme to demonstrate the successful implementation of the decommissioning plan.

14.3.5  Details of costings for the plan and a statement as to how these costs will be underwritten.


A final validation report to include a certificate of completion for the residuals management plan, for all or part of the site as necessary, shall be submitted to the Agency within three months of execution of the plan. The licensee shall carry out such tests, investigations or submit certification, as requested by the Agency, to confirm that there is no continuing risk to the environment.

This report describes the Medite site-specific RMP in response to the EPA request.

1.2.  Basis for the RMP

The basis of this RMP is as follows:

- A review of the activities carried out at the site, including process and services;
- Identification of existing and potential hazards, including evaluation of materials and wastes generated;
- Consideration of historic environmental incidents and remediation works undertaken;
- Identification of all items of plant and other materials that may be decommissioned rendered safe or removed from the site for disposal or recovery in the event of closure; and,
- Identification of locations where cleaning, decontamination or remediation works may be required in the event of decommissioning to prevent environmental pollution.
1.3. Site Close-Down Scenario: Comments and Assumptions

In order to develop a fully costed RMP for the Medite site, a number of assumptions have been made with regard to the mode and management of a hypothetical site shut down.

Medite Europe Ltd. (Medite) was bought by Coillte in 2006. Previously, Medite was owned by Weyerhaeuser Corporation and known as Weyerhaeuser Europe Ltd. Coillte was established in 1988 as a private limited company under the Forestry Act 1988. In 2005, Coillte had a turnover of €215.6 m, a profit of €19.6 m.

It is assumed that any shut-down of the Clonmel facility will be a well resourced event. This implies that the shut-down date will be known well in advance and that both production schedules and raw materials purchasing have been planned with the shut-down already “factored in”. It also implies that Medite have the resources in terms of both financial inputs and manpower to implement the RMP through to completion – with no requirement for external financing or manpower other than for expert advise.

A general assumption is that completion of the plan will result in a decommissioned and decontaminated site suitable for future industrial use, unless the site can be sold as a going concern to a third party, the nature of which will not trigger the decommissioning mechanism. The majority of buildings and some site services, while emptied and cleaned as part of the RMP, will be assumed to remain in place following cessation of fibre-board manufacturing at the site.

The second general assumption is that all parts of the site are closed as part of one comprehensive RMP. No direct reference to partial closure is made in the RMP. The RMP and associated costs have been developed for a number of discrete programme stages arranged in a logical sequence to facilitate complete site closure. The actual steps to be carried out and their associated costs for any partial shut downs may be derived from the RMP by simply reviewing that part of the RMP which covers that specific activity or land-parcel.

The third general assumption is that the RMP will be reviewed and updated as necessary, on an annual basis as part of the AER. The annual review of the RMP will take any changes in site status into consideration and incorporate current planned activities.

1.4. RMP Report Structure

The structure of the RMP is based on the following key sections:

**Section 2** provides an evaluation and overview of the site and surrounding history and describes items such as buildings, activities and issues on the existing sites, which are covered in the plan.

**Section 3** describes the initial screening and operational risk assessment carried out for the Medite facility.
Section 4 outlines the scope of the RMP, the type of closure envisaged and any exclusions in the RMP.

Section 5 describes the proposed criteria to be used to demonstrate successful decommissioning and decontamination.

Section 6 outlines management responsibilities for the implementation of the plan.

Section 7 describes the RMP in a Project Management style with discrete stages and associated tasks. Two programmes are considered:

**Closure Plan (CP)**

Decommissioning and decontamination of all above and below ground structures – including management of residues arising at the site.

**Restoration and Aftercare Management Plan (RAMP)**

Management of any potential long-term residual soil and ground water contamination at site.

Section 8-10 provides a summary of the costs associated with implementation of the RMP, the provisions in place at Medite to underwrite the costs associated with the RMP and the need to review and update the RMP.
2. MEDITE SITE DESCRIPTION AND HISTORY

2.1. Site History

As part of the development plan for Irish Forestry, Medite Corporation was invited to set up an MDF manufacturing facility in Ireland. Medite Corporation is based in Oregon USA, with the ultimate parent being Valhi Inc., a multi-industry holding company operating from Dallas, Texas.

Planning permission for the site was granted in 1982 on a green field site and production commenced in September 1983. The facility was expanded to include a second production line in 1994.

Medite was purchased by Willamette Industries in 1996, which was subsequently purchased by Weyerhaeuser in February 2002. The name change to Weyerhaeuser was officially completed in May 2002.

In 2006, the Weyerhaeuser site in Clonmel was purchased by Irish forestry company Coillte. The name of the site was changed again to Medite Europe Ltd.

2.2. Site and Process Description

Production line 1 at the facility was replaced with a new production line in 2002, and has been operational since August 2002.

The site occupied by Medite is approximately 728,500 sq.meters (180 acres) in total area. The main production site, surrounded by an embankment, is approximately 126,000 m² (31 acres) in area. A site layout plan is provided in Appendix A. The main features of the production area are as follows:

- Main production building and offices;
- Refiner and dryer building;
- Fibre storage and blending;
- Main Energy Plant (the older, steam boiler energy plant is adjacent to the refiner and dryer building);
- Log storage;
- Bark storage;
- Wood chip storage;
- Debarker building;
- Surface water interceptor lagoons;
2.3. **Assessment of Potential Risks**

The implementation of the RMP at Medite may in itself create environmental risks. Therefore, prior to decontamination and decommissioning operations, an environmental risk assessment will be carried out, involving all parties to the decommissioning process (senior Medite management, disposal contractors, process decommissioning contractors, etc). This assessment will identify potential risks associated with implementation of the RMP, which may include but is not limited to the following:

- Inadequate storage of wastes prior to off-site disposal,
- Inadequate bunding of liquid wastes prior to collection by waste contractors,
- Structural hazards (e.g. overhead/underground services), and
- Health and safety hazards.

Such an environmental risk assessment cannot be carried out until such time as actual decommissioning is about to take place since site conditions may be different to what is presented in this report and contractors involved in the decommissioning process cannot be identified until that point.

It is recommended that a site safety plan be developed prior to the commencement of the decontaminating and decommissioning process at Medite. Any other aspects of implementation of the RMP, which may involve specific health and safety issues, should be accompanied by a dedicated health and safety plan for that particular activity.
3. SCREENING AND OPERATIONAL RISK ASSESSMENT

3.1. General

As a starting point in the process, a relatively simple risk assessment decision matrix can be used to classify sites according to Low, Medium and High risk and thereby select the specific RMP and Financial Provision (FP) requirements that will be needed. The risk assessment decision matrix outlined in the EPA RMP Guidance Document 2006 was used.

The risk assigned to the facility depends on the complexity of operations at the site, the environmental sensitivity of the receiving environment and the compliance record (compliance history) of the facility.

- **Complexity** – the extent and magnitude of potential hazards present due to the operation of the facility (e.g. a function of the nature of the activity, the volumes of hazardous materials stored on site etc.). A Complexity Band (G1 least complex to G5 most complex) for each class of activity has been assigned and included in a Look-Up Table (Appendix B of the EPA RMP Guidance Document 2006).

- **Environmental Sensitivity** – the sensitivity of the receiving environment in the vicinity of the facility; with more sensitive locations given a higher score (e.g. the presence of aquifers below the site, groundwater vulnerability, the proximity to surface water bodies and their status, the proximity to sensitive human receptors, etc). The Environmental Sensitivity is calculated on a site-specific basis using a sub-matrix (Table 3.1).

- **Compliance Record** – the compliance history of the facility.

Each aspect is multiplied to give the **Total Score** for the facility, and this can be used to place the facility into an appropriate Risk Category as follows:

- Risk Category 1 = Score < 5
- Risk Category 2 = Score 5 - 9
- Risk Category 3 = Score > 9.

Once this has been completed, the licensee proceeds through the relevant steps of RMP and FP that are considered appropriate for the Risk Category.

3.2. Complexity

Significant work has been done by the Environment Agency (England and Wales) in the development of the Environmental Protection Operator and Pollution Risk Appraisal (EP OPRA) methodology for classifying activities, and a similar but shortened version of this
methodology has been developed for this process. Where available, Complexity Bands have been derived, from similar classification in the EP OPRA Complexity Score. A look up table for Irish activities has been included in Appendix B of the EPA's ELRA Guidance Document 2006.

The Complexity Band is used to determine the value used in the Operational Risk Assessments as follows:

\[ G_1 = 1, \ G_2 = 2, \ G_3 = 3, \ G_4 = 4 \text{ and } G_5 = 5 \]

Medite’ current IPPC Licence Reg. No. IPPC P0027-02 was granted under Class 8.1.

Medite activities according to the EPA’s ELRA Guidance Document 2006 are listed under:

- **8.1.0: Wood, Paper, Textiles and Leather**

  The manufacture of paper pulp, paper or board (including fibre-board, particle board and plywood) in installations with a production capacity equal to or exceeding 25,000 tonnes of product per year.\(^1\)

According the EPA ELRA Guidance Document 2006, category 8.1 is assigned complexity band G4 and therefore a complexity band of G4 is applied to the site.

### 3.3. Environmental Sensitivity

A sub-matrix for environmental sensitivity is outlined in Table 3.1. This considers 6 key potential environmental receptors and assigns individual scores that are added together to arrive at a total environmental attribute score. The scoring system used is outlined in EPA ELRA Guidance Document 2006. The total environmental attribute score is used to look up the environmental sensitivity classification in Table 3.2 below. The environmental sensitivity sub matrix has been developed based on professional judgment and with reference to the system designed in the EP OPRA Scheme by the UK Environment Agency. The environmental sensitivity classification is used in the operational risk assessment to calculate the total score.

\(^1\) This is equivalent to 68 tonnes per day.
Table 3.1 Environmental Sensitivity Sub-Matrix

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<tr>
<td>&lt;50m</td>
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<td>50m-250m</td>
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<tr>
<td>&gt;1km</td>
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</tr>
<tr>
<td>Regionally Important Aquifer</td>
<td>2</td>
</tr>
<tr>
<td>Locally Important Aquifer</td>
<td>1</td>
</tr>
<tr>
<td>Poor Aquifer</td>
<td>0</td>
</tr>
<tr>
<td>Vulnerability Rating – Extreme</td>
<td>3</td>
</tr>
<tr>
<td>Vulnerability Rating – High</td>
<td>2</td>
</tr>
<tr>
<td><strong>Vulnerability Rating - Moderate</strong></td>
<td>1</td>
</tr>
<tr>
<td>Vulnerability Rating - Low</td>
<td>0</td>
</tr>
<tr>
<td><strong>Sensitivity of Receiving Water</strong></td>
<td></td>
</tr>
<tr>
<td>Class A</td>
<td>3²</td>
</tr>
<tr>
<td>Class B</td>
<td>2</td>
</tr>
<tr>
<td>Class C</td>
<td>1</td>
</tr>
<tr>
<td>Class D</td>
<td>0</td>
</tr>
<tr>
<td>Designated Coastal &amp; Estuarine Waters</td>
<td>2</td>
</tr>
<tr>
<td>Potentially Eutrophic Coastal &amp; Estuarine Waters</td>
<td>1</td>
</tr>
<tr>
<td><strong>Air Quality &amp; Topography</strong></td>
<td></td>
</tr>
<tr>
<td>Complex Terrain</td>
<td>2</td>
</tr>
<tr>
<td>Intermediate Terrain</td>
<td>1</td>
</tr>
<tr>
<td>Simple Terrain</td>
<td>0</td>
</tr>
<tr>
<td><strong>Protected Ecological Sites</strong></td>
<td></td>
</tr>
<tr>
<td>Within or directly bordering protected site</td>
<td>2</td>
</tr>
<tr>
<td>&lt;1km to protected site</td>
<td>1</td>
</tr>
<tr>
<td>&gt;1km to protected site</td>
<td>0</td>
</tr>
<tr>
<td><strong>Sensitive Agricultural Receptors</strong></td>
<td></td>
</tr>
<tr>
<td>&lt;50m from site boundary</td>
<td>2</td>
</tr>
<tr>
<td>50m-150m from site boundary</td>
<td>1</td>
</tr>
<tr>
<td>&gt;150m from site boundary</td>
<td>0</td>
</tr>
</tbody>
</table>

Note 1 – The environmental attribute which is relevant to the Medite facility is underlined and bold.
Note 2 – The scoring system used is taken from the EPA ELRA Guidance Document 2006.

² Medite discharges into River Anner which is assigned biological water quality index Q4 (Class A) since 1980. (www.epa.ie)
Table 3.2 Environmental Sensitivity Classification

<table>
<thead>
<tr>
<th>Total Environmental Attribute Score</th>
<th>Environmental Sensitivity Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low &lt;7</td>
<td>1</td>
</tr>
<tr>
<td>Moderate 7-12</td>
<td>2</td>
</tr>
<tr>
<td>High &gt;12</td>
<td>3</td>
</tr>
</tbody>
</table>

The key receptors include:

- Human Beings;
- Groundwater;
- Surface Water;
- Air Quality;
- Protected Ecological Sites;
- Sensitive Agricultural Receptors.

Based on the above Environmental Sensitivity Sub-Matrix, the total environmental attribute score for Medite is 13 (high) which indicates that the Environmental Sensitivity Classification for the site and surrounds is 3.

3.4. Compliance Record

The compliance record score is derived from the compliance history of the facility and whether the activities carried on resulted in contamination or pollution.

For newly licensed facilities and those operating without non-compliance of emission limits, then these are classified as Compliant/New Facility and have a score of 1.

Licensed facilities with administrative non-compliances only are classified as being Minor Non-Compliant and have a score of 2.

Licensed facilities with minor non-compliances (< 5 non-compliances in 12 month period) are classified as being Minor Non-Compliant and have a score of 3. Facilities with minor soil and groundwater contamination (i.e. those with concentrations above background but not posing risk to the environment) are also considered in the class.

Licensed facilities with major non-compliance history (≥ 5 non-compliances in 12 month period) and/or those with significant soil and groundwater contamination (i.e. requiring remediation and/or long-term monitoring requirements) are classified as Major Non-Compliant/Significant Ground Contamination and have a score of 4.
As part of the preparation of this RMP, documentation relating to IPPC licence compliance was examined.

**Non-compliances**

- **2003**
  - Two failure of abatement equipment – both mechanical failures on Line 1 Core Skimmer Fan;
  - ELVs for emissions to air exceeded on two occasions;
- **2004**
  - Failure of abatement equipment on Line 2 skimmer fan, no ELV exceedances occurred;
  - Emissions to water: ELVs for COD and BOD exceeded twice; ELV for flow exceeded twice;
- **2005**
  - Emissions to air: ELVs for metal exceeded on three occasions;
  - Emissions to water: ELV for phenol exceeded twice;
- **2006** – Emissions to water: ELV for flow exceeded 13 times due to excessive rainfall.

**Incidents**

- **2006** - An Environmental incident occurred when the explosion door broke off the core stage 1 drier cyclone which resulted in an emission of fibre. Upon detection the production operation was immediately shut down. The necessary corrective action was taken at the time of the incident and appropriate preventive action was taken during the annual shutdown.
- No incidents occurred between 2003 to 2005

**Complaints**

- **2003** – One odour complaint (no source found), one complaint about visible plume from the boiler stack that occurred due to start up;
- **2004** – One complaint about level of dust, which occurred due to the failure of dust detector;
- **2005** – noise complaint, five dust complaints, four odour complaints (only four of 2005 complaints were attributed to Medite activities);
- **2006** – 9 odour complaints, one dust/fibre complaint.
Groundwater is monitored regularly as per IPPC licence. In one of the six borehole increased levels of ammonia were detected over the previous 4 years. However, it was concluded that ammonia is naturally biodegrading and the groundwater quality moving offsite is consistently of satisfactory quality.

Based on the number of non-compliances and reportable incidents (see section 4 for details), Medite is classified as Minor Non-Compliant and have a score of 3.

3.5. Risk Category

The preceding subsection of this report has determined the:

- Complexity Score (G3) = 4
- Environmental Sensitivity Score = 3
- Compliance Record Score = 3

The product of these scores is used to calculate a total score, which is then used to assign the site specific risk category (Table 3.3). The product of the above scores is 36, which according to table 3.3 below indicates that Risk Category 3 is applicable to the Medite.

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Category 2</td>
<td>5-23</td>
</tr>
<tr>
<td>Category 3</td>
<td>&gt;23</td>
</tr>
</tbody>
</table>

The Medite site is classified in Risk Category 3 and therefore the guidance provided in the EPA RMP Guidance Document 2006 for such facilities was used when carrying out this assessment.
4. SCOPE OF RMP

4.1. General

The scope of the RMP will be the decommissioning of the site activities related to the fibre-board manufacturing processes and disposal of residuals arising therefrom.

The RMP addresses both short/medium-term (Closure Plan) actions and a longer-term programme (Restoration and Aftercare Management Plan).

The Closure Plan will involve decommissioning and decontamination of all process related structures currently used for production activities. This closure plan will relate to activities currently carried out at the site.

This will involve decommissioning and decontamination of:

- all production buildings;
- all ancillary/support facilities;
- all storage areas.

It will also include the disposal of all residuals arising from the decommissioning itself. Here the term “residual” is deemed to include any materials remaining on site following process decommissioning. This includes materials and waste.

The RMP will also address any medium to long-term issues (Restoration and Aftercare Management Plan) associated with residual soil and groundwater contamination, if such issues are identified, that may have resulted from the Medite history of activities across the complete parcel of land owned by the company.

4.2. Key Issues

The principal issues to be considered in the RMP for Medite are identified as follows:

- Residual raw materials removal.
- Residual fuel and oil removal.
- Decommissioning of WWTP.
- Cleaning of Tanks, Sumps and oil interceptors.
- Drainage line cleaning.
- Landfill aftercare.

All materials remaining at the site after cessation of activities will have to be removed and disposed of in accordance with the condition of the sites IPPC license.
4.3. Scope of the RMP

Decommissioning of this site is envisaged in two Phases.

Phase 1 will focus on the decommissioning of most of the site activities related directly to production and the disposal of the residuals arising therefrom.

This will involve decommissioning of:

- all production buildings;
- all ancillary/utility areas;
- all storage areas (including bulk chemical and wood storage areas);

Phase 1 will also involve the disposal of all residuals arising as a direct result of decommissioning. Here, the term ‘residuals’ is used to describe any materials that should not be left on the site following process decommissioning. Therefore this includes raw materials, wastes, finished product, intermediate product, tankage, etc.

Phase 2 will focus on:

- Assessment of the landfill in respect of aftercare;
- Surface water system decommissioning;
- Effluent treatment plant decommissioning;
- Soil and groundwater assessment.

Successful decommissioning is determined as being completed when all building, wastes or any other materials that could result in environmental pollution are removed from the site and recycled, recovered or disposed in accordance with all regulations in force at that time. The costs of removing all above and below ground structures, i.e., effectively returning the site to “green field” status, have not be included. The only exception is where buildings and/or structures have to be removed to either assess residual soil and groundwater (S&GW) contamination or for the implementation of the S&GW remediation programme – see Section 7.2.

4.4. Exclusions from the RMP

The costs of removing above and below ground structures – effectively returning the site to “green field” status has not been included, unless such buildings and/or structures have to be removed to either assess residual soil and groundwater (S&GW) contamination.
5. CRITERIA FOR SUCCESSFUL DECOMMISSIONING

The criteria for successful decommissioning to ensure minimum impact on the environment with respect to residuals management are as follows:

1. The decontamination of all process equipment according to site standards and good manufacturing practice (GMP).
2. Decommissioning of Waste Water Treatment Plant.
3. Closure and restoration of the landfill.
4. Documented and fully costed reports to ensure that all raw materials have been dispatched from the site that are not considered waste and so have a monetary value.
6. Documented and fully costed reports on the disposal of non hazardous wastes including all certification required under the Waste Management Act and IPPC licence.
7. Documentation relating to the proper management, and if necessary removal, of asbestos containing materials, if such materials are determined to be present on the site.
8. Documentation relating to the proper management, and if necessary removal, of ODS, asbestos, PCBs, if such materials are determined to be present on site.
9. Removal of radioactive sources and disposal by licensed companies.
10. Remediation of site soil and groundwater to pre-determined, risk based, remedial goals, agreed with the EPA and verified by a programme of groundwater monitoring post corrective action.

Note that, with respect to the above criteria, the costs and time to complete decommissioning should not exceed that estimated in the most up-to-date revision of the Residuals Management Plan in place at the time of decommissioning.
6. MANAGEMENT OF THE RMP

The overall responsibility and management of the RMP will be undertaken by designated members of site management, other relevant company personnel etc. Responsibilities of this technical team will be formally defined.

Prior to commencement of the RMP, this Medite team will be established. The selection of personnel to form this team will adequately address the important aspects of the RMP including financial management, environmental management etc. All decontamination procedures, decommissioning operations and residuals management, as required under this RMP will be authorised by the Medite Team. In addition, the team will nominate a company co-ordinator to conduct all necessary communications with relevant authorities and ensure the appropriate information transfer.
7. PROGRAMME TO ACHIEVE STATED CRITERIA

7.1. Closure Plan

7.1.1. General

The Closure Plan involves the decommissioning and decontamination of all above and below ground structures – including management of residues arising.

The structure of the Closure Plan included in this RMP is based on a logical sequence of events (project milestones) that would occur in the event of a shutdown, similar in logic to an annual maintenance shutdown. However, the end point would be the removal of all materials from the site that could pose a residual threat to the environment. All remaining structures/buildings would be in a steady-state and safe condition.

Below ground structures, in-ground sumps, drains and transfer lines, are dealt with in Closure Plan (PI) only in relation to decontamination of internal surface areas i.e. emptying and flush/rinse etc. Issues associated with removal of structures and assessment of soil/groundwater contamination are dealt with in Restoration and Aftercare Management Plan (PII).

The programme has a number of Stages, each with a set of specific tasks that involve the management of residual waste. The individual stages are in a logical sequence however; some overlap in terms of time-lines is expected.

The individual stages are:

Stage 1: Cessation of all production.
Stage 2: Removal of excess raw materials from site;
Stage 3: Removal of production related hazardous/non-hazardous wastes from Site;
Stage 4: Contract cleaning of bulk storage;
Stage 5: Removal of non-process related materials and non-hazardous wastes;
Stage 6: Decommissioning of site services and WWTP;
Stage 7: Removal of residual hazardous materials (non process related);
Stage 8: Decommissioning of the Surface Water System and WWTP; and,
Stage 9: Documentation and Certification of decommissioning and decontamination.

Each stage is considered under the following headings:

- Tasks to complete;
- Cost to complete;
- Time to complete; and,
• Plant Status at Completion of Stage.

Please refer to Gantt Chart, Appendix B (Gantt chart with stages/tasks and timelines).

7.1.2. Stage 1: Cessation of all production

This stage will be applied to:

1. Debarking;
2. Truck tipping area;
3. The screen house;
4. Refining and drying process;
5. Main production line.

The site operates a yearly shutdown for routine maintenance of each production line. The procedures in place for yearly shutdown could be utilised for this stage.

With regard to programmes for production decontamination, it is considered that many such programmes are currently in place due to the strict cleaning regimes and regulatory and legislative requirements in force. These programmes can be utilised or adapted for use as part of RMP implementation.

Furthermore, site utilities required for decontamination and decommissioning procedures are considered to be readily available on-site for utilisation during implementation of the RMP.

The production areas are now considered in more detail with particulars taken from site documentation on standard operating procedures for equipment cleaning operations and corporate procedures on decommissioning and from information contained in the original IPPC licence application.

Stage 1 - Task 1: Cancellation of all incoming materials.

As stated previously, it is assumed that any shutdown of the site will be a well-planned event. This implies that the shut-down date will be known well in advance and that both process schedules and inputs of raw materials have been planned with the shut-down already factored in.

All contracts relating to the delivery of supplies and raw materials will be cancelled. All contracts other than those that are concerned with the RMP or related to safety of personnel or the environment will be terminated.
Stage 1 - Task 2: Removal of Finished Product.

Once decommissioning commences, all remaining dried and refined fibre will be processed to final product where practically possible through the various line processes.

It is estimated that 18,000 m³ of finished product would be stored in the Finished Product Warehouse.

Stage 1 - Task 3: Transfer remaining raw materials & process materials to storage.

Any raw materials remaining in process areas will be transferred to suitable storage containers and removed for suitable storage on site. This includes wood fibre, resins and waxes.

Stage 1 - Task 4: Transfer all production solid wastes, hazardous and non-hazardous, to drum storage or other suitable storage facility.

This task will include the specific transfer of hazardous and non-hazardous solid waste to appropriate storage on-site.

The following wastes will be removed:

- Refined fibre;
- MDF cut-offs;
- Wood dust.

Stage 1 - Task 5: Transfer of production liquid wastes, hazardous and non-hazardous, to suitable storage facility.

During the course of the decommissioning process, production liquid waste suitable for discharge to the sewer will be discharged under the terms of its IPPC License.

Hazardous liquid wastes unsuitable for release to sewer will be stored into appropriate drums and transferred to hazardous waste storage area for off-site disposal by a licensed contractor. This will be mostly waste oils.

Costs associated with disposal of liquids not suitable for discharge through the sewer are included in section 7.2.

Stage 1 – Task 6: Decontaminate as required.

Decontamination of all process equipment, interconnecting pipework and storage systems will be undertaken in accordance with best practice and safe working procedures.

Cleaning procedures are conducted on a routine basis at the facility, in accordance with fully validated cleaning methodologies. Therefore decontaminating programmes will reflect such cleaning programmes.
Liquid streams produced during this process which would be suitable for discharge to the sewer will be discharged upon approval by the Environmental Manager and then discharged according to the conditions of the operating IPPC licence.

If process wastewater containing hazardous components is produced during specific cleaning operations which will be unsuitable for discharge to sewer (for example contaminated with oil), it will be stored into the hazardous waste drums and transferred to the hazardous waste storage area, prior to disposal off-site by approved waste contractors.

Contaminated solid waste arising from wipe-downs of equipment etc. will be collected in drums as hazardous or non-hazardous waste and disposed off-site accordingly.

This task specifically includes:

- Clean down of all equipment, including production line 1 and 2 (continuous press, coolers, sanders, saws, strappers), debarking equipment and wood chipping equipment.
- Removal of lubricating oils and greases from all machinery that will be remaining on-site.
- Cleaning of production building materials in contact with any potentially polluting material.
- Purging of transfer lines and vessels in contact with materials, as appropriate.
- All external surface areas and floors in the process area will be cleaned and washed down.
- There may be some parts of the general ductwork system, which requires decommissioning, with subsequent, cleaning removal and disposal by licensed contractors as necessary.

**Stage 1 - Task 7: Isolate from electrical supplies, heating, ventilation, and other utilities available.**

There are no specific residuals associated with this stage, as this is just a physical disconnection step. However, some utilities may be retained for later decommissioning stages.

**Site Status at Completion of Stage 1**

Following successful completion of Stage 1 (Tasks 1 – 7), the plant status is as follows:

- All site production equipment decontaminated and can be considered environmentally safe.
- All production related residuals transferred to bulk storage or warehouse.
• All auxiliary systems decommissioned and all raw and waste materials removed from production buildings to storage.

Time to Complete

It is estimated that Stage 1 would take approximately 8-10 weeks to complete. It will be completed by production and maintenance staff at Medite, and where necessary, external contractors.

Budget Cost Estimate

As described in Section 1.2 it is assumed that the shutdown is a well-planned and resourced event and all costs in terms of manpower will be allocated to normal site running costs for the period in question. However, it is anticipated that plant and equipment hire may be required for various decommissioning procedures, therefore a provisional and contingency (PC) sum in the range €50,000 may be used as necessary.


As shut-down will have been known in advance, it is assumed that raw materials purchasing will have phased down so that the amount of raw materials present on the site will be at a minimum level to coincide with the planned shut-down date. This will reduce the amount of raw material remaining at the site at the time of shutdown.

For the purposes of the RMP, it is assumed that the planned reduction in stocks reduces the inventory by 80% at shut down and that the remainder is shipped from site as a hazardous and non-hazardous waste. Treating all remaining raw materials as waste is the worst case scenario, which is costed in this RMP. In reality, some of the raw materials can be returned to suppliers, sent to the other Medite plants, or sold, as described below.

For example, the urea solution could be given to Clonmel Treatment Works or other local activated sludge treatment works.

All of the above routes would result in considerable cost savings when compared to the “waste” route.

Based on an 80% reduction in inventory prior to shut-down, it was estimated that the approximate quantities of raw materials as presented in Table 7.1 would still be on site and will require disposal. These materials are stored in the bulk storage area.
Table 7.1: Raw Materials on the site prior to shutdown

<table>
<thead>
<tr>
<th>Raw Materials</th>
<th>Quantity (tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDI &amp; MUF Resins</td>
<td>500</td>
</tr>
<tr>
<td>Board Colorants</td>
<td>6</td>
</tr>
<tr>
<td>Urea solution</td>
<td>25</td>
</tr>
<tr>
<td>Paraffin wax</td>
<td>80</td>
</tr>
<tr>
<td>Mineral Wax</td>
<td>5</td>
</tr>
<tr>
<td>Additives (fire retardant, etc.)</td>
<td>70</td>
</tr>
<tr>
<td>Wood chips and other wood materials</td>
<td>600</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,286</strong></td>
</tr>
</tbody>
</table>

Plant Status at Completion of Stage 2

All raw materials listed in Table 7.1 will be removed from the site.

Time to Complete

Stage 2 will be completed over a 4-week period.

Budget Cost Estimate

All the raw materials are classified as non-hazardous materials. A removal of a tonne of non-hazardous waste costs approximately €190. The estimated costs for the disposal of the residual raw materials is €244,340.

7.1.4. Stage 3: Removal of Production Related Hazardous/Non-Hazardous Wastes

At this point, all substances that can be considered waste, either hazardous or non-hazardous, will have been placed in designated areas. The waste may include raw materials (detailed in stage 2) that cannot be returned to suppliers or sold on to interested third parties.

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3 Wood material will be reused as fuel, therefore not included in the disposal cost.

4 This information was supplied by Andrew O’Meara, Environmental Officer at Medite.
In the case of hazardous waste disposal, all requirements of the current IPPC Licence will be considered, especially in relation to hazardous waste that is not scheduled on the IPPC Licence. Therefore, this waste will require the prior written approval of the EPA before the waste can be removed from the site.

Stage 3 will include the following tasks:

- Administrative organisation of shipments.
- Removal of the waste in accordance with appropriate National and EU Legislation.
- Administrative organisation of relevant paper work. All waste shipments during this period will be documented according to EPA Guidelines. This will facilitate the requirement to have stated criteria for proper decommissioning (see Section 5.0).

Plant Status at Completion of Stage 2

All raw materials listed in Table 7.2 and Table 7.3 will be removed from the site.

Time to Complete

Stage 3 will be completed over a 4-week period.

Budget Cost Estimate

Table’s 7.2 and 7.3 summarise the expected quantities of hazardous waste and non-hazardous waste respectively that are expected to be shipped from the site during decommissioning. The cost is based on a flat rate of €1,000 per metric tonne for transport and disposal of liquid hazardous waste and €1,500 per metric tonne for disposal of solid hazardous waste.

The total cost for Stage 3 is estimated to be €199,600.
### Table 7.2. Hazardous Waste Inventory

<table>
<thead>
<tr>
<th>Waste Type</th>
<th>Amount to be disposed at Site Close down (tonnes)</th>
<th>Estimated Cost (€) Note 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Oils</td>
<td>30.35</td>
<td>45,525</td>
</tr>
<tr>
<td>Solid Oily Waste</td>
<td>1.5</td>
<td>1,500</td>
</tr>
<tr>
<td>Lead Acid Batteries</td>
<td>0.418</td>
<td>418</td>
</tr>
<tr>
<td>Lab Chemicals</td>
<td>0.2</td>
<td>200</td>
</tr>
<tr>
<td>Adhesives</td>
<td>0.21</td>
<td>210</td>
</tr>
<tr>
<td>Paint/Ink/Varnish Waste</td>
<td>0.68</td>
<td>680</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>34.358</strong></td>
<td><strong>48,535</strong></td>
</tr>
</tbody>
</table>

Note 1 – Waste Types and Amounts (except Raw Materials) were taken from AER 2006

Note 2 – It is estimated that removal of a tonne of solid hazardous waste costs €1,000 and removal of a tonne of liquid hazardous waste costs €1,500
### Table 7.3. Non Hazardous Waste Inventory

<table>
<thead>
<tr>
<th>Waste Type</th>
<th>Amount (tonnes)</th>
<th>Disposal Method</th>
<th>Estimated Cost (£) Note 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reject Fibre</td>
<td>124</td>
<td>Reuse as fuel</td>
<td>–</td>
</tr>
<tr>
<td>Reject MDF Product</td>
<td>1,035</td>
<td>Reuse as fuel</td>
<td>–</td>
</tr>
<tr>
<td>Bark</td>
<td>6,193</td>
<td>Reuse as fuel</td>
<td>–</td>
</tr>
<tr>
<td>Wood Screenings</td>
<td>150</td>
<td>Reuse as fuel</td>
<td>–</td>
</tr>
<tr>
<td>Wood Packaging</td>
<td>37.54</td>
<td>Reuse as fuel</td>
<td>–</td>
</tr>
<tr>
<td>Wastewater Sludge</td>
<td>2,500</td>
<td>Reuse as fuel</td>
<td>–</td>
</tr>
<tr>
<td>Plastic Packaging</td>
<td>18.82</td>
<td>Recycled</td>
<td>3,575.8</td>
</tr>
<tr>
<td>Scrap Metal</td>
<td>107.4</td>
<td>Recycled</td>
<td>20,406</td>
</tr>
<tr>
<td>Wood Ash</td>
<td>5,857</td>
<td>Reused for land treatment Note 2</td>
<td>117,140</td>
</tr>
<tr>
<td>Mixed Municipal Waste</td>
<td>52.33</td>
<td>Landfilled</td>
<td>9,942.7</td>
</tr>
<tr>
<td>Construction Rubble</td>
<td>50</td>
<td>Landfilled on-site Note 3</td>
<td>–</td>
</tr>
<tr>
<td>Saw / Sander Dust</td>
<td>29,061</td>
<td>Reuse as fuel</td>
<td>–</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>45,186.09</td>
<td></td>
<td>151,064.5</td>
</tr>
</tbody>
</table>

Note 1 – Estimated on the basis of €190 per tonne of waste for plastic, metal and landfill materials. Although there is no cost for recycling these materials at the moment, it cannot be assumed that the same arrangements would be available in the case of site closure. There is no cost attached to the reusable materials.

Note 2 – Transport costs of €20 per tonne

Note 3 – These materials are landfilled on-site therefore no costs attached.
7.1.5. Stage 4: Contract cleaning of bulk storage

Cleaning of bulk tanks

This stage is started when bulk storage begins to be emptied and with all materials removed for return or disposal. At the site, there are a number of bulk storage tanks listed in Table 7.4.

Table 7.4. Bulk storage tanks

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>NUMBER of tanks</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPG</td>
<td>2</td>
</tr>
<tr>
<td>HCl</td>
<td>1</td>
</tr>
<tr>
<td>Mixing tank</td>
<td>1</td>
</tr>
<tr>
<td>Urea Formaldehyde Resin (UF)</td>
<td>5</td>
</tr>
<tr>
<td>Melamine Urea Formaldehyde (MUF)</td>
<td>4</td>
</tr>
<tr>
<td>Paraffin Wax Emulsion</td>
<td>3</td>
</tr>
<tr>
<td>Urea Solution</td>
<td>1</td>
</tr>
<tr>
<td>MDI Resin</td>
<td>1</td>
</tr>
<tr>
<td>Fire Retardant Solution</td>
<td>1</td>
</tr>
<tr>
<td>Mineral Wax Solution</td>
<td>1</td>
</tr>
<tr>
<td>Diesel</td>
<td>2</td>
</tr>
<tr>
<td>Thermal Oil</td>
<td>2</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

A specialist company will be contracted to provide a comprehensive cleaning service for tanks listed above. This will include the cleaning of transfer pipelines and the collection of any residual sludge.
Cleaning of bunds, sumps, interceptors and drainage

There are approximately 12 concrete bunds, two oil interceptors and several sumps on the site. Also, there is a network of drainage connecting surface run-off to the treatment lagoons and connecting dryer to the WWTP.

All bunds, sumps, interceptors and drainage requires cleaning.

Plant Status at Completion of Stage 4

All bulk storage on-site decontaminated and residual materials collected by specialist cleaning contractors.

Time to Complete

It will take approximately 4 weeks to complete this stage. This stage can start after two weeks into Stage 3.

Budget Cost Estimate

Total cost estimate for Stage 5 is presented in Table 7.5.

Table 7.5: Estimate for cleaning of tanks, bunds, interceptors and sumps

<table>
<thead>
<tr>
<th>Type</th>
<th>No. of units</th>
<th>Price per unit</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk Tanks</td>
<td>24</td>
<td>€ 2,000</td>
<td>€ 48,000</td>
</tr>
<tr>
<td>Bunds</td>
<td>12</td>
<td>€ 1,000</td>
<td>€ 12,000</td>
</tr>
<tr>
<td>Interceptors</td>
<td>2</td>
<td>€ 2,000</td>
<td>€ 4,000</td>
</tr>
<tr>
<td>Sumps</td>
<td>2</td>
<td>€ 2,000</td>
<td>€ 4,000</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>€ 68,000</td>
</tr>
</tbody>
</table>

7.1.6. Stage 5: Removal of non-process related materials and non-hazardous wastes

This will comprise of clearance of the remaining non-process materials from the site such as fuels, chemicals and ash, as presented in Table 7.6.

In addition, the following non-hazardous wastes will be removed (these wastes were accounted for in Table 7.3):

- Plastics and packaging;
- Scrap metal;
• Timber;
• Cardboard;
• Mechanical parts;
• Protective clothing;
• Miscellaneous.

It is assumed that a total of 50 tonnes of the above waste can arise. As this is all non-hazardous waste, the cost of removal would be €190 per tonne, or total of €9,500.

Table 7.6: Non-process materials

<table>
<thead>
<tr>
<th>Material</th>
<th>Max. Amount (*)</th>
<th>COST Note I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Gas (Diesel)</td>
<td>12 tonnes</td>
<td>€ 18,000</td>
</tr>
<tr>
<td>Liquefied Petroleum Gas</td>
<td>15 tonnes</td>
<td>€ 22,500</td>
</tr>
<tr>
<td>Boiler Chemicals</td>
<td>5 tonnes</td>
<td>€ 7,500</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>€ 48,000</td>
</tr>
</tbody>
</table>

Note I - It is considered that all of the above will be liquid hazardous wastes, disposed at cost of 1,500 euro per tonne

These materials will be removed and disposed in accordance with legal requirements.

Stage 5 - Time to Complete

It is expected that this stage will take two weeks.

Stage 5 - Budget Cost Estimate

It is approximated that € 57,500 will be required to dispose of the waste arising in Stage 5.

7.1.7. Stage 6: Decommissioning of site services

This stage of decommissioning will apply to the site utilities, plus the site administration buildings.

Certain utilities while decommissioned and decontaminated as part of the RMP will remain on-site. This includes the ESB substation, concrete bunds, sumps, drains and interceptors, emergency generator, motors, transformers, compressors and pumps.

Equipment for disposal

There will be a small amount of electrical and mechanical equipment on site that will be written off and disposed as waste (WEEE or scrap metal). This includes some environmental and QA labs equipment, refrigerators, small saws and sanders.
A provisional and contingency (PC) sum in the range €2,000 may be used as necessary to dispose of the above equipment.

Administration Area

At this stage, it is assumed that only partial administration facilities will be required for the remaining site decommissioning operations and the successful completion of the RMP. Outside of the waste paper and other recyclables, the only anticipated hazardous residuals associated with decommissioning of the administration buildings include waste electrical and electronic equipment (WEEE). It is assumed that most waste electrical and electronic equipment would be disposed off. Present figures for office WEEE and cost of disposal are presented in Table 7.7 below.

Table 7.7: Office EEE in Medite and disposal costs

<table>
<thead>
<tr>
<th>Type of EEE</th>
<th>Amount</th>
<th>Cost</th>
<th>Total cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCs</td>
<td>67</td>
<td>€ 18 per PC</td>
<td>€ 1,206</td>
</tr>
<tr>
<td>Printers/photocopiers</td>
<td>16</td>
<td>€ 0.6 per kg / 10 kg per printer</td>
<td>€ 96</td>
</tr>
<tr>
<td>Phones/fax</td>
<td>80</td>
<td>€ 0.6 per kg / 2 kg per phones</td>
<td>€ 96</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td><strong>€ 1,398</strong></td>
</tr>
</tbody>
</table>

Furniture will be offered for resale. However, there is large amount of old furniture that will be sent for recycling as timber and scrap metal. A PC sum of €1,000 has been included for disposal of furniture.

Emergency Generator

The 250 kVA emergency generator will be rendered safe by a specialist contractor. The diesel fuel for the generator will be removed from the site. A PC sum of €5,000 has been included for this item.

Fans Pumps and Motors

There are numerous fans, transformers, compressors, pumps and motors located throughout the main building. These will be removed as part of the RMP and offered for resale (where practicable). Items which have reached their end of useful light will be disposed off in a safe manner. A PC sum of €5,000 has been included for the disposal of end of life fans, transformers, compressors, pumps and motors.

Heat Generators

There are four generators on site:
• Two 18 MW wood biomass fuelled heat energy generators (production line 1);
• 19 MW wood biomass fuelled heat energy generator (production line 2);
• 6 MW natural gas fuelled heat energy generator.

A sum of €1,500 per generators has been included for contract cleaning of the generators by external contractor, which amount to a total PC sum of €6,000.

Plant Status at the Completion of Stage 7

All site utilities, labs and administration building with the exception of limited electrical supply, will be effectively decommissioned.

Time to Complete

Utility decommissioning should not start until contract cleaning (Stage 4) has been completed. An overall estimate of the time to decommission all utilities is 8-10 weeks.

Budget Cost Estimates

The approximate cost for the decommissioning of site services as outlined above is €20,400.

7.1.8. Stage 7: Removal of residual hazardous materials (Non process related)

This stage applies to the situation where there may be specific residuals associated with the building structure and plant equipment. This includes asbestos containing materials, radioactive wastes and fluorescent tubes but does not include for actual concrete that may be contaminated.

There is no asbestos, ODS or PCBs on site.

Task 1: Remove fluorescent tubes.

Some offices have fluorescent tube lighting. It is approximated that there are approximately 0.5 tubes per square metre and 600 square metres of office space. Therefore, there will be approximately 300 fluorescent tubes for removal.

Task 2: Remove and dispose of radioactive material.

The site has 19 radioactive sources used for measurement equipment licensed by the Radiological Institute of Ireland that must be returned to the supplier. The cost is approximately €5,000 per source, total €95,000.

Plant Status at Completion of Stage 6

All hazardous residual materials removed off-site.
Budget Cost Estimate

The PC sum estimated required for removal of residual hazardous material from the site is €100,000.

Time to Complete

An overall estimate of the time required to decommission and remove all residual hazardous materials off-site is 1 week.

7.1.9. Stage 8: Decommissioning of the Surface Water System and WWTP

At this point in the decommissioning process, any internal plant activities that may contribute to surface water run-off will have been decommissioned and cleaned. Therefore, only external plant areas and storage areas open to the elements are considered here. These areas include:

- Ash pits;
- Bark waste storage;
- Chip waste storage;
- General yard areas to the west of the main plant;
- Surface water drainage network;
- Bulk resin storage;
- Surface water settlement tanks.

Ash Pits, Bark and Chip Waste storage and General Yard Areas

Following process decommissioning, there is likely to be residual mud, chippings and other similar residue in the concrete yard areas where there is significant vehicle movement or waste storage. It is assumed at this point that the major waste groups, such as chippings and ash will have been removed in previous stages of decommissioning.

It is proposed that these areas will be initially cleaned using on-site personnel. This would initially comprise the removal of gross solids with the assistance of suitable vehicles. The solids gathered in this way would be stored in standard 2 tonne skips for subsequent disposal to offsite landfill. The area considered here is estimated to be of the order of 12,000 m$^2$. It is estimated that up to 1.5 tonnes of sludge will be removed in this way. Upon completion, the areas would then be power washed with high-pressure water jets. The washings would be treated in the wastewater treatment plant prior to discharge.
Surface Water Drainage Network

This comprises the Northern and Southern network of drains, both closed and open channel, all of which ultimately lead to settlement tanks.

It is proposed to use high-pressure water to flush any accumulated sludge from the closed (sub-surface) drains to the open channel drains further down stream. It is estimated that approximately one tonne of sludge would be removed this way and sent to landfill.

Settlement Ponds

There are three settling ponds assigned to the southern surface water drain network and one settling pond assigned to the northern surface water drain network. One of the three southern settling ponds is kept empty as an emergency diversion basin. There is also an old settling pond across the main road to Medite, which has since been by-passed.

It is proposed that the sludge from these ponds and associated pump sumps will be removed using a combination of vacuum and manual digging to remove sludge from these receptacles. This sludge will then be sent to landfill.

Cost to Complete

Table 7.7 summarises the residuals expected from the decommissioning and cleaning of the surface water system and all associated receptacles.

Table 7.7: Summary of residuals expected from surface water system decommissioning

<table>
<thead>
<tr>
<th>Source of Sludge/Solids</th>
<th>Estimated No. Tonnes</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Yard Areas, waste storage areas</td>
<td>1.5</td>
<td>€ 285</td>
</tr>
<tr>
<td>Surface Water Drains</td>
<td>2</td>
<td>€ 380</td>
</tr>
<tr>
<td>Surface Water Settling Ponds</td>
<td>4</td>
<td>€760</td>
</tr>
</tbody>
</table>

Note 1 – This material is considered non-hazardous waste and would mainly comprise wood solids. The material would be landfilled at estimated cost €190 per tonne.

There is a requirement to characterise various sludge’s at approximate cost of €5,000. Assuming that landfiling is an appropriate disposal method then, the cost to decommission the surface water, including cleaning, hire of vacuum system and disposal of generated residuals is expected to be approximately €10,000.

Time To Complete

Given the complexity of the surface water drain network and the size of the settling ponds, it is expected to take approximately four weeks to complete the process.
7.1.10. **Stage 9: Documentation and Certification**

Throughout implementation of the RMP, documentation will be generated to track progress. All residues removed from site will be recorded and final clearance certificates will be prepared as required under the terms of the IPPC licence and as required under relevant waste management regulations. A full report on the outcome of the RMP will be prepared and submitted to the EPA.
7.2. Restoration and Aftercare Management Plan – Management of any Potential Long Term Residual Soil and Groundwater Contamination

7.2.1. Risk Assessment

A fundamental principle underpinning the RMP will be to fully manage any potential contaminated soil or groundwater at the site.

Significant ground investigation has already been completed by Medite. The geological and hydrogeological environments present at and around the site were investigated in 1995 and 1998 by Geotechnical & Environmental Services (GES) Ltd. In addition, URS completed “Phase I Environmental Site Investigation” for the Medite site in February 2006. As a result of that investigation, and of on-going groundwater monitoring required under the terms of the current IPPC licence, the quality of the soil and groundwater beneath much of the site has been well characterised. A brief summary of the status of the soil and groundwater condition follows:

7.2.1.1. Topography

Land surfaces in the region slope gently to the River Suir. At the Redmondstown townland the land surface is steeper, sloping south-eastwards at gradients of approximately 1:26.

7.2.1.2. Hydrology

The hydrology of the region is dominated by the River Suir, flowing eastwards approximately 1 km south of the facility. A small tributary of the River Suir, the Anner, flows southwards to the Suir and is located to the east of the site.

7.2.1.3. Geology

Regionally, bedrock in the area consists of Carboniferous limestones, folded in a series of east-west tending anticlines and synclines. These rock occupy the low lying areas, with older, harder sandstones forming the surrounding hills including the Comeragh mountains to the south.

7.2.1.4. Hydrogeology

Regionally groundwater flow is considered to concentrate on the River Suir. The limestones in the area are considered ‘regionally important aquifers’ with the site considered to lie on the Waulsortian category of limestone. The site is underlain by 7-12 m of subsoils, much of which appears to be dominated by alluvial sands and gravels. It is thought that groundwater flows southeastwards within discrete bedrock fractures, and probably discharges into the Anner River.

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7.2.1.5. **Soil and Groundwater Quality**

Four wells were drilled and sampled by GES in 1995 (MW1, MW2, MW3 and MW4). MW1 is upgradient of the production areas and landfill and the other three wells are along the downgradient (eastern) site boundary.

The report “Review of Groundwater Monitoring for 2006” produced by GES Ltd. concludes that ‘Groundwater quality moving offsite is consistently of satisfactory quality, and is therefore not presently having an impact on the receiving water’.

However, recent trends in contaminant concentrations in well LF2 show increasing iron, manganese, ammonia, calcium and aluminium concentrations in 2004 and 2005, combined with generally declining nitrate concentrations. The ammonia is considered to be related to degradation of resin wastes, contained in sawdust and sludges disposed of in the landfill. The changes in iron, manganese and nitrate concentrations are all related to changes in the redox state of the groundwater related to oxygen consumption during biodegradation.

These recent trends suggest there is migration of reduced (oxygen-deficient) groundwater with inorganic contamination from the landfill towards the southeast. The rate of migration appears slow and there does not appear to be any impact on the downgradient wells to date, however the status of the landfill plume should continue to be monitored. Additional groundwater investigation lateral to, and downgradient of, well LF2 should be considered to better define the extent of the issue and determine whether any remediation is required.

**Landfill**

The landfill soil and groundwater quality was thoroughly investigated in GES “Risk Assessment” study in 1998. The approximate area of landfill is 1 hectare. The landfill contains mainly wood fiber, sander dust, reject board, settled sludge from the surface water settlement lagoons, and considerable quantities of excavated clean soil. Some of the material in the landfill contains additives containing ammonia and phosphate. The groundwater analyses from the monitoring points downgradient indicate elevated concentrations of ammonia. There is an indication that adequate dilution in downgradient sampling points occurs.

Four trial pits were excavated where landfill gas was measured. The increased CO₂ levels were detected, which appear to be a product of the decomposition of the landfill wastes. Methane emissions were very low. No evidence of landfill gas migration has been detected.

The 2005 GES report shows that further work had been undertaken around the landfill in the interim, consisting of four trial pits (TP1 to TP4) and two wells downgradient of the landfill (wells LF1 and LF2). LF1 and LF2 have been sampled since 1998. In 2005 elevated iron, manganese, aluminium, calcium, chloride, nitrate and ammonia were detected in wells MW1, LF1 and LF2 in one or more monitoring rounds in 2005, relative to the downgradient wells. Iron was considered slightly elevated in downgradient well...
MW2 on one occasion in 2005. No USEPA list organics were detected in groundwater in any of the wells in 2005.

7.2.2. Post – Closure Intrusive Investigation

The aim of this investigation would be to establish where (if anywhere) there is soil contamination and whether any soil and/or groundwater-specific corrective action may be required at the Medite Site. The investigation will also provide a site condition report that will protect Medite from any liability relating to pollution that may be subsequently caused by other use of the site in the event of Medite ceasing activities and vacating the site. Risk based decision making will be used to quantitatively evaluate the risk posed by any contamination detected and to design an appropriate remedial programme.

The investigation, carried out by a suitably qualified and independent third party, would encompass any potential source areas of chemical release (production areas, areas with concentrated oil storage and use, areas of historical fuel storage, etc). It is envisaged that the investigation would be carried out following plant closure, to avoid interfering with the decommissioning and plant decontamination phase.

The site is required to monitor groundwater quarterly at six locations under the terms of the IPPC licence. Where possible, groundwater samples will also be retrieved during the investigation work and together with existing data recorded by the site will be used to determine the quality of the groundwater beneath the site. The need, if any, for additional (medium to long-term) groundwater monitoring will be dependent upon the soils investigation results.

As outlined above the major steps for the Long Term Programme (LTP) will be initiated immediately following decontamination and decommissioning of the plants operational areas. The key steps of this programme are predicted to be as follows:

1. Characterise potential source areas of chemical release (soils) and define remedial targets (if appropriate);
2. Carry out soil sampling of potential source areas;
3. Obtain groundwater samples and analyse for target compounds based on assessment of operations at Medite;
4. Design/implementation of source area soil remediation programme (if appropriate);
5. Design/implementation of source area groundwater remediation programme (if appropriate). This may be monitoring and/or may include active remediation;
6. Longer term post remediation monitoring and/or decommissioning of remedial plant when the remedial targets are achieved;
A comprehensive listing of identified potential source areas is tabulated below in Table 7.8.

**Table 7.8 Potential Sources of Chemical release**

<table>
<thead>
<tr>
<th>SITE AREA</th>
<th>RATIONALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landfill</td>
<td>Some of the materials contain ammonia and phosphates which can leach into the groundwater</td>
</tr>
<tr>
<td>Chemical stores</td>
<td>Boiler and WWTP chemicals may have spilled and contaminated the soil and groundwater</td>
</tr>
<tr>
<td>Bulk tanks</td>
<td>The bunds integrity may have been breached and contents of tanks released into the soil and groundwater</td>
</tr>
</tbody>
</table>

Investigation of the above areas will involve the installation of shallow sampling boreholes using a combination of window sampling and percussive drilling. Trial pits may be installed in certain areas to allow improved visual inspection. Soil samples would be analysed at a UKAS accredited laboratory.

Where groundwater sampling is required (likely to be limited to outside buildings in general) deeper boreholes will be drilled using an air flush rotary technique. Water samples would be analysed at a UKAS accredited laboratory.

The budget required to complete such a comprehensive investigation of potential source areas, including fieldwork, laboratory analysis, quantitative risk assessment (to derive risk based remedial actions and goals) and risk communication is estimated to be in the order of €35,000 - €45,000.

**7.2.3. Design/Implementation source area soil/ remediation programme (as appropriate)**

Soil remediation may be required in certain source areas as part of the remediation programme. The magnitude and extent of any future soil contamination and the extent of remediation required will only be understood following the detailed, post-closure investigations outlined above.

If the post-closure investigation encounters significant shallow soil contamination, this soil contamination could continue to leach to groundwater (acting as an ongoing source of groundwater contamination) or have implications with respect to the potential future use of the site. The results of the post-closure investigation study will be used to establish whether remediation is required. Risk based decision making will be used to quantitatively evaluate the appropriate levels of residual contamination that can be left in place.

Localised contamination of groundwater with ammonia has been identified in well LF2 (based on several years of groundwater monitoring). There is evidence that ammonia
source is resin waste which is biodegrading, causing changes in iron, manganese and nitrate concentrations. No offsite effects have been observed.

The budget required to continue the groundwater remediation at the site is estimated to be of the order of €20,000.

7.2.4. Landfill Management Programme

The on-site Landfill has been previously well described in relevant sections of the Application for review of the IPC Licence (refer to Section 15), prepared in 2001. A summary of the landfill is presented here.

Medite historically disposed small quantities of non-hazardous wastes to the on-site landfill: settled solids from the surface water interceptors and lagoons; wood dust; reject MDF; soil from site levelling; and dilute resin residue washes.

The landfill is now only occasionally used for inert materials, such as construction rubble (maximum 50 tonnes per year).

Medite operate an active landfill plan. This includes regular landfill gas and water level monitoring and groundwater quality in the vicinity of the landfill. As part of this plan, in early 2000 Medite commissioned external consultants to carry out an assessment of all available monitoring data and further assessment of the landfill. In conclusion, the report stated that there appeared not to be the need to place a permanent cap on the landfill. The report also indicated that groundwater quality in the vicinity of the landfill is satisfactory and that the flux of methane gas from the landfill is low. Monitoring of groundwater and landfill gas is on-going at the Medite site.

A review of the groundwater monitoring from 2000 – 2006 was also completed by GES, which concluded that the two wells downgradient of the landfill had been impacted by degrading resin wastes and that biodegradation was occurring.

Active remediation does no appear necessary based on this conclusion and monitoring is recommended.

It is therefore proposed to maintain the current active landfill monitoring plan once site activities have ceased and as agreed with the Agency at the time of cessation. Based on the current landfill plan, aftercare would include:

- Landfill gas monitoring (4 trial pits, quarterly);
- Water level monitoring (6 wells, quarterly);
- Groundwater quality monitoring (6 wells, quarterly).

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6 Geotechnical & Environmental Services Ltd., 10 March 2000, Landfill Monitoring Review
Time to complete

Following cessation of activities at Medite, the IPPC licence will continue to be active for at least three years if the Agency sees fit. Due to the expected biodegradation, a monitoring period of 10 years is considered adequate. However, the actual duration of this monitoring period will depend on results as they become available over time and discussions with the Agency.

Cost to Complete

It is anticipated that the cost of the landfill aftercare plan will mainly comprise of monitoring costs and reporting. The estimated cost of this over a 10 year lifetime of the aftercare plan is expected to €200,000.

An estimate for any soil remediation required is not included and would be made after completing the soil investigation. The soil investigation cost is estimated to be in the order of €35,000 – 45,000 based on a scope of 20 boreholes.
8. **TEST PROGRAMME**

It is assumed following completion of all decontamination and decommissioning operations on-site, subsequent compilation of all documentation (as previously detailed in Section 5.0) and submission to the EPA and relevant authorities, that this will be satisfactory to demonstrate successful implementation of the decommissioning plan. Furthermore, in relation to the successful implementation of the LTP, it is also assumed that any ongoing soil/groundwater remediation and/or monitoring programmes will be accompanied by associated monitoring data. This monitoring data, which will illustrate any contaminant levels, will be submitted to the EPA and relevant authorities and will demonstrate the completion of the programme. A certificate of completion will be issued on completion of the RMP.

It is therefore assumed that this documentation and communications with the EPA and relevant authorities will be sufficient to demonstrate successful implementation of the RMP and a test programme will not be required.
9. SUMMARY OF COSTS ASSOCIATED WITH THE RMP

This section briefly summarises the costs presented in Sections 7.1 and 7.2 of this report. The summary is presented in Table 9.1 and includes all costs identified during the analysis of the Short Term and Long Term Programmes.

Table 9.1 Summary of RMP Costs

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>COST (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAGE 1</td>
<td>Cessation of Production</td>
<td>50,000</td>
</tr>
<tr>
<td>STAGE 2</td>
<td>Production related hazardous waste disposal</td>
<td>244,000</td>
</tr>
<tr>
<td>STAGE 3</td>
<td>Production related non-hazardous waste disposal</td>
<td>200,000</td>
</tr>
<tr>
<td>STAGE 4</td>
<td>Cleaning of bulk storage</td>
<td>68,000</td>
</tr>
<tr>
<td>STAGE 5</td>
<td>Removal of non-process related materials</td>
<td>60,000</td>
</tr>
<tr>
<td>STAGE 6</td>
<td>Decommissioning of site services</td>
<td>20,000</td>
</tr>
<tr>
<td>STAGE 7</td>
<td>Removal of Residual Hazardous Material</td>
<td>100,000</td>
</tr>
<tr>
<td>STAGE 8</td>
<td>Decommissioning of WWTP</td>
<td>10,000</td>
</tr>
<tr>
<td></td>
<td>SUB TOTAL (approximate)</td>
<td>752,000</td>
</tr>
<tr>
<td>LTP.1</td>
<td>Investigation for potential contamination sources</td>
<td>45,000</td>
</tr>
<tr>
<td>LTP.3</td>
<td>Landfill management programme</td>
<td>245,000</td>
</tr>
<tr>
<td></td>
<td>SUB TOTAL LTP (approximate)</td>
<td>245,000</td>
</tr>
<tr>
<td></td>
<td>Not anticipated</td>
<td>30,000</td>
</tr>
<tr>
<td></td>
<td>RMP TOTAL (approximate)</td>
<td>€1,027,000</td>
</tr>
</tbody>
</table>

In conclusion, in the unlikely event of site closure, it has been estimated that approximately €1.027 million would be required to bring the site to an environmentally safe condition.

10. UNDERWRITING THE RMP – FINANCIAL PROVISIONS

Appendix C contains a copy of a correspondence from Medite confirming liabilities associated with decommissioning will be underwritten.
11. REVIEW OF THE RMP

The summary of costs associated with the RMP, as presented in Section 9.0 of this report, are estimates only and are based on the information and data available at the time of compilation of the report. It is anticipated that these costs will vary as time progresses and will depend on factors, including the following:

- Site conditions;
- Legislative developments;
- Inflation.

Taking this into consideration therefore, it is important that the RMP report and associated costs are reviewed and updated to reflect the current site situation. In addition, IPPC licence requirements specify the RMP report must be reviewed on an annual basis as part of the Annual Environmental Report.
Appendix A - Site location and site layout
Appendix B - Gantt Chart
<table>
<thead>
<tr>
<th>Task</th>
<th>Effort</th>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Week 5</th>
<th>Week 6</th>
<th>Week 7</th>
<th>Week 8</th>
<th>Week 9</th>
<th>Week 10</th>
<th>Week 11</th>
<th>Week 12</th>
<th>Week 13</th>
<th>Week 14</th>
<th>Week 15</th>
<th>Week 16</th>
<th>Week 17</th>
<th>Week 18</th>
<th>Week 19</th>
<th>Week 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1: Cessation of all production</td>
<td>8-10 weeks</td>
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<td>Stage 2: Removal of Excess Raw Materials</td>
<td>4 weeks</td>
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<tr>
<td>Stage 3: Removal of Production Related Hazardous/Non-Hazardous Wastes</td>
<td>4 weeks</td>
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<td>Stage 4: Contract cleaning of bulk storage</td>
<td>4 weeks</td>
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<td>Stage 5: Removal of non-process related materials and non-hazardous wastes</td>
<td>2 weeks</td>
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<td>Stage 6: Decommissioning of site services</td>
<td>8-10 weeks</td>
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<tr>
<td>Stage 7: Removal of residual hazardous materials (Non process related)</td>
<td>1 week</td>
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<tr>
<td>Stage 8: Decommissioning of the Surface Water System and WWTP</td>
<td>4 weeks</td>
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<td>Stage 9: Documentation and Certification</td>
<td>1 week</td>
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</tbody>
</table>
APPENDIX C:

10. UNDERWRITING THE RMP:

APPENDIX C:

Medite Europe Ltd. is operated as a wholly owned subsidiary of Coillte Teoranta, a state-owned company operating in forestry, land-based businesses, and added-value processing operations. Coillte is owned by the Minister for Finance and the Minister for Agriculture and Food. In 2007, Coillte had a turnover of €318.1 million and a profit of €40.1 million. All profits were reinvested in the business. Coillte’s forest estate comprises over 445,000 hectares of forest land (approx. 7% land cover in Ireland).

Coillte places a strong emphasis on achieving balance between commercial, environmental, and social objectives in managing business. Should any potential cessation of operations occur while Medite Europe Ltd. is in Coillte’s ownership, such a cessation would be a well-managed exercise underwritten from Coillte’s own internal resources.
Medite Europe Limited: Application for a revised IPPC Licence:

ATTACHMENT L: STATUTORY REQUIREMENTS

Attachment L: Statutory Requirements

L.1.1 Overview:
The IPPC licensing process requires the applicant to demonstrate how the requirements of Section 83(5) (a) (i) to (v) and (vii) to (x) of the EPA Acts, 1992 and 2003 will be met, having regard, where appropriate, to any relevant specification issued by the Agency under section 5(3) of the Act and the reasons for the selection of the arrangements proposed.

In addition the applicant must indicate whether or not the activity is carried out, or may be carried out, or is located such that it is liable to have an adverse effect on the following:

(a) a site placed on a list in accordance with chapter 1 of S.I. 94 of 1997, or
(b) a site where consultation has been initiated in accordance with Article 5 of the EU Habitats Directive (92/43/EEC), or

The applicant must also indicate whether or not the activity is liable to have an adverse effect on water quality in light of S.I. No.258 of 1998 (Local Government (Water Pollution) Act, 1977 (Water Quality Standards for Phosphorous) Regulations, 1998) and indicate whether any of the substances specified in the Schedule of the EPA (Licensing) (Amendment) 2004, S.I. 394 of 2004, are discharged by the activity to the relevant medium.

And finally the applicant must also demonstrate assurances under the Fit and Proper Person requirements, to include details of convictions under relevant legislation, qualifications and technical knowledge and financial commitments.

L.1.2 Requirements of Section 83(5) of the Environmental Protection Agency Acts 1992 & 2003

Under Section 83(5) [(a) (i) to (v) and (vii) to (x)] of the Environmental Protection Agency Acts 1992 and 2003 (as defined in Section 1 of the Protection of the Environment Act 2003), the Agency shall not grant a licence or revised licence for an activity unless it is satisfied that the operation of the plant meets certain requirements.


This section outlines in how Medite Europe Ltd will meet such requirements.
L.1.2.1  Air Emissions

Requirement:
Section 83(5)(a)(i) of the Environmental Protection Agency Acts 1992 and 2003 states that the Agency “may not grant a licence for an activity unless it is satisfied that any emission from the activity will not result in the contravention of any air quality standard specified under the Air Pollution Act 1987”.

Air Quality standards as specified under Section 50 of the Air Pollution Act 1987 are contained in the Air Quality Standards Regulations S.I. No.244 of 1987, and concern Sulphur Dioxide, Suspended Particulates, Lead and Nitrogen Dioxide. These standards are replaced by Air Quality Standards Regulations 2002 (S.I. 271 of 2002), which also bring in standards for NOx and Benzene.

Site Compliance:
Emissions of particulates, nitrogen oxides, carbon monoxide and metals are monitored under schedule 1(i), (ii) Emissions to Atmosphere in Medite’s IPPC Licence P0027-02. Medite is in compliance with licensed emission limits; air dispersion modelling carried out by ERM Consultants UK & Ireland Air Quality Team in preparation for this licence review application has shown no significant impacts on the environment.

L.1.2.2  Water Quality Standard

Requirement:
Section(5)(a)(ii) of the Environmental Protection Agency Act 1992 and the Protection of the Environment Act 2003 states that the Agency “shall not grant a licence for an activity unless it is satisfied that any emissions from the activity will comply with, or will not result in the contravention of, any relevant quality standard for waters, trade effluents and sewage effluents and standards in relation to treatment of such effluents prescribed under section 26 of the Local Government (Water Pollution) Act, 1977”; Section 26 of the Water Pollution Act 1977 allows the Minister to set quality standards for water, trade effluent and sewerage. The Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorous) Regulations, 1998 (S.I. 258 of 1998) are the only quality standards set under this section.

Site Compliance:
All wastewater generated on site is treated in a dedicated wastewater treatment plant prior to discharge to the River Anner. Emissions are monitored under its IPPC Licence P0027-02 schedule 2(i), (ii) and (ii). Medite is in compliance with licensed emission limits, impact assessment carried out in preparation for this licence review application by Aquafact International Services Ltd on Medite’s effluent discharge to the River Anner has shown no significant impacts.
Medite Europe Limited: Application for a revised IPPC Licence:

ATTACHMENT L: STATUTORY REQUIREMENTS

L.1.2.3 European Legislation

**Requirement:**
Section 83(5) (a) (iii) of the European Protection Agency Acts 1992 and 2003 states “that the Agency shall not grant a licence for an activity unless it is satisfied that any emission from the activity will comply with, or not result in the contravention of any relevant standard including any standard for an environmental medium prescribed under Regulations made under the European Communities Act, 1972 or any other enactment”

**Site Compliance:**

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Site Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>The European Communities (Quality of Salmonoid Waters) Regulations (S.I. 293 of 1988)</td>
<td>Medite Europe Ltd discharge into the River Anner within the strict guidelines of its IPPC Licence P0027-02</td>
</tr>
<tr>
<td>Local Government (Water Pollution) Act 1977 (Control of Cadmium Discharges) Regulations (S.I. 294 of 1985)</td>
<td>Not applicable as Medite Europe Ltd does not discharge these scheduled pollutants</td>
</tr>
<tr>
<td>Local Government (Water Pollution) Act 1977 (Control of Hexachlorocyclohexane and Mercury Discharges) Regulations (S.I. 55 of 1986)</td>
<td>Not applicable as Medite Europe Ltd does not discharge these scheduled pollutants</td>
</tr>
<tr>
<td>Local Government (Water Pollution) Acts 1977 and 1990 (Control of Aldrin, Dieldrin, Endrin, Isodrin, HCB, HCBD and CHCL3 Discharges) Regulations 1994 (S.I. 348 of 1993)</td>
<td>Not applicable as Medite Europe Ltd does not discharge these scheduled pollutants</td>
</tr>
<tr>
<td>Local Government (Water Pollution) Acts 1977 and 1990 (Control of Carbon Tetrachloride, DDT and Pentachlorophenol Discharges) Regulations 1994 (S.I. 245 of 1994)</td>
<td>Not applicable as Medite Europe Ltd does not discharge these scheduled pollutants</td>
</tr>
<tr>
<td>Quality of Shellfish Water Regulations (S.I. 200 of 1994, amended by Quality of Shellfish Waters (Amendment) Regulations (S.I. 459 of 2001)</td>
<td>Not applicable as Medite Europe Ltd does not discharge directly to Shellfish waters</td>
</tr>
<tr>
<td>Local Government (Water Pollution) Regulations, 1992 (S.I. 271 of 1992)</td>
<td>Medite Europe Ltd does not have direct discharges to groundwater and monitors the groundwater quality beneath the site</td>
</tr>
<tr>
<td>Water Quality (Dangerous Substances) Regulations, 2001 (S.I. 12 of 2001)</td>
<td>Groundwater, wastewater and surface water monitoring on site reflect negligible discharge of such substances contained in the regulations</td>
</tr>
</tbody>
</table>
L.1.2.4  Noise Regulations

Requirement:
Section 83 (5) (a) (iv) of the Environmental Protection Agency Acts 1992 and 2003 states “that the Agency shall not grant a licence for any activity unless it is satisfied that any noise from the activity will comply with or result in the contravention of any regulations under Section 106 of the EPA Act”. This section enables the minister to make regulations for the purpose of the prevention or limitation of noise, which may cause a nuisance. Although no noise control regulations have been made, the EPA Guidance Note for Noise in Relation to Scheduled Activities recommend that to avoid disturbance the noise level at sensitive locations should not exceed a LAeq T value of 55dBA during the daytime and a LAeq T value of 45dBA at night-time. It also recommends that audible tones and impulsive noise at sensitive locations at night should be avoided.

Site Compliance:
An annual noise monitoring survey takes place (Condition 8 IPPC Licence P0027-02); from analysis of the noise measurements it may be concluded that site operations comply with the daytime criteria of 55dBA LAeq T value and night-time noise criteria of 45dBA LAeq T value at the designated noise sensitive locations.

L.1.2.5  Significant Environmental Pollution

Requirement:
Section 85 (5) (a) (v) of the Environmental Protection Agency Acts 1992 and 2003 states “that the Agency shall not grant a licence for an activity unless it is satisfied that any emissions from the activity will not cause significant environmental pollution”.

Site Compliance:
The site is ISO14001 accredited and is compliant with its current IPPC Licence P0027-02, and as part of this environmental management system, monitoring and control measures are implemented for air, water, waste, surface water and waste emissions to minimise the environmental impact of site operations.

In preparation for this IPPC Licence Review both an air dispersion modelling study has been carried out and an impact assessment on the River Anner has been carried out – both conclude that there is unlikely to be any significant impact on the environment as a result of emissions to air and water from site activities.

Additionally there is significant investment in measures to protect the surrounding environment, including provision of secondary containment and spill containment system in the materials storage area.
**Medite Europe Limited**: Application for a revised IPPC Licence:

**ATTACHMENT L: STATUTORY REQUIREMENTS**

**L.1.2.6 Generation and Disposal of Waste**

**Requirement:**
Section 83 (5) (a) (vii) of the Environmental Protection Agency Acts 1992 and 2003 states that “production of waste should be prevented or minimised, and where waste is produced, it will be recovered, and where it is not economically and technically possible to recover it, be disposed of in a manner which will prevent or minimise any impact on the environment”.

**Site Compliance:**
All wastes generated on site are recovered or disposed of as per condition 7 Waste Management of Medite Europe Ltd IPPC Licence P0027-02 – Medite is compliant with its licence. Waste contractors are strictly controlled and all permits / licences and documentation are maintained on site. Dedicated waste personnel oversee waste management on site, with support from the EHS Department. The site Environmental Management Programme (EMP) includes targets and projects for waste reduction.

**L.1.2.7 Energy Requirements**

**Requirement:**
Section 83 (5) (a) (viii) of the Environmental Protection Agency Acts 1992 and 2003 states that “energy is to be used efficiently in the carrying on of the licensed activity”.

**Site Compliance:**
Under its IPPC Licence P0027-02 Condition 10 Energy Use Medite Europe Ltd considers energy efficiency in all its facility operations. There is a dedicated fulltime energy resource onsite to support and track implementation of energy management and energy improvements on site.

**L.1.2.8 Accident Prevention**

**Requirement:**
Section 83 (5) (a) (ix) of the Environmental Protection Agency Acts 1992 and 2003 requires that “necessary measures be taken to prevent accidents in the carrying on of the activity”. In addition, it is required that where an accident occurs, its consequences for the environment are limited, and where there are consequences, these consequences are remedied.

**Site Compliance:**
As stated in its Environmental Policy Medite Europe Ltd commit to continuous environmental improvement in the company. This is achieved through the operation of an Environmental Management System (accredited to ISO14001, IPPC Licence compliant), providing the site with the framework for implementing this policy and setting and reviewing environmental goals, objectives and targets. Monitoring and assessment takes place on a routine basis to ensure high standards are maintained on site.
**Medite Europe Limited**: Application for a revised IPPC Licence:

**ATTACHMENT L: STATUTORY REQUIREMENTS**

Where accident occur the site Emergency Response Procedure ensures that the appropriate corrective action is taken and preventive action is taken to prevent a re-occurrence.

**L.1.2.9 Cessation of the Activity**

**Requirement:**
Section 83 (5) (a) (x) of the Environmental Protection Agency Acts 1992 and 2003 requires that "necessary measures are taken upon the permanent cessation of the activity (including such a cessation resulting from the abandonment of the activity) to avoid any risk of environmental pollution and return the site of the activity to a satisfactory state".

**Site Compliance:**
In the unlikely event of cessation of the current operation on site, Medite Europe Ltd are fully committed to providing sufficient resources and finances to facilitate the full remediation, decommissioning, restoration and after care of the site, to ensure minimal impact to the environment during or following site closure and return the site of the activity to a satisfactory state. A Residual Management Plan was prepared for Medite Europe Ltd by consultants URS Ireland in March 2007; the EPA Guidance Document entitled “Guidance on Environmental Liability Risk Assessment, Residual Management Plans and Financial Provision was used in the preparation of this plan.

**L.1.3 Designated Areas**

**Requirement:**
The activity is not carried out on, or is located such that it is liable to have an adverse effect on:
- A site placed on a list in accordance with Chapter 1 of S.I. 94 of 1997, or
- A site where consultation has been initiated in accordance with Article 5 of the EU Habitats Directive (92/43/EEC)

**Site Compliance:**
Medite Europe Ltd site is not located within a designated area

**L.1.4 Water Quality**

**Requirement:**

**Site Compliance:**
All wastewater generated on site is treated in a dedicated wastewater treatment plant prior to discharge to the River Anner. Emissions are monitored under its IPPC Licence P0027-02 schedule 2(ii), (ii) and (ii). Medite is in compliance with licensed emission limits, impact assessment carried out by Aquafact International Services Ltd on River Anner has shown no significant impacts from Medite.
Medite Europe Limited: Application for a revised IPPC Licence:

ATTACHMENT L: STATUTORY REQUIREMENTS

L.1.5 Requirements of Environmental Protection Agency (Licensing) (Amendment) Regulations 2004

Requirement:
The Environmental Protection Agency (Licensing) (Amendment) Regulations 2004 (S.I. 394 of 2004) specify indicative lists of principal polluting substances to be taken into account by the Agency, if relevant, in the fixing of emission limit values.

Site Compliance:

<table>
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<tr>
<th>Medium</th>
<th>Principal Polluting Substance</th>
<th>Medite Europe Ltd Emissions</th>
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</thead>
<tbody>
<tr>
<td>Air</td>
<td>Sulphur dioxide and other sulphur compounds</td>
<td>Unlikely to be present</td>
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<td></td>
<td>Oxides of nitrogen and other nitrogen compounds</td>
<td>Present</td>
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<tr>
<td></td>
<td>Carbon monoxide</td>
<td>Present</td>
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<tr>
<td></td>
<td>Volatile organic compounds</td>
<td>Present</td>
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<tr>
<td></td>
<td>Metals and their compounds</td>
<td>Present</td>
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<td></td>
<td>Dust</td>
<td>Present</td>
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<td></td>
<td>Asbestos (suspended particulates, fibres)</td>
<td>Unlikely to be present</td>
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<tr>
<td></td>
<td>Chlorine and its compounds</td>
<td>Unlikely to be present</td>
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<tr>
<td></td>
<td>Fluorine and its compounds</td>
<td>Unlikely to be present</td>
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<tr>
<td></td>
<td>Arsenic and its compounds</td>
<td>Unlikely to be present</td>
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<td>Cyanides</td>
<td>Unlikely to be present</td>
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<td>Substances and preparations which have proved to possess carcinogenic or mutagenic properties or properties which may affect reproduction via the air</td>
<td>Unlikely to be present</td>
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<td>Polychlorinated dibenzodioxins and polychlorinated dibenzofurans</td>
<td>Unlikely to be present</td>
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<td>Water</td>
<td>Organohalogen compounds and substances which may form such compounds in the aquatic environment</td>
<td>Unlikely to be present</td>
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<td>Organophosphorus compounds</td>
<td>Unlikely to be present</td>
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<td>Organotin compounds</td>
<td>Unlikely to be present</td>
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<tr>
<td></td>
<td>Substances and preparations which have been proved to possess carcinogenic or mutagenic properties or properties which may affect reproduction in or via the aquatic environment</td>
<td>Unlikely to be present</td>
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<td>Persistent hydrocarbons and persistent and bio-accumulable organic toxic substances</td>
<td>Unlikely to be present</td>
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</tbody>
</table>
Medite Europe Limited: Application for a revised IPPC Licence:

ATTACHMENT L: STATUTORY REQUIREMENTS

<table>
<thead>
<tr>
<th>Medium</th>
<th>Principal Polluting Substance</th>
<th>Medite Europe Ltd Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>Cyanides</td>
<td>Unlikely to be present</td>
</tr>
<tr>
<td></td>
<td>Arsenic and its compounds</td>
<td>Unlikely to be present</td>
</tr>
<tr>
<td></td>
<td>Biocides and plant health products</td>
<td>Unlikely to be present</td>
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<td></td>
<td>Materials in suspension</td>
<td>Present</td>
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<td></td>
<td>Substances which contribute to eutrophication (in particular nitrates and phosphates)</td>
<td>Present</td>
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<td>Substances which have an unfavourable influence on the oxygen balance (and can be measured using parameters such as BOD, COD, etc.)</td>
<td>Present</td>
</tr>
</tbody>
</table>

Additional information on principal polluting substances from Air and Water is provided in the IPPC Licence application form.

L.1.6 Requirements for a Fit and Proper person

Requirement:
Section 83 (5) (a) (xi) of the Environmental Protection Agency Acts 1992 and 2003 specifies that the Agency shall not grant a licence unless it is satisfied that the licensee is a fit and proper person. Information to enable a determination to be made by the Agency, as required by Section 84 (4) of the Environmental Protection Acts 1992 and 2003, is given below.

Site Compliance:
Convictions:
Medite Europe Ltd has not been convicted under the Environmental Protection Agency Acts 1992.

Medite Europe Ltd has not been convicted under the Waste Management Act 1996, the Local Government (Water Pollution) Acts 1977 and 1990 or the Air Pollution Act 1987. Medite Europe Ltd has no other prosecutions brought against them.

Technical Knowledge and Qualifications:
The Environmental Officer has responsibility for day to day operation of the site environmental management system. The current Environmental Officer holds a BSc in Food Business and a Post Graduate Diploma in Environmental Protection, and has worked in environmental roles in the company for the last 8 years.

The Environmental Officer reports to the Technical & Environmental Manager, who subsequently reports to the Operations Director. Both the Technical & Environmental Manager and Operations Director have extensive experience working in the industry.

Environmental operations staff are given specific training and have experience to carry out their roles competently. All employees are given environmental induction training and if required by their job additional training in order to fulfil their role.
**Financial Commitments:**
Medite Europe Ltd has resources to ensure that any financial commitments or liabilities that may arise are met, including those that may arise through cessation of activities at the site. A Residual Management Plan was prepared for Medite Europe Ltd by consultants URS Ireland in March 2007; the EPA Guidance Document entitled “Guidance on Environmental Liability Risk Assessment, Residual Management Plans and Financial Provision” was used in the preparation of this plan.