



OPERATION AND MAINTENANCE MANUAL

Version: November 2014

CDS UNIT MODEL

PROJECT NUMBER

SITE ADDRESS

INSTALLER;

CDS UNIT OWNER

CDS Technologies is part of the Rocla Pipeline Company.

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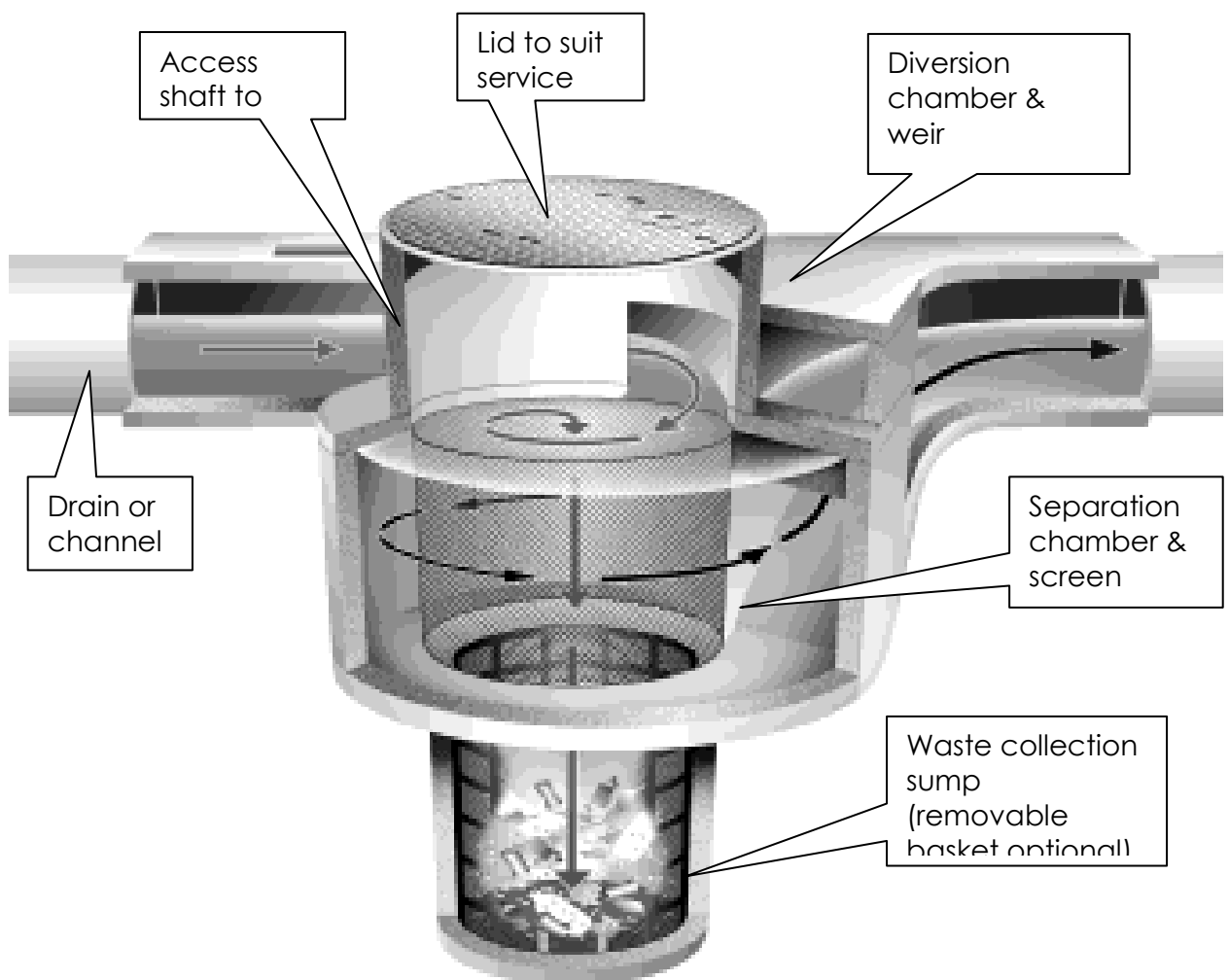
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1 Preamble

- 1.1 CDS Technologies has been established to provide a cost-effective way to achieve environmental sustainability in water quality. The company is committed to its Clients and the environment, however its focus is on the development, manufacture, construction, installation, maintenance and repair of the CDS units.
- 1.2 The CDS owner may opt to perform their own cleaning or contract the cleaning to a pre-qualified contractor. Pre-qualified contractors are approved by CDS Technologies to perform inspections and cleaning in conformance with CDS Technologies Specification. They have demonstrated that they can meet all safety and environmental legislation and are adequately insured. These contractors can provide very competitive rates, provide valuable feedback on the CDS operation and will take the worry and effort out of the maintenance process.
- 1.3 Definitions

CDS For simplicity, the letters CDS will be taken to mean a CDS unit.



2 Inspections

2.1 Routine Inspections

- 2.1.1 Routine inspections are recommended to ensure the CDS is functioning correctly and indicate when cleaning is necessary. These should be carried out on a regular monthly basis. Additionally, it is recommended that a non-scheduled inspection be carried out after any heavy downpour or prolonged period of wet weather. These inspections are the responsibility of the CDS unit owner, unless other arrangements have been made with CDS Pty Ltd. Due to the efficiency of the CDS design, it is likely that they will collect large quantities of pollutants during significant rainfall events. Inspections after heavy rain are therefore even more important than scheduled inspections.
- 2.1.2 The routine inspection involves removing the access hatch in the CDS main lid and visually checking the visible part of the screen, the percentage of water surface occupied by floatables and measuring the level of accumulated debris in the sump.
- 2.1.3 This level can be calculated using a survey staff or weighted string line, by measuring the distance from the estimated top of the debris to the top of the lid. A chart is provided on the data sheet that allows the depth measurement to be converted into a percentage full. The data sheet is located in Appendix D. CDS can also provide simple Excell spreadsheet programs for constructed units on request.
- 2.1.4 When the accumulated material reaches the level of the top of the sump (100% full), it is recommended that it be emptied.
- 2.1.5 Should the trapped material be allowed to accumulate and rise into the separation chamber, i.e. above the bottom of the screen, the efficient operation of the unit will be compromised with subsequent flows possibly leading to screen blockage.
- 2.1.6 A standard report for a routine inspection is shown at Appendix A. This should be faxed to the CDS unit owner and CDS Technologies head office. This information helps in future CDS unit sizing and cleaning frequency estimations.
- 2.1.7 CDS Technologies should be informed if there is any damage or non-functionality observed with the CDS through the completion and forwarding of the 'Damage and Non-Functionality Report' included in Appendix A.

2.2 Annual Inspection

- 2.2.1 CDS recommends Annual Inspections involving dewatering the unit and checking the condition of the screen, area behind the screen, diversion chamber, weir, lids and any special features of the unit (Baskets can be excluded from this because they can be inspected at every cleanout).
- 2.2.2 The Damage or Non-Functionality Report (Appendix C) can be used to record any damage or wear and tear that will require attention.
- 2.2.3 This is also a good opportunity to apply grease to the frame of any cast iron lids and/or lubricate padlocks.

3 Recommended Cleaning Methods

- 3.1 There are several factors influencing the choice of cleaning method, the main factor being CDS unit size. Other factors include access, equipment availability, required frequency, cost any restrictions, eg units in tidal locations cannot generally be cleaned by education.

Unit Size (Screen Diameter mm)	Recommended Cleaning Method	Comments
500 (PL0506)	Suction	Unit not designed for basket; total volume of water and waste is well within range of standard education equipment
700 (P0708 series)	Suction	Unit not designed for basket; total volume of water and waste is well within range of standard education equipment
900 (P1000 Series)	Suction/basket	Suction is the most cost-effective method.
1500 (P1512 series)	Suction/basket	Suction is the most cost effective method.
2000 (P2000 series)	Suction/basket/ grab	Grab is the most cost effective method.
3000 (P3000 series)	Suction/grab	Grab is the most cost effective method.

- 3.2 The basket is available for purchase from CDS Technologies and consists of a fabricated fibreglass and steel lifting ring supporting a reinforced fabric basket and connected by SWR slings and shackles. The basket has stainless steel quick-release closures and buckles. A basket is preferred in units which are below low tide or where other methods are not feasible.
- 3.3 The following chapters detail procedures for each of the recommended methods with illustrations, and include safety information and related regulations.

4 Basket Cleaning

The following is a recommended procedure for emptying the CDS unit fitted with an optional collection basket (this procedure is shown in Figure 4.1). See also Hazard Analysis at Section 4.8.

For units fitted with an Oil Baffle the Oil must be removed using the methodology for Education Cleaning prior to the removal of the basket process. See Section 5.

- 4.1 Remove lid(s) from access chamber
- CDS units in trafficked areas (roadways) are fitted with load-class lids (Gatic). The lids are usually multi-part and have tapered edges. Special lifting levers are required to remove them. Larger units in trafficked areas may have RSJ beams to support the lid structure. These also must be removed. If the lifting tackle for the basket is hanging from the RSJ, it must be disconnected and temporarily connected to the inside of the access shaft while the RSJ is removed.

CDS units in non-trafficked areas (parks or reserves) may be constructed from fibreglass, galvanised steel or timber and may be single or of multi part construction. Fibreglass lids on models F0908/0912 can be easily removed by hand after unlocking with a T bar key.

Galvanised and timber lids have adequate lifting points to assist in removal by crane.

When working in a roadway, utilise appropriate traffic control measures.

For safety reasons, any staff working over the open unit should wear a safety harness tied back to an immovable object.

- 4.2 Connect lifting tackle
- Subject to access, the following crane capacities should be adequate to lift full baskets from the sumps of CDS units.

The estimate of the full basket weight can be obtained from the CDS unit Data Sheet.

900mm CDS	5 tonne capacity crane minimum
1500mm CDS	8 tonne capacity crane minimum
2000mm CDS	12 tonne capacity crane minimum
3000mm CDS	15 tonne capacity crane minimum

The crane needs to be able to raise the bottom of the basket, which is up to 7 metres below the lifting ring, over the side of the truck being used to transport the waste.

The crane should be located on suitably firm ground and

operated by a qualified crane operator and guided by a qualified dogman. All staff on the ground in the vicinity of the unit should wear hard hats.

The lifting ring, which is temporarily attached to the side of the CDS, is to be attached to the crane hook.

4.3 Lifting the basket

If the unit is especially full or there is a great deal of floating material on the surface, it is recommended that the basket be raised slowly to reduce turbulence in the separation chamber which can wash floatable items over the rim of the basket.

Floating material should be pushed towards the centre to ensure it is caught as the basket rises. If some floating material remains in the CDS unit, it will likely be removed next time or it is possible to create a backwash by "dunking" the basket under the surface and quickly back up again. If the basket is found to have a significant amount of material "nesting" on the lifting collar, it is recommended that this material be pushed down into the basket using a broom, rake, shovel or staff before removing the basket completely from the unit.

With the bottom of the basket raised above the water level, allow water to drain back into the CDS unit for a few minutes.

Lift and place basket into truck and allow it to settle to relieve tension in securing straps. Release the Quick-release couplings that hold the basket closed.

Raise basket and allow contents to discharge into truck.

Lower basket and remove any trapped contents. If material is tangled in lifting slings, remove it.

Waste should not be handled unless appropriate protective gloves are worn.

Close basket and secure straps with Quick-release couplings. Place and position basket back in the CDS unit. It is sometimes advisable to weight the basket with two or three bricks to prevent the fabric from billowing up.

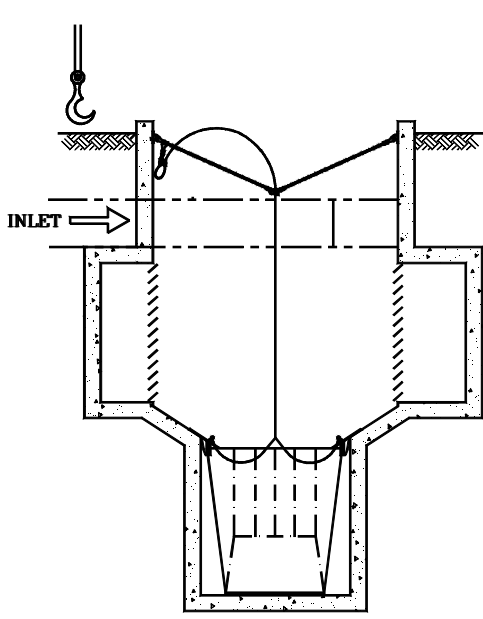
Check the separation screen for blockage or damage. Any material caught on the screen should be hosed or scrubbed off with a hard-bristle broom.

A significant quantity of material blocking the screen can be regarded as evidence of non-functionality and reported to CDS Technologies. If any damage is apparent, it should be reported to CDS as soon as practicable to enable a site inspection to be done. The phone number is listed on the CDS Data Sheet.

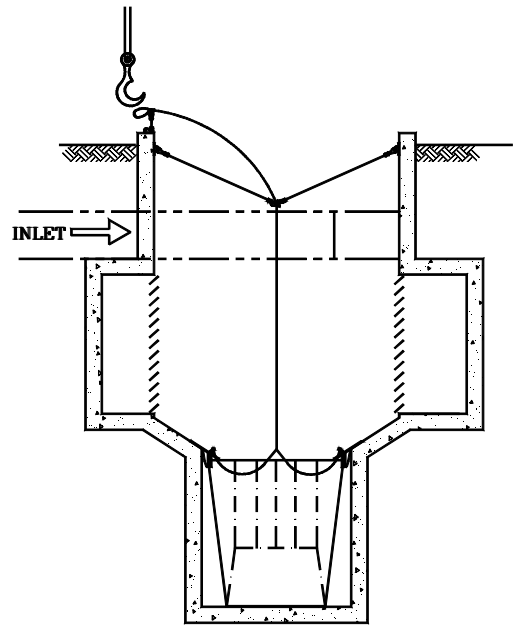
Replace lifting tackle and lids to their normal position.

NB It is important that the lifting cable hangs vertically down from the centre of the lid so as not to impede the circular flow of water in the CDS.

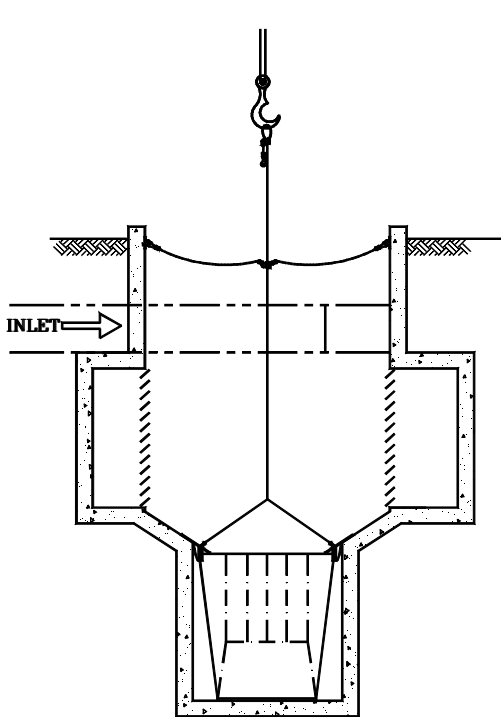
- 4.4 Disposal of Pollutants Record the quantity of pollutants removed from the CDS with a visual assessment of the breakdown by type:
- % silt and sediment
 - % litter
 - % vegetation
- A note should be made of any unusual or large items, eg. oil, paint, car tyres etc.
- Dispose of pollutant material at an approved tipping site, ie. a tip which is licensed by the Waste Authority in the relevant state.
- A record of the weight of the material extracted should be kept. The weight may be read by the crane, or the weigh station as the disposal truck enters the tip. The weight should be recorded on the CDS Cleanout Report (Appendix B).
- Care should be taken to:
- Cover the load en-route to the tip and to ensure that none of the litter from the load escapes from the truck.
- Adequately drain the material before leaving the site.
- 4.5 Tidy Site Tidy the site of any debris prior to leaving.
- 4.6 Complete and Forward Cleaning Report Complete Cleaning Report (Appendix B) and forward to the CDS unit owner.
- If there is any damage or non-functionality, complete Damage or Non-Functionality Report (Appendix C) and forward to the CDS Contact Person listed on the CDS Data Sheet.
- 4.7 Annual Clean and Inspection On an annual basis the CDS should be pumped down as described in the section on Suction Cleaning, the basket removed, the sump pumped out and thoroughly cleaned of any debris that may have accumulated under the basket. The water from the sump is either disposed of appropriately to sewer or pumped upstream so that it can be released and retreated by the CDS unit. A close inspection should be carried out on the screen, basket, lifting tackle etc and any maintenance requirements should be reported. Inform CDS Technologies when this annual service is to occur if they are required to attend.
- Inspect the return channel behind the screen and remove any accumulated silt or other deposits, if present. Record details in the "Comments" section of the 'Clean Out Report'.



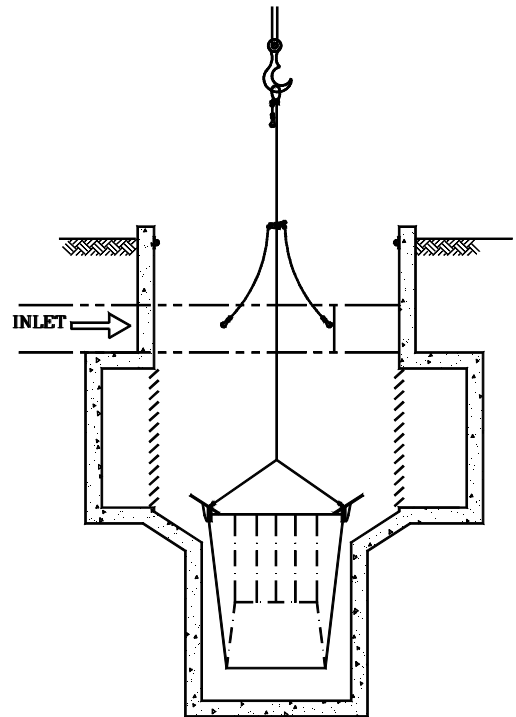
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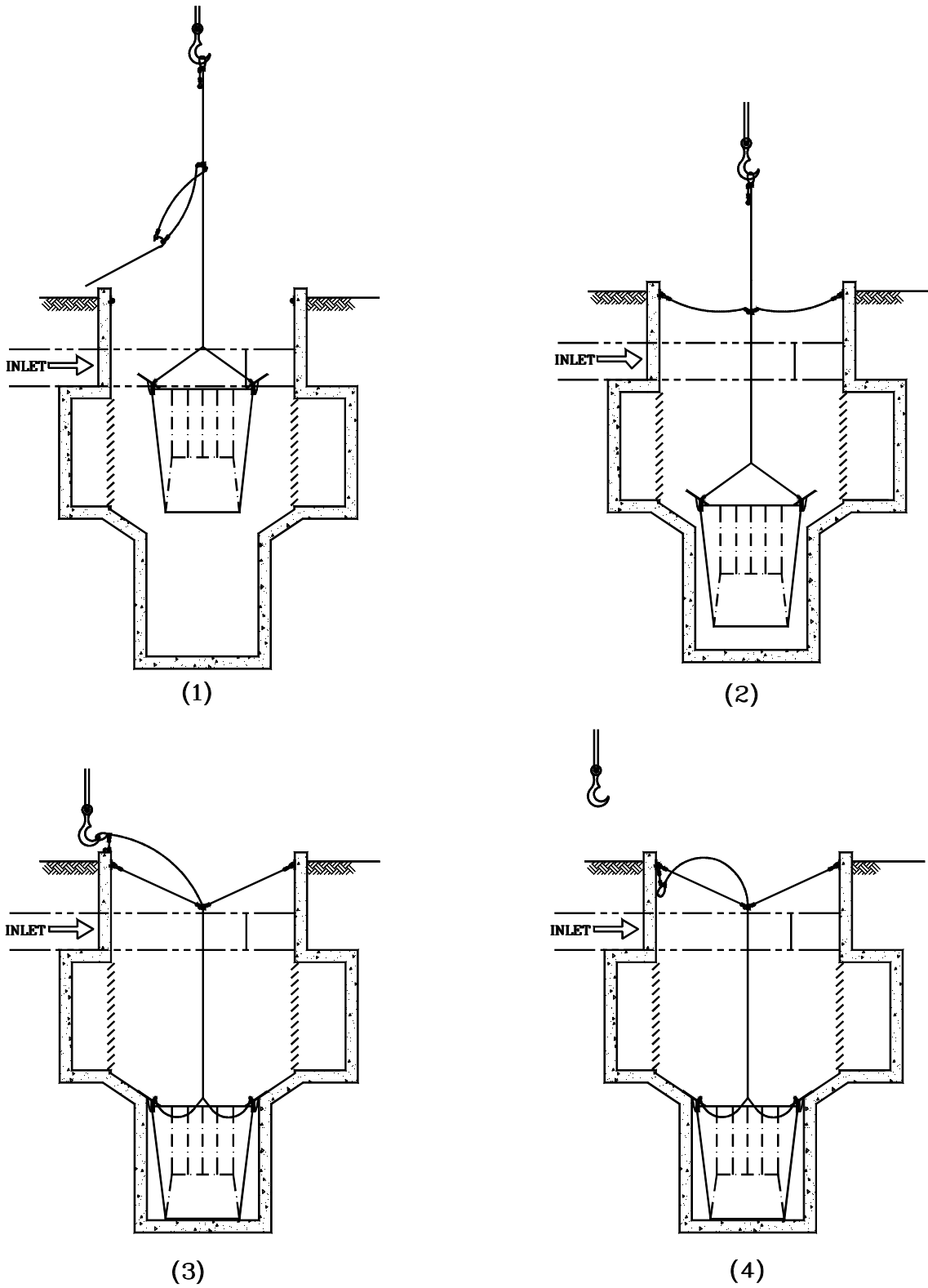


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(4)

LIFTING OPERATION



LOWERING OPERATION

Figure

4.8 HAZARD ANALYSIS

Activity: Basket Cleaning of CDS Unit

Task	Possible Hazard	Hazard Control
Site Establishment	Traffic Hazards	Implement Traffic Control Plan Obtain Road Closure Approval if necessary
	Risk to Pedestrian	Care to be taken when driving cranes, trucks etc. through public areas. Use assistant to guide reversing vehicle and ward off pedestrians In high pedestrian traffic areas, erect barricades around open CDS unit
Remove CDS Lid	Manual Handling	Correct Manual Lifting Techniques PPE : Steel cap boots, hard hat, gloves Lifting tackle in good condition. Crane in good condition, qualified operators. Crane near overhead electrical cables 3m clearance required to overhead electrical cables
Remove Basket	Lifting Cable Breaks	Check basket lifting tackle for deterioration. Check cable as it emerges from under the water for deterioration. No person to stand under basket as it is removed.
	Person fall into CDS unit	It is not possible to remove the CDS basket whilst barriers are placed around CDS unit. Therefore special care must be taken whilst working around the open CDS unit.
Empty Basket into truck	Biological contamination	Wear gloves and wash hands afterwards with anti-bacterial soap.
	Basket swings hitting employee	PPE, hard hat
Replace Basket	See Remove Basket	
Replace CDS lid	See Remove CDS Lid	

5 SUCTION CLEANING

The following is a procedure for emptying the CDS unit using a truck-mounted suction unit (this procedure is shown in Figure 5.1). See Hazard Analysis at Section 5.8.

UNITS FITTED WITH OPTIONAL OIL BAFFLES

In the case of Units fitted with an Oil baffle the oil must be removed by eduction prior to de-watering.

Oil will be sitting on the surface at the fluid level inside the screen in the unit; this will be visible through the lid at surface level.

The eduction hose is carefully lowered into the oil, care being taken not to protrude below the oil level and the oil removed by suction.

The depth of the oil on the surface can be gauged by the oil residue on the dipping staff used to establish the level of pollution contained in the sump.

This oil will be securely quarantined or retained in a vessel for disposal

NB: Eduction or the use of absorbent material such as Oil Absorbent Pillows is the only way to remove the oil, the grab or basket method is still a clean out method for the remainder of the pollutant but the oil must be removed first.

Remove lid

- | | | |
|-----|----------------------------------|---|
| 5.1 | Stop inflow | If necessary, the incoming flow can be blocked using a drop-board or sandbags stacked across the inlet. Ensure that the flow is low enough for a person to safely enter the chamber to place the drop-board.

NB If working in a roadway, erect appropriate traffic control measures. |
| 5.2 | Pump down the separation chamber | Place a flex drive pump or suction hose in the outlet of the separation chamber, ie outside the screen. This water can be discharged downstream because it has passed through the screen, therefore it has undergone treatment. Other options that may be considered include pumping the water upstream of the inlet. It may be necessary to remove water removed from the unit and transport it by tanker to an approved disposal site or it may be discharged to sewer if approved by local water authority.

Do not pump water from the inside of the screen directly downstream.

Access to the outside of the screen is via the Diversion Chamber. The water level will drop to the top of the sump. |
| 5.3 | Remove debris by suction | Using a "Super sucker" type suction cleaner, remove the debris from the sump (Experience has shown that the common Council Road Sweeper Eductor is not nearly as |

efficient at removing the debris).

For larger units, removal by suction may require the assistance of a suitably qualified "Confined Spaces" worker, lowered into the CDS unit to manually direct the nozzle of the suction hose and remove blockages. Any large items or sticks blocking the nozzle may be put to one side and removed manually on completion of the suction process.

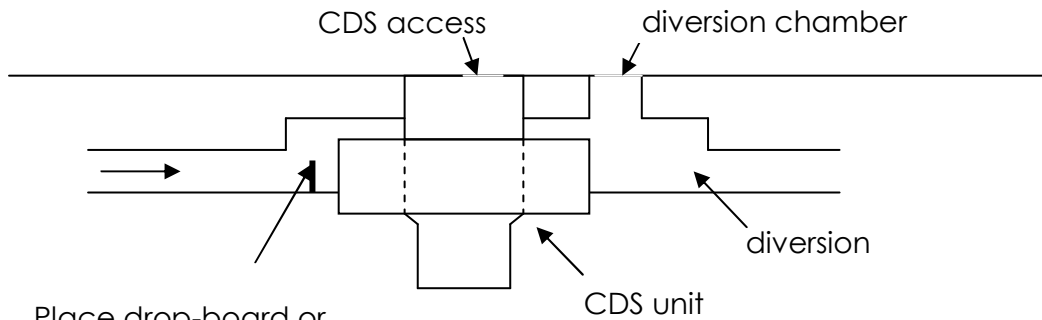
Confined spaces legislation requires that the employee in the unit be harnessed to a tripod-type hoist that is permanently manned above, while a third operator mans the suction machine.

- 5.4 Disposal of Pollutants Record the quantity of pollutants removed from the CDS with a visual assessment of the breakdown by type:
- _____ % silt and sediment
 - _____ % litter
 - _____ % vegetation
- A note should be made of any unusual or large items, eg. oil, paint, car tyres etc.
- Dispose of pollutant material at an approved tipping site, ie. a tip which is licensed by the Waste Authority in the relevant state.
- The free water removed can be discharged back into the CDS unit to minimise transportation and disposal costs.
- The material should be weighed if possible. Weight should be measured when free water no longer drains out of the material. If this is not possible, an estimation of weight should be made.
- 5.5 Tidy Site Tidy the site of any debris prior to leaving.
- 5.6 Complete and Forward Cleaning Report Complete Cleaning Report (Appendix B) and forward to CDS owner. If there is any damage or non-functionality, complete Damage or Non-Functionality Report (Appendix C) and forward to the CDS Contact Person listed on the CDS Data Sheet.

Annually the CDS unit should be fully inspected inside and outside the screen to ensure no damage, algal growth or deposition of material has occurred. Any problems should be reported to the CDS owner and to CDS Technologies contact person.

5.7 PROCEDURE

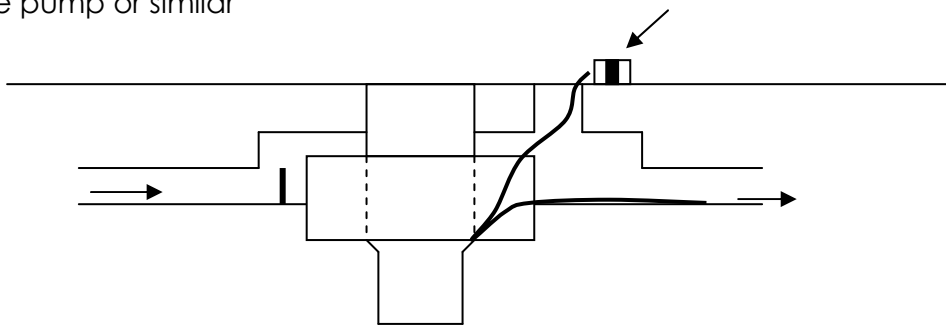
Stop Inflow



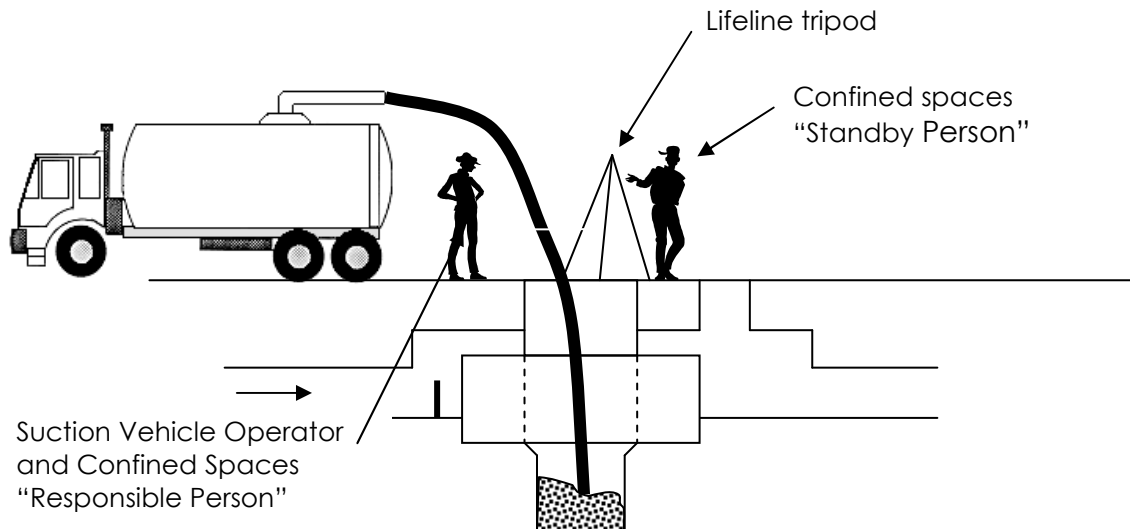
Place drop-board or sandbags across inlet to CDS

Pump down the separation chamber from the outside of the screen

Flexi-drive pump or similar



Remove debris by suction



NB: A person may be needed inside the CDS unit to guide the head of the suction hose.

All 3 staff in this method require Confined Spaces Training.

5.8 HAZARD ANALYSIS

Activity : Cleaning CDS units by vacuum loading

WHAT CAN GO WRONG	HOW WILL IT BE MANAGED
<p>Proposed Work: Cleaning of C.D.S. units of various sizes by Vacuum Loading at various locations.</p> <p><u>Consequences</u> Possible Road Work Entry into Confined Spaces</p>	<p>Field staff will be certified through AS2865 and safety inducted prior to commencing fieldwork. A supervisor will issue each crew with a work schedule for the day. The responsible person will ensure each site is handled with extreme care.</p> <p>Should roadwork be required, the crew will have the correct signs, barricades and appropriate dress.</p>
<p>Confined Space Category:</p> <p>Deterioration of air quality may occur within a confined space resulting in a category change.</p> <p>Illegal dumping of trade waste / chemicals may also result in confined space category changes.</p>	<p>The responsible person will ensure:</p> <p>Gas testing is undertaken for the duration of the work. If gas levels are above AS2865 allowable levels postpone work until reasonable levels can be achieved.</p> <p>Force ventilation equipment is available, on site, and can be used if required. Vacuum truck draws fresh air into chamber.</p> <p>Personnel entering the confined space will wear all the appropriate safety gear, including hard hat, steel capped boots, overall, eye protection, gloves and be connected to an approved lifeline/tripod set-up at all times whilst in the confined space.</p> <p>Remove other manhole lids in vicinity of work.</p> <p>Should trade waste chemicals become evident all work will cease, evacuation will proceed. Once evacuation is complete C.D.S. will be notified immediately.</p> <p>Self rescue unit to be worn.</p>

WHAT CAN GO WRONG	HOW WILL IT BE MANAGED
<p>Isolation of Work Site: Partial blockage/diversion boards, installed upstream to divert flows, may fail resulting in increased flow conditions.</p>	<p>The responsible person will ensure: Isolation of the work site by ensuring level of flow is at workable levels prior to confined space entry. The work can be done during low flow conditions. Flow levels are monitored upstream of the work location. Personnel entering the confined space will wear all the appropriate safety gear, including hard hat, steel capped boots, overall, eye protection, gloves and be connected to an approved lifeline/tripod set-up at all times whilst in the confined space.</p>
<p>Pre-entry Inspection: Air quality may exceed As2865 limits. Excessive flow conditions Presence of fumes, smells and noxious gases.</p>	<p>Gas detection will be undertaken prior to commencing confined space work. Gas detection is to continue for the entirety of the work. The work crew will complete an Entry Permit once they have tested for gas. Copy of Entry Permit to be forwarded to C.D.S. Should excessive flows be present work is not to proceed until such time that flows are at acceptable levels.</p>

<p>Access:</p> <p>Manhole/Access lid dimensions may not comply with Australian Standards.</p> <p>General public and road access routes may be interrupted.</p> <p>Suction hose restricts size of manhole.</p>	<p>The responsible person will ensure: Access will only be undertaken if it is possible, through the manhole opening. Entry will NOT take place into a manhole/confined space if these site-opening sizes do not conform to Australian Standards. The entrant will wear a safety harness. Appropriate signs and barricades will be used around the work area to ensure public and traffic routes are kept to a minimum. All tools, manhole lids and other equipment is to be kept within the barricaded area. Suction hose to be removed whilst assessing/egressing the manhole.</p>
WHAT CAN GO WRONG	HOW WILL IT BE MANAGED
<p>Methods of Work:</p> <p>Failure of safety equipment while in use. Noise may impact on the employees and the residents/public.</p>	<p>The responsible person will ensure: Daily inspection of all equipment will take place prior to work commencing. This will ensure equipment is maintained in good condition. Noise levels throughout this contract will comply with the EPA's Noise Control Manual.</p> <p>Personnel will have earplugs available for their use as and when required.</p>
<p>Suitable Workers:</p> <p>Unqualified workers without training working within a Confined Space.</p>	<p>All persons working on a cleaning project will have undertaken and are currently certified to work under AS2865.</p> <p>All staff is trained in the use of the equipment and materials to be used for this project.</p> <p>Other training will include and is not limited to a Safety Induction, First Aid/CPR Training.</p>

	<p>The responsible person will ensure:</p> <p>Only AS2865 certified person could enter a Confined Space to carry out work.</p> <p>All staff members working on-site are carrying their Confined Space tickets.</p>
Rescue Precautions:	<p>The responsible person will ensure:</p> <p>Each field crew will have undertaken a Safety Induction. Each crew will be equipped with a First Aid Kit and a mobile telephone.</p>
<p>Traffic & Public Access:</p> <p>Manholes are located on roads, footpaths and private property. The work may cause disruption to motorists and residents living in the area.</p>	<p>The responsible person will ensure:</p> <p>Traffic control measures including signs, barricades and witches hats are used on roadways.</p> <p>Barricades and pedestrian diversion shall be utilised on footpaths and on private property.</p>

WHAT CAN GO WRONG	HOW WILL IT BE MANAGED
<p>Illumination:</p> <p>Poor lighting may result in slips and falls.</p>	<p>The responsible person will ensure:</p> <p>Dolphin torches are used in the confined space in conjunction with miners lights fixed to the entry workers helmet.</p> <p>The stand-by person will have a 12v light that he/she can shine from above to help light up the area.</p>
<p>Ventilation:</p> <p>Fumes, smells and unacceptable gas levels.</p>	<p>The responsible person will ensure:</p> <p>Gas testing is undertaken for the duration of the work. If gas levels are above AS2865 allowable levels postpone work until reasonable levels can be achieved.</p> <p>Force ventilation equipment is available, on site, and can be used if required.</p> <p>Stand-by person will remain at the entry/exit point to allow emergency exit if required.</p> <p>Personnel entering the confined space will wear all the appropriate</p>

	<p>safety gear, including hard hat, steel capped boots, overalls, eye protection, gloves and be connected to an approved lifeline/tripod set-up at all times whilst in the confined space.</p> <p>Should air quality deteriorate work will cease, evacuation will proceed.</p>
<p>Contents / Hazard:</p> <p>Sharp objects, syringes and hazardous materials.</p>	<p>The responsible person will ensure: Site inspection, prior to commencing confined space work, is to take place. Retrieved hazardous materials and sharp objects or syringes are to be disposed of correctly.</p>
<p>Fire / Explosion Risk:</p> <p>Fuels and Oils</p>	<p>The responsible person will ensure:</p> <p>Confined space is evacuated immediately if the Lower Explosive Limit (LEL) exceeds 5% on Gas Detector.</p>

WHAT CAN GO WRONG	HOW WILL IT BE MANAGED
<p>Temperature:</p> <p>No hot work is expected.</p>	N/A
<p>Electrical Isolation:</p> <p>Possibility of electrocution.</p>	<p>The responsible person will ensure: Isolation of electrical equipment. All electrical equipment to be used is inspected prior to undertaking any work. All electrical equipment used in confined spaces shall be low-voltage.</p>
<p>Manual Handling of Manhole:</p>	<p>The responsible person will ensure:</p> <p>Mechanical lifting equipment shall be used. All manhole covers are put back on pits and manholes before leaving site.</p>

6 CLAMSHELL (GRAB) CLEANING

The following is a procedure for emptying the CDS unit using a tipper-truck-mounted clamshell or grab bucket (this procedure is shown in Figure 6.1). This method is available for 2m & up diameter CDS units due to the physical size of the bucket. Currently only two of the units exist in Australia, based in Sydney and Melbourne, which can service all states. Contact your CDS representative to arrange for a quotation. See Hazard Analysis at Section 6.7.

For units fitted with an Oil Baffle the Oil must be removed using the methodology for Education Cleaning prior to the grab process. See Section 5.

- | | | |
|-----|----------------------------|---|
| 6.1 | Remove lids | See section 4.1 |
| 6.2 | Remove debris by clamshell | Ensure clamshell does not contact screen as damage can occur. Clamshell should be perforated and should be lifted clear of water surface and allowed to drain. Using the clamshell, load the waste into the tipping body of the truck. The truck should be positioned so that water draining from the body drains back into the CDS. Drain waste thoroughly before proceeding to tip. |
| 6.3 | Scoop floating waste | Using a pool scoop, remove the floating litter from the surface of the water in the separation chamber. Replace lid. |

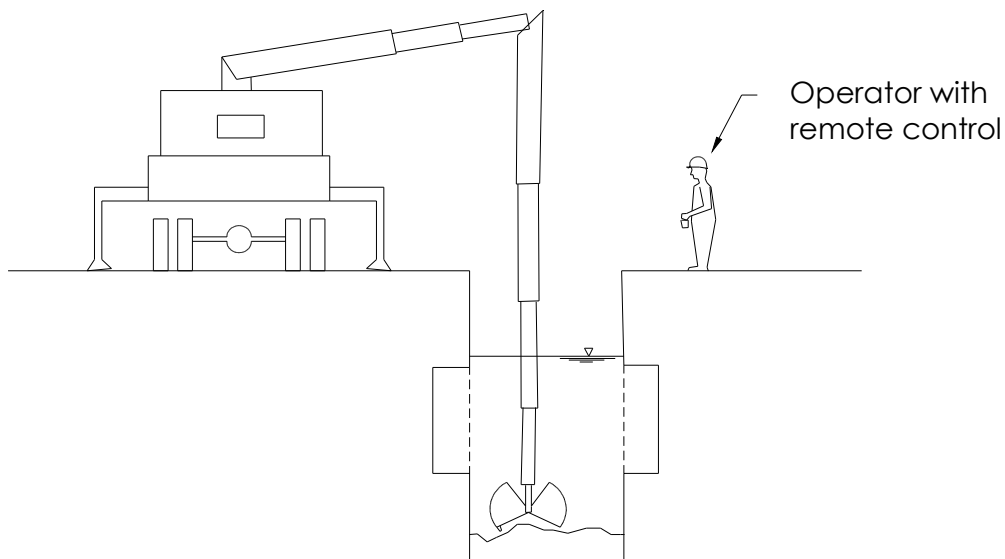


Figure 6.1 Clamshell bucket operation

- 6.4 Disposal of Pollutants Record the quantity of pollutants removed from the CDS with a visual assessment of the breakdown by type:
- _____ % silt and sediment
 - _____ % litter
 - _____ % vegetation
- A note should be made of any unusual or large items, eg. oil, paint, car tyres etc.
- Dispose of pollutant material at an approved tipping site, ie. a tip which is licensed by the Waste Authority in the relevant state.
- Any free water removed can be discharged back into the CDS unit to minimise transportation and disposal costs.
- The material should be weighed if possible. Weight should be measured when the free water no longer drains out at the material. If this is not possible, an estimation of weight should be made.
- 6.5 Tidy Site Tidy the site of any debris prior to leaving.
- 6.6 Complete and Forward Cleaning Report Complete Cleaning Report (Appendix B) and forward to CDS owner. If there is any damage or non-functionality, complete Damage or Non-Functionality Report (Appendix C) and forward to the CDS Contact Person listed on the CDS Data Sheet.

Annually the CDS unit should be fully inspected inside and outside the screen to ensure no damage, algal growth or deposition of material has occurred. Any problems should be reported to the CDS owner and to CDS Technologies contact person.

6.7 HAZARD ANALYSIS 1

Activity : Grab Cleaning of CDS Unit

Task	Possible Hazard	Hazard Control
Site Establishment	Traffic Hazards	Implement Traffic Control Plan Obtain Road Closure Approval if necessary
	Risk to Pedestrian	Care to be taken when driving cranes, trucks etc. through public areas. Use assistant to guide reversing vehicle and ward off pedestrians In high pedestrian traffic areas, erect barricades around open CDS unit
Remove CDS Lid	Manual Handling	Correct Manual Lifting Techniques PPE : Steel cap boots, hard hat, gloves Lifting tackle in good condition. Crane in good condition, qualified operators. Crane near overhead electrical cables 3m clearance required to overhead electrical cables
	Person fall into CDS unit	Special care must be taken whilst working around the open CDS unit. Place barricade round open CDS unit. Place wire ladder into CDS unit fixed to truck.
Empty Bucket into truck	Biological contamination	Wear gloves and wash hands afterwards with anti-bacterial soap.
	Bucket swings hitting employee	PPE, hard hat
Replace Basket	See Remove Basket	
Replace CDS lid	See Remove CDS Lid	

7 Safety Regulations

- 7.1 The safety regulations applying in the State or Territory are to be strictly adhered to.
- 7.2 The party performing the cleaning is to be fully aware of all applicable safety regulations and ensure that all staff are adequately trained in safe working practices.
- 7.3 These safety regulations include but are not limited to:
 - 7.3.1 Occupational Health and Safety Legislation
 - 7.3.2 Confined Spaces Legislation
 - 7.3.3 Motor Traffic Legislation
 - 7.3.4 Scaffolding and Lifts Regulations
 - 7.3.5 Health Regulations dealing with handling of hazardous substances
 - 7.3.6 Hazardous Substances Legislation
 - 7.3.7 Manual Handling Regulations
 - 7.3.8 Plant Operating Instructions
 - 7.3.9 Traffic and Pedestrian Safety Standards.
- 7.4 Adequate insurances should be carried to cover Public Liability and Worker Injury.

8 Environmental Responsibility

- 8.1 CDS Technologies is committed to improving the environment with its products. It is essential therefore that the process of cleaning the CDS is performed in a manner, which is environmentally responsible. Simply, there must not be any waste left on the site or anything other than the treated water discharged into the environment. The waste must be disposed of in a best practice manner with regard to environmental legislation.
- 8.2 The party performing the cleaning must be aware of all environmental legislation applicable to these operations and ensure that all employees are trained in work practices complying with the legislation.
- 8.3 This legislation includes but is not limited to:
 - 8.3.1 Local Government Regulations
 - 8.3.2 Clean Waters Act
 - 8.3.3 Waste Disposal Regulations
 - 8.3.4 Litter Regulations

9 Documentation

9.1 There are only 3 documents generated by the inspection and cleaning of the CDS.

9.2 Inspection Report

Appendix A to be completed for each inspection and copy forwarded to CDS owner.

9.3 Cleaning Report

Appendix B is to be completed for each clean and forwarded to CDS owner.

9.4 Damage or Non-Functionality Report

Appendix C is to be completed upon observance of any damage or extraordinary occurrence affecting the normal operation of the CDS. Examples of these are:

9.4.1 damaged screen

9.4.2 damaged exclusion bars

9.4.3 damaged lids

9.4.4 screen blockage

9.4.5 repeated inlet blockage, and such like.

CDS Technologies will discuss with the CDS owner any remedial action required.

9.5 CDS Data Sheet

Appendix D - This contains relevant information about each CDS and includes contact phone numbers for CDS Contact Personnel including after hours numbers.

9.6 Any damage or non-functionality of the CDS unit should be reported on a Damage or Non-functionality Report (Appendix C) to CDS/Rocla



Inspection Form

Appendix A

Date:

Cleaning Contractor
Company:

Phone No:

Fax No:

Inspection Person:

Unit Identification:

Percent cover of
floatables on surface:

State of the screen (if
visible):

Depth from base to lid:

Depth of accumulated
solids:

Percent full:

Comments:

Signed:

The report is to be faxed to the CDS owner.



CDS Clean Out Report

Appendix B

Date: _____

Cleaning Contractor Company: _____

Phone No: _____

Fax No: _____

Contact Person: _____

Unit Identification: _____

Address: _____

Method of Cleaning: _____

Time Taken: _____

Volume or mass of removed material: _____

Breakdown of material: _____ Oil Quantity in litres

_____ %silt and sand

_____ %litter

_____ %vegetation

Safety Procedures implemented in accordance with Hazard Analysis : Yes No

Comments: _____

Signed: _____

This report is to be faxed to the CDS owner.

Any damage or non-functionality of the CDS unit should be reported on a Damage or Non-functionality Report Appendix C to CDS /Rocla



Damage or Non-functionality Report

Date: _____

Unit Identification: _____

Address: _____

Company doing inspection/cleaning: _____

Contact Person: _____

Phone: _____ Fax: _____

Nature of damage or problem: _____

Signed: _____

This report is to be faxed to CDS/Rocla



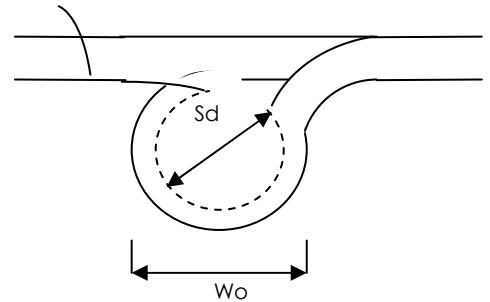
CDS Unit Data Sheet

Appendix D

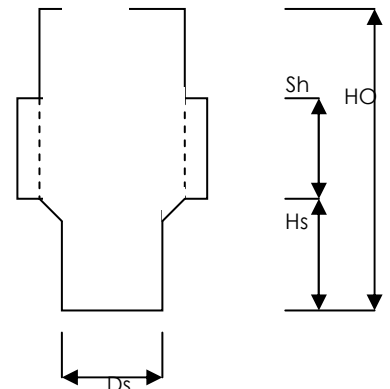
Name:	_____	Unit Name:	_____
Address:	_____	Unit No:	_____
	_____	Unit Address:	_____
Contact Person:	_____	Site:	_____
Phone:	_____	Truck Instruction:	_____
Fax:	_____	Keys:	_____
Mobile:	_____	Lid Type:	_____
CDS Rep:	_____	Lid Size:	_____
Phone:	_____	Emptying Method(s):	_____
	_____	Oil removed: Yes/No	_____
After Hours:	_____	Date Operational:	_____

Technical Data

Screen diameter (Sd) = _____
 Screen height (Sh) = _____
 Over all height (H0) = _____
 Over all width (Wo) = _____
 Sump diameter (Ds) = _____
 Sump Height (Hs) = _____
 Sump total volume (Vt) = _____
 Unit weight of solid material (γ) 800t/m³
 Estimate weight of full basket = _____



Depth from Lid to Pollution	Volume m ³	Weight tonnes	Percent Full
Screen bot			> 100
Sump Top			100
			90
			80
			70
			60
			50
			40
			30
			20
			10
Base =	0.00	0.00	Base Sump



ADDITIONAL NOTES ON CLEANOUT PROCEDURES ETC

