City of Portland, Oregon

Water Pollution Control Facilities (WPCF) Permit For
Class V Stormwater Underground Injection Control Systems

Permit Number: 102830

Decommissioning Procedure

Stormwater Underground Injection Control

March 24, 2015

Prepared By:
City of Portland, Bureau of Environmental Services

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TABLE OF CONTENTS

Appendices

Attachments

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EXECUTIVE SUMMARY

This UIC Decommissioning Procedure provides the general steps and requirements for decommissioning (i.e., taking out of operation) Class V public underground injection control systems (UICs) in the City of Portland. This procedure is a requirement of the Water Pollution Control Facility (WPCF) permit that the Oregon Department of Environmental Quality (DEQ) will issue to the City of Portland on June 1, 2015 (2015 Permit). All City personnel and contractors conducting UIC decommissioning activities should comply with this procedure to the extent that the requirements apply to the nature and scope of their work.

The procedure includes the following twelve steps:

Step 1: Describe General Characteristics of UIC to be Decommissioned

Step 2: Conduct Site Inspection of UIC; Note Any Contaminants of Potential Concern

Step 3: Determine Sampling Requirements

Step 4: Collect Required Samples

Step 5: Review Sample Analytical Results

Step 6: Prepare Follow-up Site-Specific Sampling Plan (if required)

Step 7: Prepare Site-Specific Contaminated Media Management Plan (if required)

Step 8: Develop Alternative Stormwater Management Design for UIC

Step 9: Prepare and Submit DEQ UIC Pre-Closure Notification Form

Step 10: Prepare Decommissioning Scope of Work and Select Contractor

Step 11: Decommission UIC (Field Procedure)

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Step 12: Prepare Closure and Decommissioning Report

Key personnel for the UIC permit program and their areas of responsibility are identified in Section 3.0

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Section 1

1 Introduction and Organization

1.1 Purpose and Applicability

The purpose of this document is to provide the procedure and general requirements for decommissioning Class V public underground injection control systems (UICs) in the City of Portland. The procedure is a requirement of the Water Pollution Control Facility (WPCF) permit that the Oregon Department of Environmental Quality (DEQ) will issue on June 1, 2015 (2015 Permit). It is part of the City of Portland UIC Management Plan (March 24, 2015). This will be the second WPCF permit issued to the City; the first was issued in June 2005.

The procedure applies to standard City-owned Class V UICs identified for decommissioning. As defined by the DEQ permit, a standard City UIC is generally considered to be a UIC constructed in accordance with City construction specifications. Decommissioning of non-standard UICs will generally follow this procedure, but may require additional information in a site-specific closure work plan. Examples of non-standard UICs are those that intercept groundwater or have been determined to have adversely impacted soil or groundwater.

This procedure has been developed for use by the designated project managers from all City bureaus. All City personnel and contractors conducting decommissioning activities must comply with the procedure to the extent that the requirements apply to the nature and scope of their work.

1.2 Regulatory Requirements

Under Oregon Administrative Rules (OAR) 340-044, DEQ developed and will issue its second WPCF permit to the City of Portland in June 2015. The permit regulates the construction, operations, and maintenance (including alterations and decommissioning) of all of the City's Class V public UICs. The City currently has approximately 9,000 UICs that collect stormwater from public rights-of-way and discharge it to the subsurface. UIC structures are most prevalent in the eastern portion of the City, where the subsurface soils support greater drainage and infiltration rates. For many areas east of the Willamette River, UICs are the only form of stormwater disposal available.

Under the 2015 WPCF permit, the City must identify UICs that do not meet permit conditions or that are prohibited by OAR 340-04409915(2). City will continue to track, update, and refine information related to the UIC system as described in the City's *UIC Management Plan* (UICMP, 2015), Chapter 2 *Best Management Practice* (BMP), SA-1 *Inventory and Evaluation of City-owned UICs*. This information will be used to identify and apply the management practices specified in the UICMP to ensure the UIC system meets permit requirements.

If a City-owned UIC does not meet the criteria provided in the WPCF permit or found to endanger human health or the environment and cannot be upgraded or altered to meet the

criteria, then the UIC system must be decommissioned and stormwater managed using an alternative method. Alternative stormwater management methods must be consistent with watershed health goals and developed in accordance with the stormwater management and disposal hierarchy established in the City's *Stormwater Management Manual* (SWMM).

DEQ and the Oregon Water Resources Department (WRD) have regulatory requirements for the decommissioning of subsurface wells. UICs must be decommissioned in a manner that complies with the federal and state prohibition of fluid (stormwater) movement, as outlined in 40 CFR 144.12 and 144.82a and OAR 340-44-0040. Oregon well-abandonment standards are designed to prevent contamination of the well or aquifer beneath the well by surface and subsurface leakage that may carry harmful chemicals or bacteria.

This Decommissioning Procedure was developed using the following guidance and reference documents.

- WPCF Permit (No. 102830) for Class V Stormwater Underground Injection Control Systems; Schedule B, Section 6 and Schedule D, Section 5 (DEQ, June 2015)
- Oregon Administrative Rules (OAR) 340-044-0040: Decommissioning and Conversion Requirements for Underground Injection Systems
- Federal 40 CFR 144.12 and 144.82a: Underground Injection Control Regulations for Class V Injection Wells
- *Guidelines for Characterizing, Closing and Abandoning Shallow Injection Wells* (EPA Region 10 closure manual, March 2001)
- *Underground Injection Wells for Stormwater Best Management Practices Manual* (Oregon Association of Clean Water Agencies, January 2003)
- *Closure of an Injection System Fact Sheet*, Oregon Department of Environmental Quality (December 2014)
- City of Portland, Bureau of Environmental Services: UIC decommissioning work plans approved by DEQ, as follows:
  - Underground Injection Control Decommissioning Work Plan, SE 60th and Steele, BES Project No. 7097, April 20, 2005
  - Shallow Underground Injection Control Decommissioning Work Plan and Closure Report, BPA St. Johns Substation, BES Project No. 6781, November 2003

Oregon Department of Environmental Quality Class V Pre-Closure Notification Form (DEQ\WQ\document # UICclosure-1000, December 2014)

2 UIC Decommissioning Procedure and Work Sequence

Section 2

This section provides the procedure and work sequence for decommissioning Class V public UICs within the City of Portland.

NOTE: If the City has not previously provided UIC pre-closure information in the *UIC Management Plan Annual Report* (due in November), a Class V **UIC Pre-Closure Notification Form** shall be submitted to DEQ at least 30 days before conducting any onsite physical decommissioning work. The form is provided as Attachment 2 to this procedure. The procedure steps identified below include gathering the information needed to fill out and submit the form.

UIC Decommissioning Procedure and Work Sequence

Step 1	**Obtain and Document General Information of UIC Facility to be Decommissioned.**	
	Action/Information Required	**Responsibility**

	Obtain the following information, as necessary and appropriate:
	• UIC Facility name (legal name and/or common name)
	• Owner/operator of UIC—include legal contact and contact information (phone, email, fax)
	• Location of UIC including
	  • Address of UIC (physical and mailing address if available)
	  • Latitude and longitude
	• UIC BES Hansen Node number (if available and registered)
	• DEQ Identification Number
	• Identify commercial or industrial facilities that may discharge to the subject UIC (also see Step 2)
	  • Identify potential facilities using DEQ's Facility Profiler (http://deq12.deq.state.or.us/fs20/),
	  • Review DEQ's Environmental Cleanup Site Information (ECSI) (http://www.deq.state.or.us/lq/ECSI/ecsi.htm),
	  • Leaking Underground Storage Tank (LUST) database (http://www.deq.state.or.us/lq/tanks/lust/LustPublicLookup.asp), and other relevant databases.
	  • Nature of business using UIC (if any); SIC/NAICS code if known
	• Year of construction/installation
	• UIC design and size (sump, drywell, floor drain, septic tank, drill hole, other)
	• UIC construction depth (total depth of UIC from ground surface and estimated location of perforations)
	• Geologic (soil type) and hydrologic conditions (depth to groundwater)
	• Water level and sediment depth present in the UIC (referenced to bottom of UIC)
	• Vicinity and site maps
	• Zoning designation
	• Size and type of drainage area
	• Average annual stormwater flow into UIC, based on drainage area
	• Tested UIC infiltration design capacity
	Note: This information will be used to complete and submit the DEQ UIC Pre-Closure Notification Form (Attachment 2). (See Step 9.)
	Note: Please contact UIC Program staff and the BES Coordinated Site Analysis (CSA) team to obtain the information required in this step.
		Designated Project Manager in coordination with BES CSA team and BES UIC Project Manager

Step 2	**Conduct Site Inspection of UIC; Note Any Contaminants of Potential Concern**	
	Action/Information Required	**Responsibility**
	A detailed UIC Site Inspection Checklist has been developed for this activity (see Attachment 3). Experienced BES CSA or UIC staff should perform the inspection. The purpose of the inspection is to observe the UIC and surrounding area to identify potential pollutant sources (e.g., utility poles, land use activities [gas stations, auto shops, etc.]) that may discharge to the subject UIC and identify potential constraints for UIC sampling or decommissioning activities. As noted on Attachment 3, contact BES CSA staff to have them conduct a review of relevant city, state, and federal databases to identify DEQ Environmental Contaminant Site Information (ECSI) sites, State Fire Marshal hazardous substance lists, spill reports, leaking underground storage tanks (LUSTs), SARA Title III facilities, and other contaminated sites that could have a direct impact on site drainage. Current and past land use history at the site, as well as interviews with current and past staff, can be used to help identify any contaminants of potential concern.	Designated Project Manager in Coordination with BES CSA or BES UIC Project Manager
Step 3	**Determine Sampling Requirements**	
	Action/Information Required	**Responsibility**
	Samples to be collected only when the Site Inspection for the UIC determines: • a potential contamination source is identified within the UIC drainage area during the Level 1 Environmental Assessment, • the UIC contains free product, or • the UIC is located within 2-year time of travel (if determined) or 500 feet of a public or private drinking water well or irrigation water supply well.	Designated Project Manager in coordination with BES Water Pollution Control Lab (WPCL), BES CSA, or contractor
Step 4	**Collect Samples as Required**	
	Action/Information Required	**Responsibility**
	Collect water and sediment sample from within the subject UIC as determined by the Site Inspection, in accordance with Standard Operating Procedures included in **Appendix A—*UIC Decommissioning Sampling and Analysis Plan***, and submit them to the BES Water Pollution Control Laboratory (WPCL)—or the appropriate lab--for required analysis. It is recommended that samples be collected and submitted no later than 30-days prior to decommissioning activities so that analytical results are available to assure proper management of any materials removed from the UIC and to assess if the subject UIC has adversely impacted groundwater quality.	BES CSA in coordination with WPCL

Step 5	Review Sample Analytical Results	
	Action/Information Required	**Responsibility**
	Compare analytical results with applicable screening criteria identified in Appendix A--and City of Portland's batch discharge requirements. • If all sample results are **below** applicable screening standards, skip steps 6 and 7 and go to step 8. • If any sample results are **above** applicable screening standards, determine based on available data and best professional judgement if operation of the UIC has likely adversely impacted soil or groundwater quality (see Appendix A) or if additional investigation is needed (see Step 6). Potential impacts will be evaluated using DEQ's risk-based protocols or other applicable DEQ risk assessment guidance. Detection of soil or groundwater contamination from the UIC will be reported to DEQ within fourteen (14) days of observation or receipt of sampling results. Go to steps 6 and/or 7 below as appropriate.	WPCL Staff BES CSA staff UIC Program staff
Step 6	**Prepare Follow-up Site-Specific Sampling Plan (If Required—See Step 5 Above)**	
	Action/Information Required	**Responsibility**
	Any UIC sample results significantly above applicable screening criteria may require a site-specific follow-up sampling plan. If sampling results are above criteria--consult with UIC program staff and BES Coordinated Site Analysis team before decommissioning activities commence. Any required follow-up sampling plan should be approved by DEQ before additional sampling begins. A registered professional geologist, engineering geologist, or professional engineer must oversee development of the plan. If UIC conditions (e.g. non aqueous phase liquid) or sediment/water analytical results indicate that groundwater or soil outside the UIC may have been impacted at a level that would adversely impact the beneficial uses of groundwater: • BES will determine, in consultation with DEQ, if any additional investigation or response actions are required for compliance with the WPCF permit (see UIC Management Plan—Evaluation and Response program element). • BES will, if appropriate, prepare a site-specific Sampling and Analysis Plan to assess potential adverse impacts to groundwater from the UIC (see UIC Management Plan—Section 4.4). The BES UIC, WPCL and CSA staff will assist, as appropriate, in preparing and implementing follow-up sampling plan requirements.	Designated Project Manager in coordination with WPCL Staff, BES CSA staff and UIC Program Staff

Step 7	**Prepare Site-Specific Contaminated Media Management Plan if Required**	
	Action/Information Required	**Responsibility**
	If UIC samples detect contaminant concentrations above naturally occurring background concentration, materials removed from the subject UIC during decommissioning must be managed in accordance with applicable solid and hazardous waste regulations. A Contaminated Media Management Plan (CMMP) describing how impacted media will be excavated, handled, stored, transported, or disposed off-site should be prepared, if needed. This plan should specify where media will ultimately be disposed and include authorization for disposal. A Waste Profile Sheet for solid waste disposal at a DEQ permitted landfill is provided as **Attachment 4**. This form can also be obtained at www.wmsolutions.com. Contact BES CSA Team at 503-823-7881 to obtain CMMP form and instructions on developing a CMMP. The CMMP will be provided to the contractor performing the onsite decommissioning work (see Step 10). Consult with DEQ, as necessary, during preparation of a CMMP.	BES CSA Team and UIC Project Engineer
Step 8	**Develop Alternative Stormwater Management Design for UIC**	
	Action/Information Required	**Responsibility**
	Prior to UIC decommissioning, a plan to manage the stormwater currently discharged to the UIC system should be developed (UIC replacement, swale, etc.) and implemented. This "alternative plan" will assure proper stormwater management and controls. Alternative stormwater management design should consider, but not be limited to, the following: • Stormwater management and disposal hierarchy established in the *Stormwater Management Manual* (Attachment 1), • BES policy, • Protection of human health and the environment, • Permit requirements, • Watershed benefits, • Compliance with applicable federal, state and local standards, • BMP short and long-term effectiveness, stormwater flow, long-term reliability, constructability, implementability, and cost. The BES Chief Engineer must approve the alternative stormwater management design(s) prior to UIC decommissioning. Stormwater management facilities must be properly implemented before on-site decommissioning activities commence.	Designated Project Manager UIC Engineer with BES Engineering Services (concept and final design)
Step 9	**Prepare and Submit DEQ UIC Pre-Closure Notification Form**	
	Action/Information Required	**Responsibility**
	The DEQ UIC Pre-Closure Notification Form (Attachment 2) for the UIC must be filled out and submitted to DEQ at least 30 days prior to decommissioning a UIC. For any additional information, contact Bethany Nabhan at 503-823-5524, or John O'Donovan at 503-823-7881.	BES CSA Team or Project Manager

Step 10	Prepare Decommissioning Scope of Work and Select Contractor	
	Action/Information Required	**Responsibility**
	BES Engineering (Designated Project manager) and the UIC Project Manager prepare a scope of work for the bid package. The scope of work will be based on the field procedur identified in Step 11. A contractor is selected in accordance with BES contract procurement procedures. In accordance with BES construction requirements, the selected contractor will prepare and submit a site-specific work plan to BES that includes the following, as necessary and appropriate: decommissioning work methods and sequence of work, a health and safety plan, a transportation management plan, a contaminated medial management plan, an emergency response plan, and any other information requested or required. The site-specific work plan must be consistent with the field procedure shown in Step 11 and with any other project specifications. BES approves the contractor work plan.	CSA on-call contracts BES Engineering Services if required
Step 11	**Decommission UIC (Field Procedure)**	**Responsibility**
	The following steps show the general sequence of work for decommissioning standard public UICs. All UICs will be decommissioned in accordance with this procedure and OAR 340-044-0040: *Decommissioning and Conversion Requirements for Underground Injection Systems*. <u>Before beginning onsite decommissioning construction work</u> ensure the following pre-decommissioning activities have been completed: 1) Confirm with BES CSA or UIC staff that: a) any required sediment, water, or soil sampling (in accordance with Step 4 of this procedure) has been completed, b) Any sampling results have been evaluated to assess if groundwater quality is impacted (see Appendix A), and c) Sediment and water has been characterized for disposal purposes. Detection of soil or groundwater contamination from the UIC must be reported to DEQ within fourteen (14) days of observation or receipt of sampling results. 2) Prior to decommissioning a UIC, ensure that approved temporary or permanent alternative stormwater management facilities are in place in accordance with City standard construction specifications. After coordination with CSA, proceed with the following: 1) Remove sediment, soil, and water from, or associated with, the UIC (e.g., sediment manhole, lines, inlets) and properly handle, store, transport, and dispose of these materials in accordance with all federal, state, and local regulations and requirements (see Contaminated Media Management Plan). 2) For standard city UICs—remove top cone and first solid concrete section to a depth of approximately 8-10 feet below ground surface—or to a depth	Designated Project Manager or Contractor

	approved by the Chief Engineer. Backfill UIC void with Controlled Low-Strength Materials (CLSM), concrete slurry, or other materials appropriate for the site conditions that meet DEQ and WRD requirements. 3) Cover the top of the backfilled UIC with approved geo-fabric material to extend beyond outside of UIC and surrounding backfill. Backfill excavation (approximately 8-10 feet below the ground surface) to access the UIC to the appropriate grade using materials approved by the Chief Engineer. Clean road-base rock material or pea gravel—or other material, may be placed to an appropriate depth for future utility or road construction, in accordance with City standard construction specifications or approved by the Chief Engineer. Compact backfill material to design specifications and pave over. 4) Render the UIC system completely inoperable by disconnecting, plugging, and sealing all associated UIC piping in accordance with City standard construction specifications. Wherever feasible and practical (will not cause significant impacts to project budget and schedule or significant impacts to traffic flow), pipe leads directly associated with the UIC and/or sedimentation manhole may be removed during decommissioning activities. Any associated piping or structures left in place will be noted and clearly identified on the City's mapping systems. This information must be documented in the UIC Closure Report and Hansen Database, as required in Step 12 below. 5) Prepare a closure report at the conclusion of decommissioning activities (Step 12) and submit to the UIC program staff. **Note:** If dewatering is required, it may be necessary to apply for a batch discharge permit (see Attachment 5) from the City of Portland and obtain approval prior to decommissioning or dewatering activities. This permit can be obtained from BES's CSA team. Contact Bethany Nabhan at (503) 823-5524 or Ann O'Roke at (503) 823-7230.	
Step 12	**Prepare Closure and Decommissioning Report**	**Responsibility**
	At the conclusion and closeout of each UIC decommissioning project, a UIC closure report will be prepared by BES staff and filed in the UIC Program filing system, per permit requirements. The closure report should include the following information: • Brief summary of UIC condition prior to closure--reason for decommissioning. • Brief discussion of UIC closure actions taken to ensure the UIC is no longer injecting fluids into the subsurface. • Documentation of proper disposal of contaminated media. • Certify by a registered professional geologist, engineer, or approved designated person that the UIC has been properly closed. • Pertinent documentation of UIC decommissioning (maps, photographs, waste disposal permits if required, transportation manifests, analytical data, etc). UIC decommissioning information will be documented by the UIC program. **http://www.deq.state.or.us/wq/uic/docs/forms/preclosure039.pdf**	Designated Project Manager in coordination with BES Engineering and BES UIC Project Manager UIC Program Staff

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3 Key Personnel for UIC Decommissioning

Section 3

This section presents the key personnel for the UIC decommissioning activities and their areas of responsibility. The UICMP (Section 7) presents the staff roles and responsibilities for the UIC Program leadership and major program elements.

KEY PERSONNEL AND AREAS OF RESPONSIBILITY				
Name	**Bureau**	**Contact Phone**	**Email Address**	**Areas of Responsibility**
Bill Ryan	BES	503-823-7203	bill.ryan@portlandoregon.gov	*Engineering Services Chief Engineer* Review and approve UIC corrective action design, UIC decommissioning design and construction documents. Approve decommissioning backfill materials.
Barbara Adkins	BES UIC	503-823-5737	barbara.adkins@portlandoregon.gov	*UIC Program Manager* Develop, recommend and oversee implementation of UIC program and policies. Ensure UIC Program management and regulatory requirements are identified, implemented, and maintained in accordance with BES policy and the WPCF permit. Liaison with DEQ and other interested parties regarding the UIC Program. Provide citywide coordination of UIC program requirements. Review and approve UIC plans and documents; ensure adequate resources are allocated to UIC Program
Joel Bowker	BES UIC	503-823-6997	joel.bowker@portlandoregon.gov	*System Monitoring* Implement System Monitoring and Evaluation and Response program elements to meet permit requirements and protect groundwater. Develop sampling and analysis plans for decommissioning and corrective actions. Coordinate and communicate sampling and analytical requirements to field (CSA or WPCL) and analytical laboratory staff; and assist with data evaluation and reporting. *System Management* Implement UIC System Management program element to meet permit requirements and protect groundwater. Develop and main UIC Database. Prepare annual UICMP report and associated plans/reports as required. Assist in preparation of corrective action strategies and priorities. Coordinate and communicate UIC Program and WPCF permit needs (stormwater sampling, source investigations, response actions) with applicable BES UIC personnel. *Corrective Actions* Develop UIC corrective action strategies and plans. Develop and implement UIC decommissioning process and procedures. Prepare annual reports and plans as required.
Tracy Rauscher	BES UIC	503-823-7457	tracy.rauscher@portlandoregon.gov	

KEY PERSONNEL AND AREAS OF RESPONSIBILITY				
Name	**Bureau**	**Contact Phone**	**Email Address**	**Areas of Responsibility**
Bethany Nabhan	BES CSA	503-823-5524	bethany.nabhan@portlandoregon.gov	*Coordinated Site Analysis Team*. Assist with preparation of DEQ UIC Pre-Closure Forms and Contaminated Media Management Plans. Provides general direction for UIC site assessments.
John O'Donovan	BES CSA	503-823-7881	john.odonovan@portlandoregon.gov	*Coordinated Site Analysis Manager* Review and approve CSA plans and procedures as required.
Ann O'Roke	BES WPCL	503-823-7230	ann.oroke@portlandoregon.gov	Review and approve water batch discharge requests and permits. Assist with water quality sampling and analysis requirements.

Appendix A

UIC DECOMMISSIONING SAMPLING AND ANALYSIS PLAN

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UIC DECOMMISSIONING
SAMPLING AND ANALYSIS PLAN

A 1.0 PURPOSE

This sampling and analysis plan (SAP) presents the procedures that BES staff and contractors will follow for collecting and analyzing sediment and water samples prior to decommissioning city-owned underground injection control systems (UIC). Sediment and water samples will be collected from a UIC during decommissioning when the UIC meets one the following criteria:

- a potential contamination source is identified within the UIC drainage area during the Level 1 Environmental Assessment,
- the UIC contains free product, or
- the UIC is located within 500 feet of a domestic well.

This purpose of this SAP is to assure samples are collected in a consistent manner prior to decommissioning UICs. This plan was originally developed in response to the City of Portland Water Pollution Control Facilities (WPCF) 2005 permit, issued by the Oregon Department of Environmental Quality (DEQ) (No. 102830), and complies with the requirements of the 2015 permit issued by DEQ.

A 2.0 SCOPE AND APPLICABILITY

The UIC decommissioning sampling strategy, presented in this document, was developed based on conversations between the UIC Program, BES Coordinated Site Analysis (CSA) team, BES Water Pollution Control Laboratory (WPCL), Engineering Services, and DEQ. The primary purposes of the sampling strategy are to meet permit requirements, assure proper management and disposal of any material (*e.g.*, sediments or water) removed during decommissioning activities, and provide guidelines for consistent data interpretation. This sampling and analysis plan should be used when the Site Inspection determines sediment and water samples are required prior to decommissioning a UIC.

The 2015 WPCF permit requires the City to prepare other plans describing how permit conditions will be implemented. This SAP should be used in conjunction with the following documents, as necessary and appropriate:

- *Decommissioning Procedure for Underground Injection Control Systems*. City of Portland, March 2015.
- *Stormwater Discharge Monitoring Plan – consists of Sampling and Analysis Plan and Quality Assurance Project Plan.* City of Portland, March 2015.
- *UIC Management Plan*. City of Portland, March 2015.

A 3.0 SAMPLE COLLECTION PROTOCOLS

This SAP specifically addresses anticipated soil and water sampling to be performed in City-owned UICs prior to UIC decommissioning activities.

- If it is known that a UIC will be decommissioned it should not be cleaned prior to allow the collection of water or sediment samples from the UIC.
- The field sampling and decommissioning work should be conducted under a site-specific health and safety plan.

A 3.1. Sediment Sampling

Collect one (1) sediment sample from inside the UIC, in accordance with appropriate BES Standard Operating Procedures (SOP) for soil or sediment sampling, if sediment is present in sufficient amount. SOPs include:

- UIC Program SOP #1.00 – Sediment Sample Collection Procedures for UIC Decommissioning (attached below); or
- BES Water Pollution Control Laboratory (WPCL) Field Operations SOP #5.01a – Sampling of Soil and Sediment (modified as needed for UIC sampling).

If sediment is not present[1], or there is an insufficient volume for analysis, no sample will be collected. It is not recommended that soil samples be collected outside the UIC unless specifically required by DEQ.

The sample will be submitted to the City of Portland's Water Pollution Control Laboratory (supported by City-approved contract laboratories) for analyses (see Section 3.4).

A 3.2. Water Sampling

Collect one (1) water sample from the UIC, in accordance with appropriate BES SOP(s) for water sampling, if standing water is present within the UIC[2]. SOPs include:

- UIC Program SOP #2.00 – Water Sample Collection Procedures for UIC Decommissioning (see attached); or
- Field Operations SOP #2.02b Grab Sample Collection with Stainless Steel Beaker (modified as needed for UIC sampling);
- Field Operations SOP #2.02c – Grab Sample with a Peristaltic Pump (modified as needed for UIC sampling)

If water is not present[3], or there is an insufficient volume for analysis, no sample will be collected.

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[1] If there is not enough sediment in the UIC to collect a sample, consult with UIC Program staff for additional sampling that might be required. At this time, for UICs located in and receiving drainage from City right-of-ways, it is not recommended that soil samples be collected outside the UIC.

[2] To the extent practicable, the field team should assess whether the standing water is a) stagnant water held by the bottom of the sump; b) groundwater (*i.e.*, water level within perforated zone of UIC); or c) stormwater (i.e., slowly infiltrating UIC).

[3] If there is not enough water in the UIC to collect a sample, additional sampling is not required for UICs located in and receiving drainage from City right-of-ways.

The sample will be submitted to the City of Portland's Water Pollution Control Laboratory (supported by City-approved contract laboratories (*e.g.*, Test America) for analyses (see Section 3.4).

A 3.3. Additional Sampling

UIC Program, BES Coordinated Site Analysis (CSA), or Field Operations (FO) teams may recommend additional sampling be performed on a case-by-case basis, based on the results of a site inspection or other information reviewed. For example, UICs that collect runoff from industrial or commercial facilities may warrant additional analytical testing, based on pollutants known to be present or suspected at those facilities. No additional sampling should be undertaken without discussion with the decommissioning project manager and UIC Program staff. In addition, field staff may modify the field sampling methods, as needed and appropriate, to optimize the potential of collecting a representative sample. Sampling procedures will be documented in the *Daily Field Report*. Changes or deviations from the SOPs will be discussed in the UIC closure report.

A 3.4. Recommended Sample Analysis

Table A-1 presents the recommended sample containers, volumes, preservation requirements, and holding times based on standard EPA-approved methodologies for decommissioning sampling. The analytical laboratory (*e.g.*, WPCL and Test America) will provide all appropriate sample containers and supplies (*e.g.*, bottle labels, custody seals, coolers) required for sample collection and transport.

A 3.4.1. Sediment Analysis

Analyze one-sediment sample collected from within the UIC (if adequate amounts are available for analyses) for the following:

- Total petroleum hydrocarbons (TPH). TPH-Dx (*i.e.*, reported as diesel, lube oil, and heavy oil) and TPH-Gx (gasoline) by Northwest Methods[4]. Because sediment may contain organic matter that can inadvertently influence sample results, the use of a silica gel cleanup, or equivalent cleanup is recommended for NWTPH-Dx analyses. The analytical chemist will determine the need for sample cleanup based on the results of the chromatogram. Silica gel cleanup removes potential polar organic compound interferences from naturally occurring organic matter (vegetable [pine needles, decomposing leaves, etc] and animal products [oils, sugars, and fatty acids]) but does not affect petroleum hydrocarbons, since most are non-polar. Silica Gel Cleanup is recommended for sediments because it removes contributions that are due to algae and decomposing organic matter.

- Polycyclic Aromatic Hydrocarbons (PAHs), Phthalates, and Pentachlorophenol. DEQ is currently requiring analyses of polycyclic aromatic hydrocarbons (PAHs). Laboratory methods will strive to achieve the lowest practical method detection limits (MDLs) and method reporting limits (MRLs).Sample cleanup (*e.g.*, silica gel) should be performed as determined necessary based on the results of the chromatogram evaluated by the analytical chemist on the sediment sample and associated quality control samples. While DEQ is not currently requiring analyses of phthalates or pentachlorophenol, we recommend these be included in the EPA 8270-SIM analyses, due to the frequent detection of these compounds in the stormwater discharge monitoring program. Target method reporting limits (MRLs) for these compounds are presented in Table A-2.

[4] See http://www.deq.state.or.us/wmc/tank/newtph.htm for a description of Northwest TPH Methods.

- Metals. RCRA-8 metals (*i.e.*, arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver), copper, and zinc by EPA Methods 3051/6020. Target MRLs for these compounds are presented in Table A-3.

- Toxicity Leaching Characteristic Procedure (TCLP) or the Synthetic Precipitation Leaching Procedure (SPLP) may be needed for disposal of sediments in a municipal (sanitary) landfill. One of these methods should be considered if the total metal concentration in sediment is greater than 20 times EPA's TCLP concentration for determining if a waste should be considered a RCRA regulated characteristic waste. The TCLP (EPA SW-846 Method 1311) is a more aggressive extraction developed to estimate the mobility of specific contaminants disposed of in municipal landfills, and is generally the analysis required by the landfill. The SPLP (EPA SW-846 Method 1312) was developed to assess the leaching potential of contaminated material when exposed to rainfall. If either leaching procedure is acceptable to the landfill, it is recommended the SPLP be used. ***Check with the landfill to determine if the analysis is required*** or if knowledge based on the BES Inverness sediment is acceptable for disposal.

A 3.4.2. Water Analysis

Analyze one water sample collected from within the UIC (if adequate amounts are available for analyses) for the following:

- PAHs, phthalates, and pentachlorophenol by EPA Method 8270-SIM. Target MRLs for these compounds are presented in Table A-2. The analytical chemist will determine the need for sample cleanup based on the results of chromatogram.
- RCRA-8 metals (total metals), copper and zinc (total and dissolved metals) by EPA Methods 200.8. Target MRLs for these compounds are presented in Table A-3.
- Oil and grease by EPA Method 1664.
- Total suspended solids (TSS) by Standard Method SM 2540 D.

If petroleum product (i.e., non-aqueous phase liquid (NAPL)) is observed in the UIC, a sample will be collected and analyzed for volatile organic compounds (VOCs - EPA method 8260), semivolatile organic compounds (SVOCs - EPA method 8270), hydrocarbon characterization (TPH-HCID), and polychlorinated biphenyls (PCBs - EPA Method 8082).

A 4.0 QUALITY ASSURANCE & QUALITY CONTROL

Standard laboratory QA/QC procedures will be followed for this project. General laboratory QA protocols include good laboratory practices, SOPs for sample handling, analysis, and data management, training programs for personnel, and analytical QC.

Laboratory QC is used to assess analytical performance, including the precision and accuracy of the analytical methods used, and includes system and matrix samples. System QC samples serve to verify that the analytical system is functional, clean, and calibrated. Matrix QC samples are used to evaluate potential effects from the sample matrix. Specific procedures and frequencies for analytical quality control samples are detailed in the WPCL and TA Quality Manuals (City of Portland, 2013; TA, 2012) and specific analytical SOPs. Guidelines for the minimum laboratory QC analyses are summarized in Table 4.1.

Table 4.1 Guidelines for Minimum QC Samples for Laboratory Analysis

System QC			Matrix QC		
Method Blank	**LCS[b] or LFB[c]**	**CCV[b, c] and CCB[c]**	**Duplicate[c]**	**MS[c] and MSD[d]**	**Surrogate[b]**
1 per batch[a]	1 per batch	Method-specific	1 per batch	1 per batch	Each sample

Notes:

[a] Laboratory batches are 10 or 20 samples, depending on the method
[b] Organics
[c] Inorganics
[d] For organics, duplicate precision is calculated on the MS and MSD pair

LCS – Laboratory Control Sample
LFB – Laboratory Fortified Blank
CCB – Continuing Calibration Blank
CCV – Continuing Calibration Verification
MS/MSD – Matrix Spike/ Matrix Spike Duplicate

Laboratory methods will strive to achieve the lowest practical method reporting limits (MRLs). The target MRLs for water and sediment samples are presented in Tables A-2 and A-3. If these limits cannot be met for non-detected analytes in a sample, the laboratory report will note why these limits were not met (*e.g.*, matrix interference) where appropriate.

A 5.0 DATA INTERPRETATION

The analytical sample results will be interpreted by UIC Program or CSA staff to characterize materials removed from the UIC for appropriate disposal and to evaluate whether operation of the UIC may have adversely impacted groundwater quality. Data interpretation is discussed in the following sections.

A 5.1. Sediment Results

A 5.1.1. Adverse Impacts to Groundwater

DEQ is currently requiring that soil/sediment sample results be compared to EPA Region 9 Regional Screening Levels[5] (RSLs) for soil "protection of groundwater" using a dilution/attenuation factor (DAF). DEQ is requiring that a DAF of 1 (*i.e.*, no dilution) be used when groundwater is present in the UIC or within 10 feet of the bottom of the UIC. DEQ allows the use of a DAF of 20 when the separation distance (*i.e.*, distance between groundwater and the bottom of the UIC) is greater than 10 feet to assess if groundwater may be impacted. Sediment sample results should also be compared to the Risk-Based Concentrations (RBCs) presented in DEQ's guidance (2003) for *Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites*. DEQ's RBCs for potential leaching of contaminants in soil to groundwater are based on a DAF of approximately 60.

Metal concentrations may also be compared to Development of Oregon Background Metals Concentrations in Soil, Technical Report, DEQ (2013)[6] values, as appropriate. CSA typically refers to Table for background metal soil concentrations.

The analytical data presentation and subsequent evaluation should focus primarily on pollutants, presented in Table 1 of the permit and other pollutants based on the Environmental Assessment. BES considers the EPA RSL and DAF values to be too conservative for many situations. The uncertainties associated with comparing detected concentrations to conservative screening values should be presented with the data comparison provided in the closure evaluation.

A 5.1.2. Waste Disposal

The primary purpose of the sediment sampling is for waste characterization to assure appropriate management and disposal of any material removed from the UIC during closure activities. If any sediment sample concentrations are above the waste disposal criteria for disposal to a DEQ permitted solid waste landfill (*e.g.*, Waste Management-Hillsboro Landfill), BES will notify DEQ, as required, by Oregon statute.

A 5.2. Water Results

A 5.2.1. Adverse Impacts to Groundwater

The WPCF permit requires stormwater discharged to City-owned UICs meet concentrations protective of drinking water. If the action levels, defined in Table 1 of permit, are met, groundwater should by definition not be adversely impacted by stormwater discharges. Water sample results should be compared to the action levels presented in Table 1 of the permit. When stormwater concentrations exceed a Table 1

[5] EPA Region 9 RSLs can be obtained from http://www.epa.gov/region9/

[6] Development of Oregon Background Metals Concentrations in Soil, Technical Report, DEQ (2013) can be obtained at http://www.deq.state.or.us/lq/pubs/docs/cu/DebORbackgroundMetal.pdf.

pollutant action level, the City must take corrective action with respect to the UIC(s) that exceeded the action level as described in Schedule A of the permit, condition 6 and Section 4 of the *UICMP*.

The comparison should be limited to only those compounds listed in Table 1 of the permit. BES believes this direct comparison may be overly conservative, since the UIC water concentrations are not representative of stormwater water discharged from the UIC to the subsurface. The water samples are most likely representative of stagnant water in direct contact with sediments collected in the bottom of the UIC sump. Water concentrations may also be compared to the RBCs presented in DEQ's guidance (2003) for *Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites*. The uncertainties associated with comparing detected concentrations to conservative screening values should be presented (*e.g*., see page B-52 of DEQ's guidance document) with the data comparison (i.e., written closure report).

A 5.2.2. Waste Disposal

The primary purpose of water sampling is to assure appropriate characterization and disposal of any water (or other liquids) removed during closure activities. Results should be compared to the BES batch discharge requirements (*Decommissioning Procedure for UICs*—Step 3). Typically any water (or other liquids) will be removed from UIC (by vactor truck), dewatered with sediments (at a City or other City-approved dry pad), and disposed in accordance with local, state or federal laws. If sediments are not found in the UIC, water will be discharged to the sanitary sewer under a batch discharge permit.

-

A 5.3. Need for Additional Investigation

If UIC conditions (*e.g*., non aqueous phase liquid) or sediment/water analytical results indicate that groundwater or soil outside the UIC may have been impacted at a level that would adversely impact the beneficial uses of groundwater:

- BES will determine, in consultation with DEQ, if any additional investigation or response actions are required for compliance with the WPCF permit (see *UICMP*, Section 4).
- BES will, if appropriate, prepare a site-specific Sampling and Analysis Plan to assess potential adverse impacts to groundwater from the UIC (see *Decommissioning Procedure for UICs*, Step 6 above and the *UICMP*, Section 4).

A 6.0 REPORTING UIC SAMPLING RESULTS

The results of the UIC sampling will be presented in a brief report (UIC Pre-Closure Evaluation or UIC Closure Report) in accordance with Step 12 of the *Decommissioning Procedure for Underground Injection Control Systems* (March 2015). The report will document decommissioning activities, the results of additional samples, if any, and disposal documentation.

Table A-1: Recommended Sample Containers, Lab Method, Volumes, Preservation, and Holding Times

Media	Compound/Compound Class	EPA Method	Analytical Laboratory	Container Type	Container Volume	Preservation Requirements	Technical Holding Time
Water	PAH, Phthalates & Pentachlorophenol	EPA 8270SIM	WPCL	Amber Glass	2 – 500 mL	Cool to 4°C ±2°C	7 days (extraction) 40 days (analysis)
	RCRA-8 Total Metals + Copper & Zinc	EPA 200.8	WPCL	Wide-mouth Nalgene	500-mL	HNO_3 to pH<2; Cool to 4°C +2°C	6 months
	Dissolved Metals + Copper & Zinc	EPA 200.8	WPCL	Wide-mouth Nalgene	500-mL	HNO_3 to pH<2; Cool to 4°C +2°C	6 months
	Oil & Grease	EPA 1664	WPCL	Wide Mouth Clear Glass	1 Liter	HCl to pH<2; Cool to 4°C ±2°C	28 days
	Total Suspended Solids	SM2540 D	WPCL	Plastic	1 pint	Cool to 4°C +2°C	7 days
Sediment	Diesel Range Hydrocarbons	NWTPH-Dx	WPCL	Amber Glass	1 - 4oz	Cool to 4°C ±2°C	14 days
	Gasoline Range Hydrocarbons	NWTPH-Gx	Test America	Amber Glass	1 - 4oz	Cool to 4°C ±2°C	14 days
	PAH, Phthalates & Pentachlorophenol	EPA 8270SIM	WPCL	Amber Glass	1 - 4oz	Cool to 4°C ±2°C	7 days (extraction) 40 days (analysis)
	RCRA 8 Total Metals + Copper and Zinc	EPA 3051/6020	WPCL	Amber Glass	1 - 4oz	Cool to 4°C ±2°C	6 months
	TCLP	EPA 1311	WPCL	Use total metals jar		NA	6 months

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Table A-2: UIC Decommissioning Method Reporting Limits PAHs, Phthalate and Pentachlorophenol Analyses [7]

Analyte	CAS Number	Sediment MRL (µg/kg)	Water MRL (µg/L)
Acenaphthene	83-32-9	20	0.02
Acenaphthylene	208-96-8	20	0.02
Anthracene	120-12-7	20	0.02
Benzo(a)anthracene	56-55-3	10	0.01
Benzo(a)pyrene	191-24-2	10	0.01
Benzo(b)fluoranthene	205-99-2	10	0.01
Benzo(g,h,i)perylene	191-24-2	10	0.01
Benzo(k)fluroanthene	207-08-9	10	0.01
Chrysene	218-01-9	10	0.01
Dibenzo(a,h)anthracene	53-70-3	10	0.01
Fluoranthene	2-6-44-0	10	0.01
Fluorene	86-73-7	20	0.02
Indeno(1,2,3-cd)pyrene	193-39-5	10	0.01
Naphthalene	91-20-3	40	0.04
Pentachlorophenol	87-86-5	50	1.00
Phenanthrene	85-01-08	20	0.02
Pyrene	129-00-0	10	0.01
Di(2-ethylhexyl)phthalate	117-81-7	100	1.0
Butyl benzyl phthalate	85-68-7	100	1.0
Diethyl phthalate	84-66-2	100	1.0
Dimethyl phthalate	131-11-3	100	1.0
Di-n-butyl phthalate	87-74-2	100	1.0
Di-n-octyl phthalate	117-84-0	100	1.0

[7] Polycyclic aromatic hydrocarbons (PAH), phthalates, and pentachlorophenol will be analyzed using EPA Method 8270-SIM (selected ion monitoring)

Table A-3: UIC Decommissioning Method Reporting Limits Metals Analyses

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SEDIMENTS (EPA METHOD 3051/6020)

	EPA Analyte	Sediment Method	MRL (mg/kg)
Arsenic	6020		0.50
Barium	6020		0.10
Cadmium	6020		0.10
Chromium	6020		0.50
Copper	6020		0.20
Lead	6020		0.10
Mercury	6020		0.010
Selenium	6020		1.00
Silver	6020		0.10
Zinc	6020		0.50
TCLP Lead	1311/6010		0.10 mg/l

WATER (EPA METHOD 200.8)

	EPA Analyte	Water Method	MRL (µg/L)
Arsenic	200.8		0.045
Barium	200.8		0.1
Cadmium	200.8		0.1
Chromium	200.8		0.4
Copper	200.8		0.2
Lead	200.8		0.1
Mercury	200.8		0.001
Selenium	200.8		0.5
Silver	200.8		0.1
Zinc	200.8		0.5

City of Portland
Bureau of Environmental Services
UIC Program

UIC PROGRAM
STANDARD OPERATING PROCEDURE (1.00)

SEDIMENT SAMPLE COLLECTION PROCEDURES FOR UIC DECOMMISSIONING

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the procedures for collecting sediment samples from an Underground Injection Control (UIC) sump using a direct-push probe or non-mechanical sampling devices. The samples generated using these procedures may be submitted for laboratory analysis as grab samples or may be composited, as needed.

2.0 SCOPE AND APPLICABILITY

The methodologies discussed in this SOP are applicable to using hand sampling equipment or direct-push technologies to sample UIC sediments, potentially beneath standing water.

3.0 EQUIPMENT AND MATERIALS

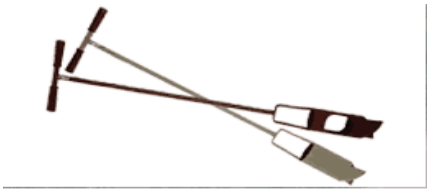
The following is a list of required equipment for collecting UIC sediment samples:

- Bucket Auger (Hand Auger)
- Stainless steel spoon
- Large stainless steel bowl
- Site files detailing UIC locations and UIC construction information
- Latex or vinyl gloves (analyte specific)
- Chain-of-Custody, Field Data Sheets, or Daily Field Record forms
- Laboratory-supplied sampler containers
- Cooler and ice ("wet ice" or blue ice)
- Tape measure

4.0 PROCEDURE

The following procedures explain how to collect UIC sediment samples with a bucket auger; or direct-push sampler. All sampling equipment and containers used in this SOP should be decontaminated prior to any sampling activities. Proper decontamination procedures are described in BES Field Operations *SOP 7.01a -Decontamination of Sampling Equipment*.

4.1 Sampling UIC Sediment Using a Bucket Auger



Common types of bucket augers (hand augers)

Bucket augers generally work best for UICs less than 20 feet in depth. The following procedures define steps to be taken when using a bucket auger to collect a sediment sample from a UIC sump. Sampling should not occur outside of the sump, unless all subsurface utility lines in the vicinity are marked. Hand auger methods are described below:

1. Determine the depth to water in the UIC using BES Field Operations *SOP 3.01a - Groundwater Level Measurement*, and record on the *Sampling Record* form.
2. Determine the depth to the top of sediment using a weighted measuring tape or tape measure; record depth on the Sampling Record form. Determine if there is enough sediment to sample by subtracting the "depth to sediment" measurement from the estimated total depth of the UIC sump. Sampling should be attempted if more than 0.5 feet of sediment are present. If there is not enough sediment in the UIC sump to collect a sample, record on *Sampling Record* form.
3. To the extent practicable, the field team should assess whether the standing water is a) stagnant water held by the bottom of the sump; b) groundwater (i.e., water level within perforated zone of UIC); or c) stormwater (i.e., slowly infiltrating UIC).
4. Assemble the appropriate sampling containers.
5. Put on new clean gloves.
6. Lower the bucket auger into the UIC until it encounters sediment. Advance the auger using a clockwise twisting motion being sure to keep auger aligned vertically. When auger is full remove from the UIC and empty sediment into the stainless steel bowl or stainless steel bucket (for sample compositing). When using an auger to collect a sample be aware of the location of overhead power lines.
7. Record notes and observations of the soil conditions on the *Field Data Sheet* or *Daily Field Record* forms. Observations should include a description of the sediment (consistency, grain-size, etc.), depth below ground surface from where sediment is extracted, and any discoloration or odors.
8. Repeat Steps 6 and 7 as necessary to the appropriate depth. Continue advancing the auger to total depth of the UIC sump, to the extent practicable.
9. After advancing the auger hole and logging the sediment cuttings, determine the appropriate depth of the sediment sample(s) for chemical analyses. Advance the auger to the appropriate sampling depth for discrete sample collection, withdraw sampler from the boring. Place sampler in the boring and advance as before, using a twisting motion. Withdraw auger from the hole.
10. With as little agitation as possible, place soil sample in the appropriate lab-supplied sample container(s) and place into chilled cooler for delivery to the laboratory
11. If collecting a composite sample, use auger to collect subsamples or aliquots from the desired depth range, and place into a clean decontaminated stainless steel bowl or bucket. Use a stainless steel spoon to homogenize the portions of the sample, by thoroughly mixing the material, and transfer into sample containers.
12. When the boring is completed, place soil cuttings back into the UIC.

13. Record the sampling date and time on the *Chain-of-Custody*, and a description of sampling location(s) and conditions encountered on the *Field Data Sheet* and/or *Daily Field Record* forms.

14. If proceeding to another sampling location, decontaminate auger per Field Operations *SOP 7.01a - Decontamination of Sampling Equipment*.

4.1 Sampling UIC Sediment Using a Direct-Push Probe

Direct-push probes are used most often for collecting sediment samples from a UIC. The following procedures define steps to be taken when using a direct-push technology rig (e.g. Geoprobe™) to collect a sediment sample from a UIC sump. Sampling should not occur outside of the sump, unless all subsurface utility lines in the vicinity are marked. Direct-push methods are described below:

1. Determine the depth to water in the UIC using BES Field Operations *SOP 3.01a - Groundwater Level Measurement*, and record on the *Sampling Record* form.

2. Determine the depth to the top of sediment using a weighted measuring tape or tape measure; record depth on the *Sampling Record* form. Determine if there is enough sediment to sample by subtracting the "depth to sediment" measurement from the estimated total depth of the UIC sump. Sampling should be attempted if more than 1 foot of sediment are present. If there is not enough sediment in the UIC sump to collect a sample, record on *Sampling Record* form.

3. Assemble the appropriate sampling containers.

4. Put on new clean gloves.

5. Have driller lower the drill rod and split spoon or equivalent sampler into the UIC until it encounters sediment. Push or drive the sampler into the sediment the length of the sampler (e.g., 2.5 feet). When sampler is full, retract sampler from the UIC.

6. Open the sampler on a clean surface (e.g., visqueen).

7. Record notes and observations of the soil conditions on the *Field Data Sheet* or *Daily Field Record* forms. Observations should include a description of the sediment (consistency, grain-size, etc.), depth below ground surface from where sediment is extracted, and any discoloration or odors.

15. Repeat Steps 6 and 7 as necessary to the appropriate depth. Continue advancing the sampler to the total depth of the UIC sump, to the extent practicable.

16. After advancing the auger hole and logging the sediment cuttings, determine the appropriate depth of the sediment sample(s) for chemical analyses. Advance the sampler to the appropriate sampling depth for discrete sample collection.

17. If collecting a composite sample, use auger to collect subsamples, or aliquots, from the desired depth ranges, and place into a clean decontaminated stainless steel bowl. Use a stainless steel spoon to homogenize the portions of the sample, by thoroughly mixing the material, and transfer into sample containers.

18. When the boring is completed, place sediment cuttings back into the UIC.

19. Record the sampling date and time on the *Chain-of-Custody*, and a description of sampling location(s) and conditions encountered on the *Field Data Sheet* and/or *Daily Field Record* forms.

20. If proceeding to another sampling location, decontaminate auger per Field Operations *SOP 7.01a - Decontamination of Sampling Equipment*.

5.0 POTENTIAL PROBLEMS

When collecting sediment samples, it may be impossible to drive a hand auger or other hand sampling equipment through hard material or surfaces. If refusal is encountered, a sample will not be collected.

When collecting sediment samples, a common problem is failure of the sampler to retain the sample. This will result in the sediment falling out while the sampler is raised to the surface. If this occurs, re-attempt the sample or use sample catchers, as appropriate.

If sediment conditions in the UIC preclude the use of a hand auger or a direct-push probe, other collection methods may be required. Refer to Field Operations *SOP 5.01a – Sampling of Soil and Sediment* for additional sample collection techniques and associated equipment.

6.0 QUALITY ASSURANCE AND QUALITY CONTROL

The sampler and drill rod should be decontaminated thoroughly with Alconox, or equivalent, prior to lowering it into the UIC. Care should be taken to keep the sampler from being cross contaminated, placed on the ground surface, etc.

City of Portland
Bureau of Environmental Services
UIC Program

UIC PROGRAM
STANDARD OPERATING PROCEDURE 2.00

WATER SAMPLE COLLECTION PROCEDURES FOR UIC DECOMMISSIONING

1.0 PURPOSE

This Standard Operating Procedure (SOP) provides guidelines for the collection of a representative water sample from an Underground Injection Control (UIC) sedimentation manhole or sump UIC using a disposable bailer.

2.0 SCOPE AND APPLICABILITY

The following procedure pertains to the proper methods for using disposable bailers (or equivalent) to collect water samples that represent water quality within the UIC system. The method for the collection of a representative sample of water from a UIC is described below.

3.0 EQUIPMENT AND MATERIALS

The following is a list of required equipment for sampling a UIC using a disposable bailer:

- Disposable (weighted polyethylene or Teflon) bailers (or equivalent container such as a stainless steel bucket)
- Bailer emptying device
- 5-gallon bucket
- Sampling Record form for each UIC
- Site files detailing UIC information and location
- Braided nylon string
- Latex gloves
- Groundwater Level Indicator
- Chain-of-Custody, Field Data Sheets, or Daily Field Record forms
- Laboratory-supplied sampler containers
- Cooler and ice (“wet ice” or blue ice)

4.0 PROCEDURE

The following procedures define steps to be taken when sampling an individual UIC:

1. Determine the depth to water in the UIC using BES Field Operations *SOP 3.01a – Groundwater Level Measurement*, or appropriate alternative, and record on the Sampling Record form.
2. Determine the depth of water in the UIC by lowering the Groundwater Level Indicator or other measuring device into the water until a solid bottom is encountered. Subtract the depth to water from the depth to solid bottom to determine the depth of water and record on the Sampling Record Form. If there is not enough water in the UIC to collect a sample (i.e., water is 1 foot deep or less), record on Sampling Record form.
3. To the extent practicable, the field team should assess whether the standing water is a) stagnant water held by the bottom of the sump; b) groundwater (i.e., water level within perforated zone of UIC); or c) stormwater (i.e., slowly infiltrating UIC).
4. Put on clean, unused latex gloves. Tear open plastic covering at top of bailer and tie braided nylon line to bailer using a bowline or other secure knot. Take bailer out of bag and place into the UIC, lowering to the water level. Allow the bailer to fill up and sink below the water level, however do not allow bailer to touch the bottom of UIC, if possible. Cut braided nylon line allowing enough line to work with, and tie the end to your wrist. Using braided nylon line, pull up bailer from the UIC looping the line around both hands. Do not let the line touch any surfaces, other than the inside of the UIC casing. Replace line if it contacts any surface other than the UIC casing. Pour bailer full of water into 5-gallon bucket. Do not allow bailer to touch bucket. Repeat using the same procedure.
    a. Bailers work well for sample collection if the depth of water is determined to be greater than 3 feet.
    b. If the depth of water is determined to be 1 to 3 feet, use an equivalent sampling device such as a stainless steel bucket.
5. To collect the sample from the bailer, raise the filled bailer to surface and use friction fit bailer-emptying device to release water from bottom into appropriate sample containers. If collecting samples for VOC analyses, use the VOC sample removal device to minimize sample disturbance. Use the following order to collect samples: VOCs (if collected), other organics, nutrients (if collected), and metals.
6. Place samples in chilled cooler for delivery to the laboratory for analysis. Fill out and complete attendant chain of custody documentation.

5.0 POTENTIAL PROBLEMS

Careful attention should be employed during the extraction of purge volumes so as to avoid possible contamination of the UIC. By not following specified requirements pertaining to decontamination and proper sampling methodology, the accuracy of the sampling procedure can be jeopardized. Cross contamination of the UIC itself may occur through the introduction of unclean sampling equipment and by introducing foreign material (e.g., dust, dirt, and organic material) into the UIC from ground level. Such activity will negatively affect the representiveness of the samples

If a bailer or other equipment falls down an open UIC attempt to recover the equipment by using a fishing hook attached to the nylon line to hook the item.

6.0 QUALITY ASSURANCE & QUALITY CONTROL

The probe on the water level indicator should be decontaminated thoroughly with Alconox, or an equivalent nonphosphate cleaner, and deionized water prior to lowering it into the UIC. Use a new bailer for each UIC. Use only clean, unused bailers, and string at each UIC.

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Attachment 1

STORMWATER MANAGEMENT AND DISPOSAL HIERARCHY

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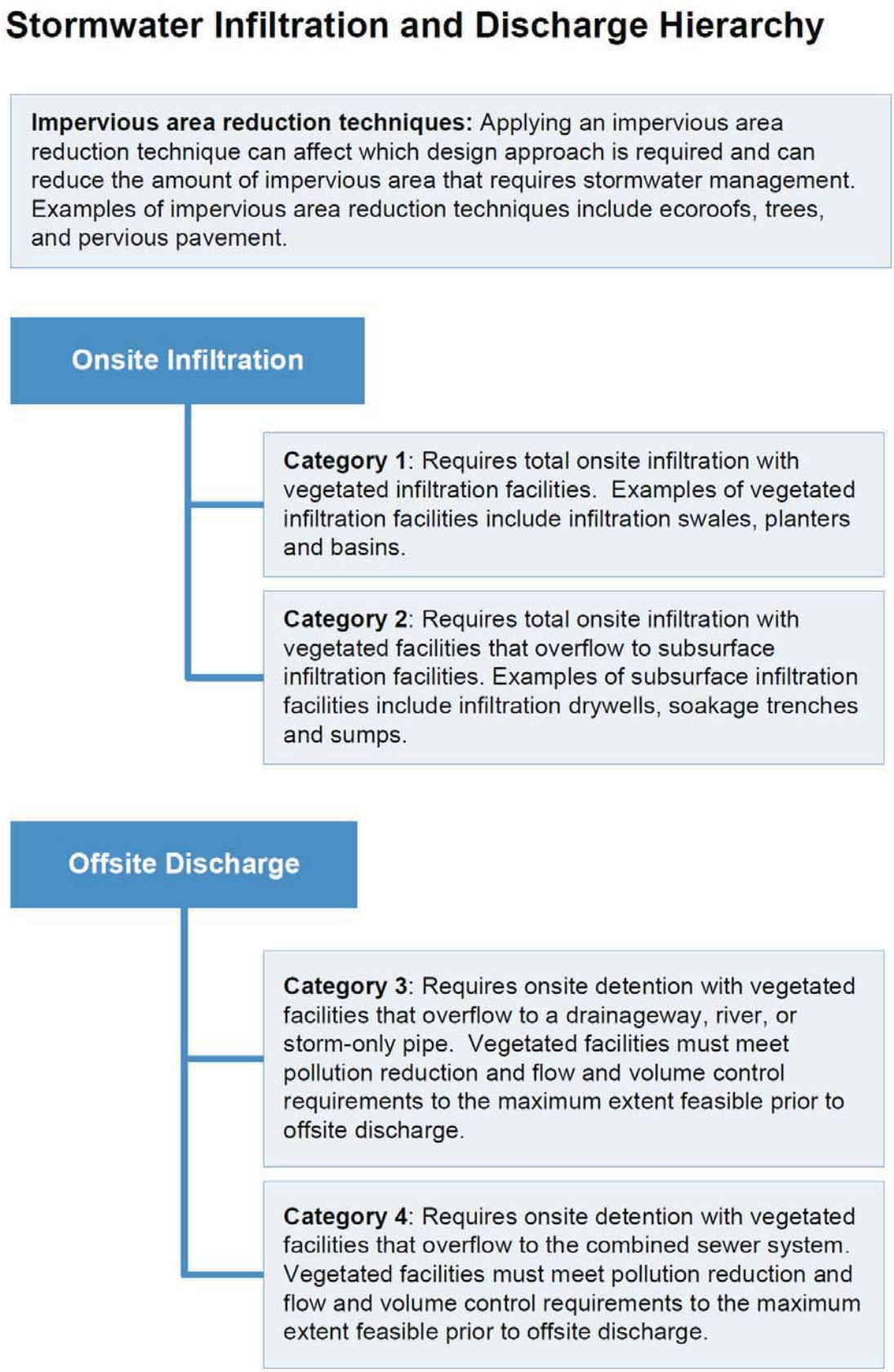
Exhibit 1-2: Stormwater Hierarchy

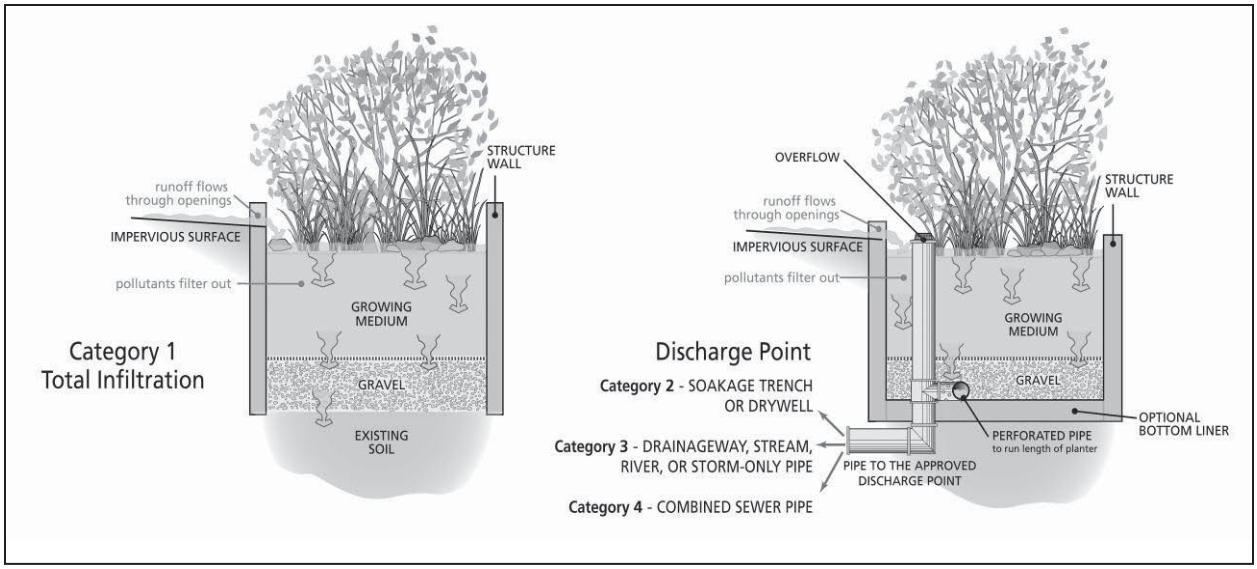


Stormwater Hierarchy

Decisions regarding the degree of onsite infiltration and the discharge point (when complete onsite infiltration is not feasible) are based on the stormwater hierarchy, as shown in **Exhibit 1-2**[2] and **Exhibit 1-3.** Following any use of impervious area reduction techniques, the highest technically feasible category must be used (1 = highest, 4 = lowest). Applicants must provide the appropriate technical analysis and evaluation to demonstrate the need to move from Category 1 through each consecutive category. Infiltration testing is required to determine the feasibility of onsite infiltration and the existing infiltration rate.

Roof runoff is exempt from pollution reduction requirements and may drain directly to a UIC. See **Section 1.4** for further clarification of UIC requirements.

Exhibit 1-3: Stormwater Hierarchy Illustration



[2] The stormwater hierarchy is based on the City's WPCF permit with DEQ regarding onsite infiltration and offsite discharge. The hierarchy is how the City satisfies the requirements of Oregon Administrative Rules (OAR) 340-040 for the protection of groundwater.

Attachment 2

DEQ UIC PRE-CLOSURE NOTIFICATION FORM

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State of Oregon Department of Environmental Quality

Class V Underground Injection Control
Pre-Closure Notification

DEQ Use Only
Received: _____
Amount: _____
Check #: _____
From: _____
UIC #: _____

Instructions for completing this application are on the back of this form. For additional information, see the "Closure of an Injection System" fact sheet, available online at: http://www.deq.state.or.us/wq/uic/guidance.htm

A. Fee for Closure

Number of injection systems ____ x $100 = _____ (total payment)

B. Facility Common Name, Legal Entity, Address & Contact Information

Facility Common Name:			
Physical Address:	City:	State:	Zip Code:
Legal Entity:	Official Contact:	Title:	
Mailing Address:	City:	State:	Zip Code:
Phone Number:	Email address:		
Consultant Contact Name:	Company:		
Phone Number:	Email address:		

C. Individual UIC Information

UIC Facility ID (e.g., 14825): _____ ☐ Site Map is attached

ID	Latitude (decimal degrees)	Longitude (decimal degrees)	Depth (feet)	Fluid Type:
				☐ Sewage ☐ Stormwater ☐ Other:_____
				☐ Sewage ☐ Stormwater ☐ Other:_____
				☐ Sewage ☐ Stormwater ☐ Other:_____
				☐ Sewage ☐ Stormwater ☐ Other:_____
				☐ Sewage ☐ Stormwater ☐ Other:_____
				☐ Sewage ☐ Stormwater ☐ Other:_____
				☐ Sewage ☐ Stormwater ☐ Other:_____
				☐ Sewage ☐ Stormwater ☐ Other:_____
				☐ Sewage ☐ Stormwater ☐ Other:_____
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				☐ Sewage ☐ Stormwater ☐ Other:_____
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				☐ Sewage ☐ Stormwater ☐ Other:_____
				☐ Sewage ☐ Stormwater ☐ Other:_____
				☐ Sewage ☐ Stormwater ☐ Other:_____
				☐ Sewage ☐ Stormwater ☐ Other:_____
				☐ Sewage ☐ Stormwater ☐ Other:_____

D. UIC System Type(s)

☐ Sewage drill hole or Cesspool (complete Section E and Section H)

☐ Stormwater UIC (complete Section F and Section H)

☐ Prohibited UIC (complete Section G and Section H)

Includes UICs that inject motor vehicle waste, floor pits or floor drains at industrial or commercial facilities, UICs that inject agricultural drainage, UICs that inject industrial or commercial process water or waste water, and UICs that inject fluids from industrial or commercial operation areas where hazardous substances, toxic materials, or petroleum products are used or handled.

E. Requirements for Decommissioning Cesspools or Sewage Drill Holes

Is this a sewage drill hole (check one)? ☐ Yes ☐ No

I certify that:

☐ The sewage drill hole or cesspool has not received industrial or commercial process water or wastewater

☐ Decommissioning will be performed by an Oregon-licensed well driller or overseen by an Oregon-licensed geologist, hydrogeologist or engineer (only required for sewage drill holes)

SIGNATURE OF LICENSED PROFESSIONAL
I certify that the sewage drill hole will be decommissioned in accordance with OAR 340-044-0040(3)(c).

Name	Signature	License No.
_____	_____	_____

F. Requirements for Decommissioning Stormwater UICs

Stormwater UIC Type (check all that apply): ☐ Roof Drain ☐ Private Driveway ☐ Parking Lot ☐ Street

I certify that:

☐ The UIC only injected stormwater runoff. The UIC did not inject motor vehicle waste, agricultural drainage, industrial or commercial process water or waste water, fluids from industrial or commercial operation areas where hazardous substances, toxic materials, or petroleum products are used or handled, and is not a floor pit or floor drain.

☐ Sediment from the drywell will be sampled and analyzed for RCRA 8 metals using TCLP methods to determine if the sediment needs to be managed as a hazardous waste (required for parking lots and streets only)

☐ I will contact DEQ's UIC Hydrogeologist (503-229-6371) if evidence of a spill is encountered during decommissioning, and discuss additional sampling requirements

☐ The UIC will be sealed in a manner that prevents vertical fluid movement

SIGNATURE OF OREGON-LICENSED GEOLOGIST OR ENGINEER (not required for roof-only runoff)
I certify that the drywell will be decommissioned in accordance with OAR 340-044-0040.

Name	Signature	License No.
_____	_____	_____

G. Requirements for Decommissioning Prohibited UICs

Fluid Type:

- ☐ Motor vehicle waste
- ☐ Floor pit or floor drain, fluid: _____
- ☐ Agricultural drainage
- ☐ Industrial or commercial process water or waste water (e.g., vehicle wash water)
- ☐ Fluids from commercial or industrial operation areas where hazardous substances, toxic materials, or petroleum products are used or handled (e.g., refueling areas)

☐ Closure Work Plan is attached

I certify that:

- ☐ I have contacted the UIC Hydrogeologist to discuss the requirements of the Closure Work Plan
- ☐ Analytical results will be used to determine if sediment needs to be managed as hazardous waste
- ☐ The UIC will be sealed in a manner that prevents vertical fluid movement
- ☐ A Closure Report will be prepared and submitted to DEQ

H. Signature of Legally Authorized Representative

I hereby certify that the information contained in this registration is true and correct to the best of my knowledge and belief.

_____ _____

Signature of Legally Authorized Representative | Date

Legally Authorized Representative:		Title:	
Mailing Address:	City:	State:	Zip Code:
Phone Number:	Email Address:		

APPLICATION INSTRUCTIONS FOR CLASS V PRE-CLOSURE NOTIFICATION

IMPORTANT NOTE: This form is regularly updated. Always download a new copy of this form from DEQ's website when applying for rule authorization. DEQ will only accept applications using an old form for 60 days from the *Revised date* in the lower right hand corner of the current form.

A. Fee for Closure

A fee of $100 per UIC must be submitted with the application.

B. Facility Common Name, Legal Entity, Address and Contact Information

Common Name: the name of the facility or operation if different from the legal name.

Physical Address: the physical location, not the mailing address of the facility.

Legal Entity: the person, business, or public organization that controls the facility where the UIC is located. A business or public organization must be registered with the Oregon Secretary of State's Business Registry: http://egov.sos.state.or.us/br/pkg_web_name_srch_inq.login. Business registration information is available online at: http://sos.oregon.gov/business/Pages/register.aspx . If the company operates under an assumed business name, the legal entity name should be the legal representative's name. The Legal Entity will receive official DEQ correspondence and will be responsible for paying annual invoices.

Official Contact: the person DEQ would contact for questions concerning the facility's UICs.

Consultant: the individual hired by the legal entity to provide technical assistance with the application.

C. Individual UIC Information

If you are applying for authorization of more than 15 UICs, then provide the individual UIC information on a separate piece of paper and attach it to this application.

- Enter the UIC Facility ID, if assigned. UIC facility ID is available online from the UIC database search page: http://www.deq.state.or.us/wq/uic/uic.asp
- Enter the **ID** used to identify the UIC, **Fluid Type**, **Depth**, **Latitude** and **Longitude** in decimal degrees NAD 83 datum for each UIC.
- A Site Map is required. The Site Map must show the UIC (labeled by name), property lines, adjoining streets, buildings, and a north arrow.

D. Individual UIC Information

Indicate the type of UIC that is being closed.

E. Requirements for Decommissioning Cesspools or Sewage Drill Holes

Fill this section out only if you are decommissioning a sewage drill hole or cesspool. A sewage drill hole is a drilled, hammered, or blasted borehole used for sewage or sanitary waste disposal.

F. Requirements for Decommissioning Stormwater UICs

Fill this section out only if you are decommissioning a stormwater UIC.

E. Requirements for Decommissioning Prohibited UICs

Fill this section out only if you are decommissioning a prohibited UIC. The UIC Hydrogeologist can be reached at 503-229-6371.

- **Motor Vehicle Waste** includes fluids from vehicular repair or maintenance activities, such as an auto body repair shop, automotive repair shop, new and used car dealership, specialty repair shop (e.g., transmission and muffler repair shop), or any facility that does any vehicular repair work.

Attachment 3

CITY OF PORTLAND UIC SITE CHECKLIST

UIC Decommissioning Procedure
March 2015
Version: Final

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CITY OF PORTLAND
ENVIRONMENTAL SERVICES
1120 SW 5th Ave Room 1000 ▪ Portland, OR 97204

UNDERGROUND INJECTION CONTROL (UIC) DECOMMISSIONING FIELD DATA AND INSPECTION SHEET

Date: **Time:**	**UIC No:**	**Inspector Name:**

SITE CONDITIONS

Site Name and Address:	**Street Type:**
Observed Traffic Volume/Type:	
Weather Conditions:	**Observed Stormwater Flow:**

Street Drainage Type:

❒ Curb and Gutter ❒ Gravel/Dirt Road

❒ No Curb ❒ Other:

Env. Features of Concern in System:

	UIC Condition/Contents:	**SedMH Condition/Contents:**
	Depth to Water:	Depth to Water:
	Depth to Sediment:	Depth to Sediment:
❑ Oily Sheen/Staining ❑UIC ❑SedMH	Depth of Water[1]:	Depth of Water[1]:
❑ Unusual Odors ❑UIC ❑SedMH	Depth of UIC (from Hansen):	Depth of UIC (from Hansen):
❑ Floatable Objects ❑UIC ❑SedMH	Depth of Sediment[2]:	Depth of Sediment[2]:
❑ Garbage/Debris or Foreign Objects ❑UIC ❑SedMH		

Describe other conditions or any environmental contaminants of potential concern (COPCs) sources likely to impact soil, groundwater or stormwater.

Other environmental features of concern or sources of potential contamination may include:

- ❑ Staining on site or street
- ❑ Presence of gasoline, grease or oil
- ❑ Telephone poles (treated wood)
- ❑ Commercial/Industrial activities draining to UIC
- ❑ Materials in drums, tanks, bags or plastic containers stored near UIC
- ❑ Industrial activities draining to UIC
- ❑ Presence of fuel /chemical storage in the drainage area
- ❑ Vehicle maintenance and repair
- ❑ PCB containing Transformers
- ❑ Poor Housekeeping
- ❑ Other

Note current and past land uses at the site.

Please contact BES CSA staff for relevant database review including, DEQ ECSI sites, leaking underground storage tanks (LUSTs) and other contaminated sites that could have a direct impact on site drainage.

Photo(s) Taken? Y / N (Include photo numbers and description)

[1] [Depth to Sediment] – [Depth to Water]

[2] [Depth of UIC] – [Depth to Sediment]

Attachment 4

WASTE PROFILE SHEET

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WASTE MANAGEMENT

EZ Profile™

Requested Facility: _____ ❑ Unsure Profile Number: _____

❑ Multiple Generator Locations (Attach Locations) ❑ Request Certificate of Disposal ❑ Renewal? Original Profile Number: _____

A. GENERATOR INFORMATION (MATERIAL ORIGIN)

1. Generator Name: _____
2. Site Address: _____
   (City, State, ZIP) _____
3. County: _____
4. Contact Name: _____
5. Email: _____
6. Phone: _____ 7. Fax: _____
8. Generator EPA ID: _____ ❑ N/A
9. State ID: _____ ❑ N/A

B. BILLING INFORMATION ❑ SAME AS GENERATOR

1. Billing Name: _____
2. Billing Address: _____
   (City, State, ZIP) _____
3. Contact Name: _____
4. Email: _____
5. Phone: _____ 6. Fax: _____
7. WM Hauled? ❑ Yes ❑ No
8. P.O. Number: _____
9. Payment Method: ❑ Credit Account ❑ Cash ❑ Credit Card

C. MATERIAL INFORMATION

1. Common Name: _____
   Describe Process Generating Material: ❑ See Attached

2. Material Composition and Contaminants: ❑ See Attached

1.	
2.	
3.	
4.	
Total composition must be equal to or greater than 100%	≥100%

3. State Waste Codes: _____ ❑ N/A
4. Color: _____
5. Physical State at 70˚F: ❑ Solid ❑ Liquid ❑ Other: _____
6. Free Liquid Range Percentage: _____ to _____ ❑ N/A
7. pH: _____ to _____ ❑ N/A
8. Strong Odor: ❑ Yes ❑ No Describe: _____
9. Flash Point: ❑ <140˚F ❑ 140˚–199˚F ❑ ≥200˚ ❑ N/A

D. REGULATORY INFORMATION

1. EPA Hazardous Waste? ❑ Yes* ❑ No
   Code: _____
2. State Hazardous Waste? ❑ Yes ❑ No
   Code: _____
3. Is this material non-hazardous due to Treatment, Delisting, or an Exclusion? ❑ Yes* ❑ No
4. Contains Underlying Hazardous Constituents? ❑ Yes* ❑ No
5. From an industry regulated under Benzene NESHAP? ❑ Yes* ❑ No
6. Facility remediation subject to 40 CFR 63 GGGGG? ❑ Yes* ❑ No
7. CERCLA or State-mandated clean-up? ❑ Yes* ❑ No
8. NRC or State-regulated radioactive or NORM waste? ❑ Yes* ❑ No

***If Yes, see Addendum (page 2) for additional questions and space.**

9. Contains PCBs? → If Yes, answer a, b and c. ❑ Yes ❑ No
   a. Regulated by 40 CFR 761? ❑ Yes ❑ No
   b. Remediation under 40 CFR 761.61 (a)? ❑ Yes ❑ No
   c. Were PCB imported into the US? ❑ Yes ❑ No
10. Regulated and/or Untreated Medical/Infectious Waste? ❑ Yes ❑ No
11. Contains Asbestos? ❑ Yes ❑ No
    → If Yes: ❑ Non-Friable ❑ Non-Friable – Regulated ❑ Friable

E. ANALYTICAL AND OTHER REPRESENTATIVE INFORMATION

1. Analytical attached ❑ Yes
   Please identify applicable samples and/or lab reports:

2. Other information attached (such as MSDS)? ❑ Yes

F. SHIPPING AND DOT INFORMATION

1. ❑ One-Time Event ❑ Repeat Event/Ongoing Business
2. Estimated Quantity/Unit of Measure: _____
   ❑ Tons ❑ Yards ❑ Drums ❑ Gallons ❑ Other: _____
3. Container Type and Size: _____
4. USDOT Proper Shipping Name: ❑ N/A

G. GENERATOR CERTIFICATION (PLEASE READ AND CERTIFY BY SIGNATURE)

By signing this EZ Profile™ form, I hereby certify that all information submitted in this and all attached documents contain true and accurate descriptions of this material, and that all relevant information necessary for proper material characterization and to identify known and suspected hazards has been provided. Any analytical data attached was derived from a sample that is representative as defined in 40 CFR 261 - Appendix 1 or by using an equivalent method. All changes occurring in the character of the material (i.e., changes in the process or new analytical) will be identified by the Generator and be disclosed to Waste Management prior to providing the material to Waste Management.

If I am an agent signing on behalf of the Generator, I have confirmed with the Generator that information contained in this Profile is accurate and complete.

Name (Print): _____ Date: _____

Title: _____

Company: _____

Certification Signature

Revised September 12, 2014

EZ Profile™ Addendum

Only complete this Addendum if prompted by responses on EZ Profile™ (page 1) or to provide additional information. Sections and question numbers correspond to EZ Profile™.

Profile Number: _____

C. MATERIAL INFORMATION

Describe Process Generating Material (Continued from page 1): If more space is needed, please attach additional pages.

Material Composition and Contaminants (Continued from page 1): If more space is needed, please attach additional pages.

5.	
6.	
7.	
8.	
9.	
Total composition must be equal to or greater than 100%	≥100%

D. REGULATORY INFORMATION

Only questions with a "Yes" response in Section D on the EZ Profile™ form (page 1) need to be answered here.

1. EPA Hazardous Waste
   a. Please list all USEPA listed and characteristic waste code numbers:

   b. Is the material subject to the Alternative Debris standards (40 CFR 268.45)? ❑ Yes ❑ No
   c. Is the material subject to the Alternative Soil standards (40 CFR 268.49)? → If Yes, complete question 4. ❑ Yes ❑ No
   d. Is the material exempt from Subpart CC Controls (40 CFR 264.1083)? ❑ Yes ❑ No
      → If Yes, please check **one** of the following:
      ❑ Waste meets LDR or treatment exemptions for organics (40 CFR 264.1082(c)(2) or (c)(4))
      ❑ Waste contains VOCs that average <500 ppmw (CFR 264.1082(c)(1)) – will require annual update.
2. State Hazardous Waste → Please list all state waste codes: _____
3. For material that is Treated, Delisted, or Excluded → Please indicate the category, below:
   ❑ Delisted Hazardous Waste ❑ Excluded Waste under 40 CFR 261.4 → Specify Exclusion: _____
   ❑ Treated Hazardous Waste Debris ❑ Treated Characteristic Hazardous Waste → If checked, complete question 4.
4. Underlying Hazardous Constituents → Please list all Underlying Hazardous Constituents:

5. Industries regulated under Benzene NESHAP include petroleum refineries, chemical manufacturing plants, coke by-product recovery plants, and TSDFs.
   a. Are you a TSDF? → If yes, please complete Benzene NESHAP questionnaire. If not, continue. ❑ Yes ❑ No
   b. Does this material contain benzene? ❑ Yes ❑ No
      1. If yes, what is the flow weighted average concentration? _____ ppmw
   c. What is your facility's current total annual benzene quantity in Megagrams? ❑ <1 Mg ❑ 1–9.99 Mg ❑ ≥10 Mg
   d. Is this waste soil from a remediation? ❑ Yes ❑ No
      1. If yes, what is the benzene concentration in remediation waste? _____ ppmw
   e. Does the waste contain >10% water/moisture? ❑ Yes ❑ No
   f. Has material been treated to remove 99% of the benzene or to achieve <10 ppmw? ❑ Yes ❑ No
   g. Is material exempt from controls in accordance with 40 CFR 61.342? ❑ Yes ❑ No
      → If yes, specify exemption: _____
   h. Based on your knowledge of your waste and the BWON regulations, do you believe that this waste stream is subject to treatment and control requirements at an off-site TSDF? ❑ Yes ❑ No
6. 40 CFR 63 GGGGG → Does the material contain <500 ppmw VOHAPs at the point of determination? ❑ Yes ❑ No
7. CERCLA or State-Mandated clean up → Please submit the Record of Decision or other documentation with process information to assist others in the evaluation for proper disposal. A "Determination of Acceptability" may be needed for CERCLA wastes not going to a CERCLA approved facility.
8. NRC or state regulated radioactive or NORM Waste → Please identify Isotopes and pCi/g: _____

Revised September 12, 2014

Additional Profile Information

Profile Number: _____

C. MATERIAL INFORMATION

Material Composition and Contaminants (Continued from page 2): If more space is needed, please attach additional pages.

10.	
11.	
12.	
13.	
14.	
15.	
16.	
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29.	
30.	
31.	
32.	
33.	
34.	
35.	
36.	
37.	
38.	
39.	
40.	
Total composition must be equal to or greater than 100%	≥100%

D. REGULATORY INFORMATION

1. EPA Hazardous Waste
   a. Please list all USEPA listed and characteristic waste code numbers (Continued from page 2):

This page left blank intentionally.

ATTACHMENT 4

SPECIAL WASTE INSTRUCTIONS

- The generator must determine if the waste is hazardous or dangerous before completing a permit application.
- The special waste permit application must be in the name of the generator of the waste and signed by an authorized representative who is responsible for the accuracy of all information submitted.
- Recertification is required for on-going special waste streams prior to the expiration date.
- A copy of the approved special waste permit must be shown to the gatehouse attendant upon delivery at the facility.

DISPOSAL SITE: **CRC _____** **FINLEY BUTTES _____** **WASCO _____**

- To be completed by disposal company -

Generator: _____

Customer: _____

Waste: _____

Instructions: _____

_____

Date: _____

Permit No: _____

Expiration date: _____

Previous No: _____

Landfill report: Yes / No

Environmental approval: _____

SPECIAL WASTE PERMIT APPLICATION

Disposal Site: **CRC _____** **Finley Buttes _____** **Wasco _____**

Generator name and address:_____

_____

Billing name & address_____

Waste description: _____

Quantity: _____ > Frequency of disposal: ❒ One-time ❒ Monthly ❒ Other:_____

Process generating waste: _____

Waste address ***(include county & zip code)***: _____

_____

Contact: _____ Phone: _____/_____ Fax: _____/_____

Transporter: _____ Phone: _____/_____ Fax: _____/_____

PHYSICAL CHARACTERISTICS AND DOCUMENTATION

Physical state: ❒ Solid ❒ Semi-solid ❒ Dusty ❒ Sludge ❒ Color: _____

Analytical results: ❒ TPH (PCS) ❒ Volatiles ❒ pH ❒ TCLP-Metals
❒ BTEX ❒ Pesticides ❒ PCB ❒ Other: _____

Sample source: ❒ Pile ❒ In-ground ❒ Pit bottom ❒ Other: _____

Additional information: ❒ MSDS ❒ Process knowledge ❒ Other: _____

NON-HAZARDOUS DETERMINATION

Under 40 CFR Part 261, is this a Listed or Characteristic waste? ❒ Yes ❒ No
Is waste classified as a state-only or provincial hazardous waste? ❒ Yes ❒ No
Is waste covered or restricted from landfilling by any permit? ❒ Yes ❒ No
Basis for non-hazardous determination:_____

WASTE CERTIFICATION STATEMENT

I hereby certify that all information contained herein is true and correct, and the material described is properly identified, classified, packaged, labeled, and prepared as indicated. I certify this waste is not hazardous or dangerous as defined by the U.S. EPA, the State of Oregon, or the state or province of origin. I certify this waste does not contain any regulated radioactive materials. I certify that all samples used for this analysis are representative of the materials described herein. I will notify the company if there is a change in the composition of, or process generating this waste stream.

_____ _____
Name (print) *Authorized representative's signature*

_____ _____
Title *Date*

REPRESENTATIVE SAMPLE CERTIFICATION

INSTRUCTIONS: This form must be completed in order to determine the acceptability of the waste described in the Special Waste Permit Application for disposal at a municipal solid waste landfill. Analytical data for certain wastes is required for an adequate assessment of waste composition and regulatory status. This form is used to certify that the analytical data presented was derived from testing a *representative* sample, which reflects the physical characteristics and chemical components in the same proportion as the *total* waste stream. A representative sample may be obtained using methods specified in federal (40 CFR Part 261, Appendix I) or state regulations.

SECTION A: DESCRIBE SAMPLING POINT OR LOCATION

❒ Pile ❒ In-ground ❒ Pit bottom ❒ Drum ❒ Other: _____

SECTION B: SAMPLING METHOD

❒ I have obtained a representative sample of the waste material described in the attached special waste permit application according to the sampling methods specified in 40 CFR Part 261.

❒ I have obtained a representative sample of the waste material described in the attached special waste permit application by an equivalent method.

SECTION C: REPRESENTATIVE DATA CERTIFICATION

Generators' name: _____

Waste type: _____

Date sample collected: _____

Samplers' name: _____

Samplers' employer: _____

SECTION D: REPRESENTATIVE SAMPLE CERTIFICATION

I hereby certify that the analytical data presented was derived from testing a representative sample taken in accordance with one of the methods listed in Section A of this form.

_____ _____

Name *Authorized representative's signature*

_____ _____

Title *Date*

Attachment 5

BATCH DISCHARGE AUTHORIZATION FORM

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ENVIRONMENTAL SERVICES
CITY OF PORTLAND

BATCH DISCHARGE AUTHORIZATION APPLICATION

Date of Request: _____

Batch Discharge Number:

_____ -- _____
(For City use only)

Requested by:

Contact Name: _____

Company Name: _____

Company Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ Cellular: _____

Facsimile: _____ Pager: _____

Email Address: _____

Waste Generator:

Facility Name: _____

Facility Address: _____

City: _____ State: _____ Zip: _____

Facility Contact: _____ Telephone: _____

Description of Discharge (attach analytical data report if applicable): _____

_____

Proposed Date(s) of Discharge: _____

Discharge Volume: _____ gallons Requested Rate of Discharge: _____ gallons per minute

Building Permit/City Project Number: _____

City of Portland Project Manager (if applicable): _____

Proposed point of disposal (attach diagram): _____

_____

_____ _____
Signature Date