

Draft Dangerous Waste Permit Burlington Environmental, LLC

(Referred to as PSC in this fact sheet. See "Facility History" for information on name and ownership.)

The Washington State Department of Ecology (Ecology) is announcing its **draft permit** for commercial dangerous waste treatment and storage at the Burlington Environmental facility in Tacoma. The facility is located in the Tacoma tide flat area between the Hylebos and Blair Waterways (see area of facility on attached map).

Ecology issued the initial permit to this facility on May 23, 1999. The facility has operated under that initial permit since that time. They submitted their permit application for renewal in accordance with the regulations. Ecology will make a final decision on re-issuing a final permit after we consider public comments on the draft permit.

The draft permit has detailed requirements for accepting, storing, consolidating, and treating dangerous waste in containers and tanks. This fact sheet summarizes:

- ✓ How the public can make comments on the draft permit.
- ✓ Activities at the dangerous waste management facility including waste storage and treatment.
- ✓ Facility operating requirements in the draft permit including waste analysis, storage, and treatment.
- ✓ Requirements for facility inspections, personnel training, and emergency planning and response.
- ✓ Requirements for closing the facility and corrective action.
- ✓ Ecology's process for making final decisions.

Comment Period

December 30, 2011 through
February 15, 2012

Comments must be received or postmarked no later than February 15, 2012. Submit comments to:

Pallavi Mukerjee
WA Department of Ecology
Hazardous Waste and Toxics
Reduction Program
P.O. Box 47600
Olympia, WA 98504-7600
Phone: 360-407-7018
E-mail: pmuk461@ecy.wa.gov

You may hand deliver your comments to the Ecology address listed below until 5 p.m., February 15, 2012.

Review the information Ecology used to make their tentative decisions to issue the permit, between 9 a.m. and 4:00 p.m. at:

Department of Ecology
Hazardous Waste and Toxics
Reduction Program
300 Desmond Drive
Lacey, WA 98503
Contact: Pallavi Mukerjee
Phone: (360) 407-7018

Or contact:
Citizens for a Healthy Bay
917 Pacific Avenue, Suite 100
Tacoma, WA 98402
Phone: (253) 383-2429

For more information or a copy of Ecology's draft permit and fact sheet contact Pallavi Mukerjee above or visit Ecology's Web site: www.ecy.wa.gov/programs/hwtr/foia/index.html.



A. Facility Background

The facility is located at 1701 E. Alexander Avenue in the Port of Tacoma Industrial Park, Pierce County, Washington. It is approximately five miles east of downtown Tacoma and three miles north of the town of Fife. Land use for the facility is permitted and zoned by the City of Tacoma as Heavy Industrial (M3). The facility consists of approximately 17 acres, of which dangerous waste operations occur on approximately three and a half acres. This dangerous waste permit is being re-issued for operations at that facility.

Burlington Environmental, LLC operates two dangerous waste management facilities in Washington. The company (formerly known as Chemical Processors, Inc., and later Burlington Environmental, Inc.) was founded in Seattle in 1970 to provide an outlet for proper treatment, recycling, and storage of dangerous wastes. Burlington Environmental, LLC is owned by PSC Environmental Services, LLC and uses “PSC” as a recognized name in the waste management industry. PSC offers fuel blending and treatment services for bulk and containerized liquid, and solid wastes to industries throughout but not limited to the Pacific Northwest.

Prior to the 1960s, the area used for facility operations was naturally vegetated with a lake and wetland. Over time, the lake was filled with sand, gravel, wood debris, and various industrial waste materials. From 1970 to 1975, a one-acre portion of a two-acre site (referred to as Parcel A) was occupied by an oil storage and waste oil refining facility, owned and operated by other companies. The site was leased by Chemical Processors, Inc. in 1976 and tanks were added for the storage and treatment of aqueous waste and treated wastewater.

In 1982, Chemical Processors, Inc. purchased an eight-acre site immediately north and west of the original facility (referred to as Parcels B and C), including one of the two acres originally leased in 1976. Three and one-half acres of the eight-acre parcel are a part of the present Tacoma Facility.

Active use of the original one-acre leased area, known as Parcel A, ceased in late 1986. Since 1986, all dangerous waste operations have been conducted within a three and a half-acre portion of the eight-acre site first purchased by Chemical Processors, Inc. in 1982.

In 1992, Burlington Environmental purchased the original one-acre leased area. Philip Services Corporation purchased the Tacoma facility from Burlington Environmental, Inc. (BEI) in 1994. The Tacoma facility’s legal name as a result of corporate restructuring is Burlington Environmental, LLC.

The current facility includes a dangerous waste container check-in and storage area, tank systems to store and treat wastes, and waste stabilization and solidification equipment. PSC will upgrade certain areas of the facility if the draft permit becomes the final permit. Upgrades will include a new covered container check-in area, a new roof over their existing container storage area, concrete containment between the check-in and container storage areas, and a bulk-container storage area used for stabilized and solidified wastes. This fact sheet includes additional descriptions of these areas and their operations below.

If the permit becomes effective as written, it will authorize these dangerous waste storage capacities:

Storage Type	Storage Capacity (gallons)
Container Storage	235,549
Tank Storage	754,860

Wastes stored and treated at the facility include:

- Acid and alkaline wastes.
- Metal bearing aqueous liquids and sludges.
- Waste oils and oily wastewaters.
- Solvent and flammable liquids.
- Cyanide and sulfide bearing wastes.

PSC estimates that the maximum they can treat is 1,594,000 gallons of dangerous waste per day. No

waste is burned or disposed at the facility. Wastes treated by the facility are sent offsite and further managed in one of the following ways:

- Combusted for energy recovery.
- Disposed by incineration.
- Discharged to the City of Tacoma's publicly owned treatment works (POTW) where they are subjected to additional treatment before being discharged to surface water.
- Sent to another dangerous waste treatment facility for additional treatment.
- Disposed of in a landfill.

PSC must meet prescribed treatment requirements for materials they send to any of these places.

This PSC dangerous waste management facility permit regulates all activities for receiving, storing, and treating dangerous waste at the facility.

In addition to dangerous wastes, PSC manages moderate risk wastes and solid wastes at this facility. PSC has a permit deferral from the Department of Ecology, Waste 2 Resources Program Solid Waste permit for managing these types of wastes at the Tacoma facility. Under the conditions of this permit deferral, moderate risk waste and solid waste must be managed as fully regulated dangerous wastes when they arrive at the facility. This includes following procedures for waste analyses required of dangerous waste.

B. Procedures for Reaching Final Decision

The public may review and comment on this draft permit. Ecology will consider all public comments before deciding whether to issue a final permit. WAC 173-303-840(3) through (9) describe the public review process.

Public Comment Period

December 30, 2011 through February 15, 2012 is the public comment period on Ecology's tentative

decision to issue a dangerous waste management facility permit. See page 1 for information on submitting comments and reviewing documents.

Public Hearing

Ecology will conduct a public hearing on this tentative decision ONLY if a member of the public requests one. To request a hearing, contact Pallavi Mukerjee by phone, letter, or e-mail by February 1, 2012. To find out if a public hearing will be held, contact Pallavi Mukerjee on or after February 6, 2012. If held, the public hearing will begin at 7:00 pm on February 8, 2012, at Ecology's Lacey Building, Room 1S-16 (the address and contact information is listed in the side bar on page one of this notice).

How to Participate

You may request, review, and comment on the draft permit and supporting documents. The information Ecology used to make their decision is also available to you. See page one for locations and hours of availability. You must deliver or postmark your comments by February 15, 2012, for Ecology to consider them.

The most effective comments are those that:

- ✓ Provide specific information describing what condition he or she believes is inappropriate.
- ✓ Provide factual and regulatory support for the comment.
- ✓ Suggest changes to fix the problem.
- ✓ Include supporting material, unless Ecology already has the material. (For example, if the comment references a regulation on managing dangerous waste, Ecology already has it. If the comment references a report or letter that is not part of the application or the agency files on PSC, or is not a commonly available reference, then Ecology likely does not have it and the person commenting should provide a copy of the reference.)

WAC 173-303-840(6) provides details on raising issues and providing information during the public comment period.

Decision-making Process

Public Comments and Testimony

Ecology will consider and respond to written comments the public submits. Ecology will also consider and respond to public testimony from the public hearing, if one is held.

Final Decisions

After considering public comments and testimony, Ecology will make a final permit decision or a new tentative decision. If Ecology re-issues a final permit to PSC, it will be valid for ten years from its effective date. However, PSC or Ecology can modify the permit at any time during that period. Permit modifications are subject to public review. WAC 173-303-830 has procedures for modifying a permit and presents the types of permit changes that are subject to public review and comment.

Ecology will inform the facility and all people who comment during the public comment period of the final permit decision.

Effective Date of Decisions

Normally, a permit is effective 30 days after Ecology gives notice of their final decision. However, if there are no comments on the draft permit, Ecology may specify an earlier effective date for the final permit.

If Ecology makes a new tentative decision on this permit, there will be a new comment period.

Appealing the Final Permit Decisions

Ecology will make a final decision after considering and responding to comments from the public and the facility on the draft permit. People can challenge that final decision or any individual permit condition by appealing to the Pollution Control Hearings Board. Appeal procedures are in WAC 173-303-845 and Chapter 43.21B Revised Code of Washington (RCW).

Ecology's Authorities and Responsibilities

Ecology regulates dangerous waste in Washington. The Washington State Hazardous Waste Management Act, Chapter 70.105 Revised Code of Washington (RCW), and the Dangerous Waste Regulations, Chapter 173-303 WAC, regulate the management of dangerous waste. WAC 173-303-800 specifies that facilities such as PSC-Tacoma, that store and treat dangerous waste, must obtain a permit.

The U.S. Environmental Protection Agency (EPA) also has regulations for facilities that manage hazardous waste. The Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) and the Hazardous and Solid Waste Amendments of 1984 (HSWA), and the regulations in Title 40 of the Code of Federal Regulations (CFR), regulate hazardous waste nationwide. EPA authorizes Ecology to implement these federal regulations in Washington.

The State of Washington's dangerous waste management program received authorization to implement the state dangerous waste regulations in lieu of the federal hazardous waste regulations on January 31, 1986. The State's program also received approval for revisions to the federal program. The last approval became effective on July 28, 2010. Currently, Ecology's program is authorized for all aspects of the federal hazardous waste regulatory program that apply to PSC's dangerous waste management permit.

C. State Environmental Policy Act (SEPA)

PSC provided a draft SEPA checklist with their permit application. Since there will be new construction requiring building permits from the City of Tacoma, the City is the lead agency for SEPA. Ecology expects that the final dangerous waste permit will not be effective until the City makes its SEPA determination.

Ecology anticipates that the City will make its SEPA determination in early 2012. Ecology will review the SEPA checklist and City's SEPA determination and provide input, if needed.

D. Facility Descriptions and Permit Requirements

PSC operates this dangerous waste management facility at 1701 E Alexander Avenue, Tacoma between the Hylebos and Blair Waterways of the Commencement Bay Nearshore Tidelat area. PSC is a commercial waste management operation who accepts and manages dangerous wastes from off-site generators.

Dangerous Waste Container Management

This dangerous waste management facility permit regulates all activities for receiving, storing, and treating dangerous waste at the facility.

The facility receives dangerous wastes in containers and in bulk tanker trucks. As described in more detail below, they conduct check-in procedures in specified container and tanker staging areas. The dangerous wastes must be formally accepted into the facility and moved to processing or long-term storage areas within 24 hours. All waste loading docks, waste check-in areas, storage areas, and treatment or processing areas, have sufficient secondary containment volume to hold up to ten percent of the maximum quantity of waste in the area, or the largest tank or container, whichever is greater. In addition, outdoor storage area has a capacity to contain precipitation from a maximum 25-year storm of 24-hour duration. PSC must remove spilled wastes from any secondary containment system as soon as it is discovered, and they must remove precipitation at least once a day if it accumulates in sumps.

Currently, when PSC receives a waste shipment of containers, their staff unload the waste containers into a specific containment bay in the South Container Storage Area to conduct check in (including waste verification).

After PSC verifies the identity of dangerous waste in a shipment, they move the waste containers into storage. Wastes are placed into separate secondary containment areas according to their hazard class. From the container storage area, wastes can be moved to the stabilization building, to one of the tank area load/unload pads, or it can be shipped off-site for treatment and disposal.

PSC will build new areas and structures under this permit to support their container management operations. The permit has a schedule to ensure construction by November 2013. The following new areas and structures will be built:

- Separate load/unload pad and roofed check-in area.
- Roof over the existing storage area
- Concrete containment between the check-in area and storage area.
- Bulk storage area for wastes following stabilization/solidification.

PSC will use the new load/unload pad and roofed check-in area to receive containers of dangerous wastes into the facility. Waste will be off-loaded from trucks on the load/unload pad and placed directly into the roofed check-in area, where PSC will conduct waste check-in and verification.

There will be four separate secondary containment areas to separate incompatible wastes in the check-in area. Within 24 hours, PSC will move waste from the check-in area into the roofed container storage area, or into one of the permitted processing areas. Transport of waste containers between the new check-in area and storage area will be over a concrete area that can contain an accidental spill before it would reach the environment.

New construction results in benefits to the environment and operations at the PSC facility:

- Less contact storm water to manage due to roofs over the check-in and container storage building.

- Better separation of incompatible waste during waste check-in and verification procedures.
- More space for safer and more efficient movement and storage of waste containers.
- Concrete containment in container transport area between check-in and storage to prevent potential accidental spills from reaching the environment.
- An area to stage stabilized/solidified waste awaiting confirmation of successful treatment which frees up space in the stabilization building for safe and effective operations.

PSC must inspect dangerous waste containers when they first arrive at the facility to ensure they are closed securely to prevent unnecessary emissions. To minimize air emissions during verification sampling, PSC must ensure a container is open only when it is actively being sampled and then promptly closed. Each container is also kept closed during staging or processing unless dangerous waste is actively being added or removed. The container must be closed if addition or removal of wastes will not occur within 15 minutes, if the person performing the operation leaves the immediate vicinity of the container, or if the container is full.

The permit requires a comprehensive inspection program for waste containers and their management structures. PSC inspects containers daily to ensure they are properly labeled, properly stacked, in good shape, and not leaking. They also inspect secondary containment structures daily to ensure their integrity and to remove any liquids (such as stormwater) from sumps. The secondary containment systems have sufficient capacity to hold wastes from ten percent of the quantity in all containers in its area, or the largest container, whichever is greater, plus, if unroofed, precipitation from a maximum 25-year storm of 24-hour duration. PSC must maintain container management areas so they have impervious surfaces with no penetrating cracks. For additional information, see a later section of this fact sheet on “Inspections.”

Dangerous Waste Tank Operations

The PSC facility includes a tank farm with 53 individual tanks for managing liquid dangerous waste. Operations include waste storage, waste neutralization, wastewater treatment, oily waste treatment, and fuel blending. The tank farm has three separate secondary containment areas. Acid waste tanks are in one area; organic waste tanks (some of which are flammable) are in a second area; and alkaline waste storage, and waste water treatment and storage tanks are in the third area.

The secondary containment systems have sufficient capacity to hold wastes from the largest tank in its area, plus precipitation from a maximum 25-year storm of 24-hour duration. Like container areas, PSC must maintain tank secondary containment areas to have impervious surfaces with no cracks.

The facility has two load/unload areas adjacent to the tank farm; one on its east side and the other on its west side. PSC receives loads of bulk wastes (such as tanker trucks) in these areas, where they pump the dangerous wastes into their tanks. Before pumping newly arrived wastes into a tank, PSC verifies the identity of the wastes and runs a compatibility test to ensure the waste is compatible with wastes already in the tank. This test avoids an unexpected and potentially dangerous reaction between wastes in the tanks.

PSC can also stage smaller containers (for example 55-gallon drums) of wastes on these pads and pump their contents into the tanks for storage and treatment. These containers of waste cannot remain on the pads for more than 24 hours. The permit has limits on the amount of wastes that can be placed on these pads to ensure adequate secondary containment capacity will be available in case of a spill.

All of PSC dangerous waste tanks must be inspected and recertified by an independent certified professional engineer every five years to ensure they are properly designed, and are being operated within their design limitations.

If problems are found, the tank may be required to be inspected and recertified more frequently. The permit also includes requirements for an ongoing comprehensive inspection program for tank systems. PSC does different types of inspections on a daily, weekly, monthly, quarterly, and biannual basis. For details, see the “Inspections” section .

The permit has requirements for air emission control from dangerous tanks. Most tanks have conservation vents to allow pressures within the tanks to equilibrate to outside pressures when wastes are added or removed or when ambient temperatures change. The vents remain closed at other times. PSC must inspect these vents annually to ensure seals are intact and not leaking. Five tanks have their vent systems connected to an activated carbon adsorption system to remove organics before being released to the atmosphere. The permit specifies monitoring and maintenance procedures to ensure ongoing effective operation of the air emission control system.

PSC must also monitor equipment such as pumps, valves, and flanges to ensure they do not have or develop air emission leaks. The permit includes monitoring schedules depending on the type of equipment and the type of waste it contacts.

Dangerous Waste Stabilization and Solidification

PSC conducts dangerous waste stabilization and solidification at the Tacoma facility. Solidification involves mixing a waste with other material to absorb liquid from waste. Stabilization involves mixing wastes with treatment agents, such as fly ash and lime, to reduce the mobility of metals and other hazardous constituents in the waste. The treatment agents also absorb moisture from the waste and produce a more solid material that is safer to transport and dispose of in a landfill.

PSC has a separate stabilization building for their stabilization and solidification processes. PSC unloads and stores dangerous waste destined for stabilization or solidification in this building.

Here, wastes can be stored for up to one year. Only compatible materials may be stored at any one time because the building has only one secondary containment area. All wastes moved to the building are stabilized or solidified in one of two double-walled tanks.

PSC must demonstrate successful absorption of liquids prior to removing treated waste from the stabilization tanks. PSC must demonstrate they meet Land Disposal Restrictions (LDR) for every load of stabilized waste they send to the landfill.

A bulk storage area will be built under this permit. Until that area is constructed, no treated wastes can leave the stabilization building until PSC gets sufficient analytical information to ship it offsite. After the bulk storage area is constructed, PSC can use this area to store treated loads of waste awaiting offsite shipment.

The stabilization building has an air pollution control system to collect dust generated by the treatment processes. PSC must verify that every waste processed in the building has lower than 500 ppm volatile organic content, therefore the building is not required to have controls for organic air emissions.

During review of the permit application, Ecology ensured the design of all areas, structures, and equipment used to manage dangerous waste met dangerous waste facility standards. The permit is specific about how PSC must comply with environmental standards and includes detailed conditions on how management areas must be used, inspected, and maintained. If PSC needs to change equipment or procedures for waste management operation, they must first modify the permit. The permit and regulations prescribe the process for permit modifications and includes Ecology approval and notification of changes to the public.

The permit requires the facility to properly operate and maintain all systems of waste management to achieve compliance with the Dangerous Waste Regulations and specific conditions of the permit.

PSC must ensure adequate funding, staffing, personnel training, and process controls to maintain compliance. PSC must tell Ecology if they are out of compliance with any of the permit requirements.

Waste Analysis Requirements

Requirements for waste analysis are complex and critical for safe operation of the facility. WAC 173-303-300 requires facilities to have comprehensive and accurate information about the composition of all dangerous waste they manage. PSC's waste analysis plan (WAP) has detailed procedures to meet this requirement. These include characterizing wastes before shipment to the facility, verifying the identity of wastes when they enter the facility, and ensuring safe and effective treatment of wastes by doing certain analyses before and after waste processing.

PSC conducts numerous treatment operations at the Tacoma facility. Major operations on dangerous wastes include:

- Consolidation in tanks.
- Waste water treatment.
- Neutralization.
- Phase separation.
- Blending of organic wastes for fuels.
- Waste stabilization and solidification.
- Dangerous waste storage.

PSC does not burn or dispose of any waste at the Tacoma facility. They discharge treated waste water to the City of Tacoma Publicly Owned Treatment Works (POTW) for additional treatment and discharge. They ship blended fuels out-of-state to a permitted hazardous waste industrial facility for burning and energy recovery, and ship stabilized and solidified waste to a landfill for disposal. PSC accepts a limited amount of dangerous waste not processed at the Tacoma facility. They store this waste in containers and ship them to another facility for processing or disposal. PSC is not allowed to accept dangerous wastes that are explosive, radioactive, or infectious at the Tacoma facility.

Key Terms and Definitions

The WAP defines key terms to ensure a clear understanding of requirements for waste analysis. Ecology defines and describes these critical terms below to facilitate later discussion on WAP requirements.

Waste stream is dangerous waste from a single generator that is specific and unique to the waste generation process. For example, two otherwise identical dangerous wastes generated from identical processes by two different generators are different waste streams in the WAP. Also, two wastes generated by the same person using slightly different processes are different waste streams in the WAP. Waste stream is a critical concept in the WAP. All requirements in the WAP are keyed to the individual waste stream.

Waste profile questionnaire (or WPQ) is a document provided by the waste generator, which meets the initial information needs for a waste stream. It includes a detailed and comprehensive physical, chemical, and regulatory description of a waste stream to assist PSC in determining whether that waste can be safely managed in compliance with the Permit.

Profile is a detailed and comprehensive physical, chemical, and regulatory description of a waste stream. PSC can use information in the generator's WPQ to develop the profile, but in many cases, PSC must supplement the generator's information to develop the profile. PSC is responsible for ensuring an adequate and accurate profile for every waste stream they accept.

Confirmation is checking that the generator's information is accurate and complete before approving the waste stream for shipment to the facility. PSC takes whatever steps are necessary to supplement generator information to develop an adequate and accurate profile during the confirmation process.

Verification is a set of procedures with criteria for determining that the waste stream received at PSC is the same as that described on the manifest and profile. This includes visual inspection and screening analysis for every waste stream that is shipped to the facility. (There are a few exceptions discussed in the “verification” subsection).

Process limits means equipment and treatment limits at the Tacoma facility. PSC’s treatment and storage structures and equipment must be operated within specified safe limits. These limits are stated in the permit. Wastes having properties outside these process limits must not be managed at the facility because they could damage the equipment or create other hazards.

Waste Characterization/Waste Profile System

Under the permit, PSC must obtain reliable information on the composition of every “waste stream” before they allow the generator to ship it to their Tacoma facility. The permit allows both acceptable knowledge about the dangerous wastes and laboratory analyses to characterize a waste stream and develop its profile. The WAP has procedures for determining when laboratory analyses are needed. However, PSC ultimately makes the decision and has the responsibility of determining the extent of laboratory analyses required for each waste stream. PSC must evaluate, supplement when necessary, and document the information and their decision. If they use knowledge about the waste stream from the generator, PSC must document how they determined that it was acceptable.

PSC uses the following general steps to ensure they have sufficient and reliable information on every new waste stream before it is shipped to their facility.

1. **Obtains information on the waste stream from the generator.** The generator provides the information in a WPQ.
2. **Confirms information on the (WPQ).** During the confirmation process, PSC determines what they need to do to substantiate and supplement information from the generator to ensure it is sufficient and reliable to meet performance requirements in the permit. This may include visiting the generator site, collecting additional documentation to support the generator’s information, doing additional laboratory analyses of the wastes, or completing a combination of these steps.
3. **Compiles and evaluates all information on the waste stream.** PSC’s trained staff review and evaluate waste analysis information for each waste stream. Their staff reviews the information to ensure PSC can manage the waste safely within process limits in the permit, and ensures that PSC can legally accept and manage the waste at the facility.

Field staff may conduct a site audit of the generator site to substantiate generator information. During these reviews, PSC determines whether additional information is needed about the waste stream. If so, PSC is responsible for collecting that information. They make sure they have accurate and sufficient information to be in compliance with process limits, ensure proper waste codes and shipping names, , and meet other requirements in the permit. The compiled information is PSC’s profile for that specific waste stream.
4. **Documents information and decision.** PSC documents information in the WPQ, additional laboratory analyses, process information, results of site audit, and communication with the generator to support their decisions on the adequacy of the profile information and acceptability of the waste stream at the Tacoma facility. PSC must keep this information for each waste stream until closure of the facility.

5. **Re-evaluates information.** If PSC continues to accept the same waste stream from a generator, they must repeat steps 1 through 4 when:
- The generator significantly changes the process or operation producing the waste. (For example, when the generator modifies their manufacturing process or changes chemical ingredients.)
 - PSC determines the waste does not match its profile when they do verification analysis. (This fact sheet discusses verification analysis in a later section)
 - Two years elapse since the last time PSC evaluated information using steps 1 - 4.

The permit stresses that PSC is responsible for obtaining accurate and complete information for every waste stream it plans to manage. Deficient or inaccurate information from the generator is not an acceptable defense for receiving unacceptable waste or mismanaging waste at the Tacoma facility.

Waste Verification

PSC must verify each waste stream in every waste shipment received at the Tacoma facility. Verification consists of a series of observations and screening tests to ensure that characteristics of the waste stream received are consistent with the information included on the waste's profile and within PSC's process limits.

For waste containers, PSC uses the following steps to verify each waste stream.

1. **Ensure current waste profile.** When a waste shipment arrives at the facility, PSC's administrative staff ensures each waste stream on the shipment has a current profile. This confirms trained PSC staff previously reviewed the acceptability of the waste stream before it was shipped to the facility.
2. **Visual check of shipment.** Check-in staff ensures the correct number of containers in the shipment for each waste stream and they compare information on the container labels with information on the manifest.
 - This helps verify the identity of the shipment by determining whether there are obvious discrepancies between information on the waste manifest and the actual waste shipment.
3. **Accept or reject waste shipment.** If information on the manifest, the profiles, and the container labels are in agreement, the number of containers is correct, and the containers are in good condition, PSC signs the manifest and formally accepts the waste into the facility.
4. **Unload transport vehicle.** While unloading the vehicle, PSC ensures dangerous waste containers are not leaking and are properly closed. If necessary, PSC staff replaces or overpacks waste containers that are in substandard condition and tightens any openings that are not secured. Then they assign a waste tracking to each container so its location at the facility is always known.
5. **Sample for verification screening analysis.** PSC is required to sample at least one container of every waste stream in every waste shipment or ten percent of the containers of a single waste stream, whichever is more. They randomly select the containers when there is more than one container for a single waste stream.
6. **Conduct screening analyses.** PSC conducts the following analyses on the waste sample to verify the waste stream matches its profile:
 - Physical description (all waste streams)
 - Ignitibility screen (liquid waste streams)
 - pH (non-organic waste streams)
 - Halogen (organic waste streams)
 - Specific gravity (all waste streams)
 - radiation screen (all waste streams)
 - Cyanide and sulfide screening tests on waste streams from industries that might generate those constituents.
 - Waste compatibility testing for all wastes that will be mixed together.
 - Water compatibility testing for all waste that will contact water during its management.

- Volatile organic constituent (VOC) screen on all waste streams they plan to stabilize or solidify at the Tacoma facility. PSC will develop the method to conduct the VOC screen under a compliance schedule that is in the permit, and then add details on how the screen test will be conducted into the permit as a permit modification. The compliance schedule requires PSC to submit their proposed screening method for Ecology review within 60 days of the permit's effective date.
7. **Conduct supplemental analyses:** PSC does additional analyses, including but not limited to heat of combustion, flash point, total chlorine, total cyanide, total sulfides, and Toxicity Characteristic Leaching Procedures (TCLP) if additional information is needed to verify that the waste stream matches its profile or if these analyses are needed to safely manage the waste.
 8. **Record results of testing and whether each waste stream passed verification screening.** If a waste stream does not pass verification testing, it is isolated from other wastes and subject to waste discrepancy procedures described below.

PSC also samples and verifies the waste identity in every bulk waste shipment arriving in a tanker truck. In this case, they sample and conduct the screening analyses (steps 5, 6 and 7) before they sign the manifest and offload the vehicle. Before they pump the arriving waste stream into any of their tanks, they conduct the compatibility test to ensure the mixture will not cause an unexpected reaction with materials already in the tank.

The permit specifies that PSC has to complete these waste stream acceptance and verification steps, and place the waste stream into long term storage or processing, within 24 hours of receiving the shipment.

Procedures for Waste Discrepancies

There is one exception to the usual requirements for accepting a waste stream into the facility. If a waste stream in a container does not pass verification analysis (i.e., there is a “waste discrepancy”), PSC must place that container in a secondary containment tray in a separate part of the container storage area. Bulk loads that fail verification will be marked and placed in the 10 day transfer area of the facility. Then they must work with the generator and conduct additional analyses if necessary to resolve the discrepancy.

After they resolve the discrepancy, PSC may store or process the waste if it meets their permitting limits or ship it back to the generator or to another permitted facility. PSC must report the discrepancy to Ecology if they cannot resolve it within 15 days. In either case, PSC must document all of their analyses, communications, and determinations in their operating record.

The permit also includes procedures for damaged waste shipments that pose a threat to human health or the environment. These include steps to make the shipment secure, clean up any released materials, and notify Ecology and other agencies of the problem.

Waste Processing Analyses

PSC is required to do certain processing analyses to ensure safe, legal, and effective treatment of wastes. PSC conducts compatibility testing before wastes are consolidated to ensure no unexpected adverse reactions. They do bench testing before they treat waste waters to ensure effective and safe treatment. After they stabilize or solidify waste, PSC tests the waste to ensure it has no free liquids that could drain from the treated waste while it is being transported to or placed in a landfill.

They also conduct TCLP analyses on stabilized waste to ensure all dangerous constituents in the waste are immobilized to regulatory limits.

In addition, when PSC has an unusual waste or one that has particularly hazardous characteristics or constituents, they treat it using a “Process Under Supervision Only” or “PUSO.” That means PSC managers and other experts directly oversee the treatment of that waste.

Data Quality Assurance

The permit specifies methods for sampling and analyzing waste streams. PSC operates a laboratory at the facility to do the required screening analysis. That laboratory must follow quality assurance and quality control (QA/QC) measures included in the permit.

Some sample and analytical methods used by PSC include:

- physical description
- pH
- flashpoint
- specific gravity
- heat of combustion
- compatibility screen
- halogens
- cyanide
- VOCs
- sulfides
- metals

All analytical data are documented and retained until facility closure.

PSC uses off-site laboratories for more detailed analyses. They must use a laboratory certified by the state of Washington. The laboratory must also follow QA/QC procedures for the approved method.

The plant manager is responsible for laboratory quality control, implements the Quality Assurance Plan, and provides technical advice to the laboratory personnel. He/She will also direct quarterly audits of analyses and measurement systems performed in the Tacoma laboratory and of the record keeping systems in the laboratory.

Samples are collected in containers compatible with the sampled material and labeled. The permit requires PSC laboratory to observe good standard laboratory practices to minimize the possibility of cross contamination.

Personnel obtaining samples are trained in proper sampling techniques. Samples collected at generator locations are accompanied by a chain of custody.

Waste Tracking

PSC must accurately track every dangerous waste from the time it enters the facility until it is:

- Discharged to the City of Tacoma POTW as a treated waste water.
- Shipped offsite as a successfully treated material.
- Manifested offsite as a dangerous waste.

The waste analyses plan specifies procedures for waste tracking.

Waste Generated by PSC

PSC generates new waste streams as they process wastes they receive from off site. Examples are:

- Sludges from their storage and treatment tanks.
- Used personal protection equipment.
- Stabilized wastes.

PSC is required to properly characterize and designate these wastes before they are placed into storage at their facility or manifested off site for disposal.

Security

The active area of the Tacoma facility is completely surrounded by a six foot high chain link fence. The main gates are electrically operated and require a pass code or a pre-programmed security device to enter the facility. All electrical gates close automatically after being opened. The plant is illuminated by automatic outdoor lighting. There are numerous surveillance cameras installed throughout the facility to monitor incoming and outgoing traffic activity.

Access to the active area of the facility is restricted to waste transportation vehicles, authorized personnel, and authorized visitors. Gates to the active area are closed or attended by employees while open.

During non operational hours, all gates are closed and locked. The locks are heavy duty units, keyed alike, issued to authorized personnel only, and stamped “DO NOT DUPLICATE.”

Signs in English, printed with the legend, “DANGER: Unauthorized Personnel Keep Out” are posted on the gates and approximately every 50 feet along the perimeter fence. The signs are attached to the fence at an approximate height of five feet, are visible from any approach to the facility, and legible from a distance of 25 feet.

Inspections

PSC will conduct periodic inspections of the facility. These inspections detect and prevent malfunctions, deterioration, operator error, and releases from the unit that could cause harm to human health and the environment.

Some inspections required under the permit are:

- **Daily Inspections** of safety, emergency, and security equipment; sumps and secondary containment structures, load/unload areas, and treatment systems for leaks, spills, or accumulated rainwater.

All spills and releases are removed as soon as detected during operational hours. During non-operational hours, if security personnel detect a release or spill they will contact the Emergency Coordinator (EC) for an immediate response.

Tank systems, ancillary and process equipment, and containers are inspected daily for structural integrity, maintenance, signs of corrosion, erosion, spills, overfilling, labeling, orientation, aisle spacing, compatibility, segregation of incompatible materials, and puncture and weld breaks.

- **Weekly Inspections** of all secondary containment systems and load/unload areas for unacceptable gaps, cracks, deterioration, corrosion, and erosion.

- **Monthly Inspections** of emergency response equipment (including Self contained breathing apparatus-SCBA and fire extinguishers) to confirm they are in working condition.
- **Quarterly Inspections** of emergency response equipment to confirm that materials are present in minimum stock quantities and are in satisfactory condition.
- **Semi Annual Inspections** of secondary containment by a qualified engineer to determine if any additional deterioration has occurred.
- **Annual Inspections** of fire hydrant pressure checks, fire suppression system checks and annual fire inspection certification by outside sources.
- **Five Year Integrity Assessment** of tanks by an independent qualified professional engineer to determine if tanks need repair, additional operating limitations, or replacement. Tanks that had a major repair, corrosion, or failure in coating are inspected two years from their last inspection.

The permit also requires PSC to correct unsatisfactory conditions discovered during the above mentioned inspections. Records of inspections must be kept in the facility record for a minimum of five years.

Emergency Planning

This permit includes a Contingency Plan PSC will follow in the case of an emergency at the facility. This plan describes specific emergency response procedures PSC will follow when responding to emergencies at the facility, such as natural disasters, explosions, fires, spills, or releases. The facility is equipped with internal and external communications, emergency equipment, and access to water for fire control. The plan also addresses procedures if an incident requires evacuation of the facility or an area.

PSC has established coordination agreements with local emergency response providers and with state and local emergency response teams. The agencies listed below are provided with current copies of the contingency plan to familiarize them with the types, locations, and properties of the dangerous waste handled at the facility.

- Tacoma Fire Department
- City of Tacoma Police Department
- Tacoma General Hospital
- Saint Joseph Medical Center
- Highline Work Clinic
- Washington Department of Ecology
- Puget Sound Clean Air Agency
- City of Tacoma Wastewater Management Operations Division
- NRC Environmental Services

The permit lists emergency response supplies and equipment at the facility and PSC must regularly inspect and maintain them. All facility employees must be trained on the contingency plan and a refresher must be provided according to the training schedule. These permit requirements help ensure PSC is always prepared for an emergency.

The permit specifies criteria for incidents that PSC must immediately report to Ecology. It also specifies criteria for incidents that require full use of contingency plan procedures. If the facility needs to implement the contingency plan, PSC must provide a written report to Ecology within 15 days. The report describes:

- The contact information.
- The date, time, and cause of the incident.
- The name and quantity of material(s) involved.
- An assessment of actual or potential hazards to human health or the environment.
- An estimated quantity and disposition of recovered materials from the incident.
- Corrective action taken to prevent reoccurrence of the incident.

The permit identifies a trained emergency coordinator (EC) who directs and coordinates emergency response procedures. The EC is thoroughly familiar with all aspects of the Contingency Plan and operations, activities, locations and properties of waste managed, location of records, and facility layout. The EC or his/her designee has complete authority to commit needed resources of the company in the event of an emergency. The permit also specifies two alternate ECs to assume emergency response duties and responsibilities in case the primary EC is not available at the time of the incident.

PSC must submit a permit modification if they make changes to the contingency plan, list of emergency coordinators, or emergency equipment.

Training

The permit requires all personnel employed at the PSC facility to undergo training. In addition, all personnel who support waste management operations and requirements of the dangerous waste permit must undergo training according to this plan.

Effective training is essential for competent and safe operation of the facility in compliance with regulatory requirements, including the dangerous waste permit. The training includes:

- Orientation Training
- Task/Process Specific Training
- Continuing Training

Job-specific training is a very important element of PSC's required training program. Each facility employee is assigned to job title(s), and every job title has required training courses or modules within a required timeframe. Employees will not work unsupervised in the new job title until training courses relevant to those titles are completed.

The permit requires that a person knowledgeable in dangerous waste management must direct the facility's training. The Operations Manager has overall responsibility for directing the facility's training plan.

He/She along with Environment, Health and Safety-(EHS) personnel, will approve the training program content and format, designate qualified instructors, and provide the necessary resources to ensure an effective training program is maintained.

The Plant Manager is responsible for ensuring all employees receive all required training in the timeframe specified. Evaluation of a trainee's proficiency is done through oral examination and on the job performance. The training program itself is evaluated annually by EHS and Operations Management personnel.

The permit requires PSC to keep records of their training program. These records include:

- All training taken by each current employee until facility closure.
- Records for former employees for at least three years after they last worked at the facility.
- Class sign in roster
- Personal training history on each employee.

Personnel training records need to be kept at the corporate offices for at least three years after closure of the facility.

Corrective Action and Closure

Dangerous waste management facilities must close when they cease managing dangerous waste. To close, a facility usually must remove all the dangerous waste from the facility and decontaminate or remove equipment, structures, and contaminated environmental media (for example, soils). If this cannot be accomplished, the facility must then conduct post-closure care to ensure that any contamination remaining onsite will not cause additional contamination to the environment.

The Dangerous Waste Regulations allow Ecology, except for certain requirements, to replace all or part of the closure and post-closure requirements with alternative requirements in an enforceable document when:

- i. A dangerous waste unit is situated among other solid waste management units or areas of concern, a release has occurred, and both the dangerous waste unit and one or more of the solid waste management units or areas of concern are likely to have contributed to the release; and
- ii. It is not necessary to apply all the closure or post-closure requirements because the alternative requirements will protect human health and the environment.

An enforceable document is an order, consent decree, or plan issued by Ecology to apply alternative requirements for closure, post-closure, groundwater monitoring, corrective action, or financial assurance. Enforceable documents include, but are not limited to:

- Closure and post-closure plans.
- Permits and orders issued under Chapter 70.105 RCW.
- Orders and consent decrees issued under Chapter 70.105D RCW (the Model Toxics Control Act,(MTCA)).

The PSC facility, along with neighboring properties, is located on a former landfill where industrial wastes were used as fill materials during the late 1960s to early 1980s. The current site designation for the former landfill is the Taylor Way and Alexander Avenue (TWAA) Fill Area Site. The wastes included auto fluff (auto shredder residue), lime wastes, lime solvent sludge, and wood waste.

Several Solid Waste Management Units-(SWMU's) are identified in a RCRA facility assessment dated February 1990 (1990 RCRA Facility Assessment (RFA), prepared for the U.S. Environmental Protection Agency (EPA) for PSC and surrounding facilities. Some of these SWMUs in the 1990 RFA represent portions of the TWAA Fill Area Site including:

- SWMU C-70 – Areas of Auto Fluff and Lime Waste (Chempro Proper).
- SWMU A-25 – Area of Auto Fluff and Lime Fill (Parcel A).

management units.

In addition, from 1972 to 1975, oil-reclaiming wastewater and petroleum sludges and emulsions were placed in a pond located on Parcel A of the Tacoma facility. A waste oil recycling and storage facility also operated from 1970 to 1986 on the east side of Parcel A.

The 1990 RFA states that the potential for releases from these and other SWMUs is high.

Releases to soil and groundwater from two former units at the Tacoma facility have contributed to soil and groundwater contamination in the TWAA Fill Area. The two former units are:

- A chemical treatment unit that started operating in 1977 on Parcel A of the Tacoma facility and ceased operation in 1986.
- The letter tank area that started operating in 1979 on Parcel B of the Tacoma facility and ceased operation in 1990.

Soils and groundwater in the TWAA Fill Area are contaminated with total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), semi volatile organic compounds (SVOCs), and metals at concentrations that exceed MTCA cleanup standards.

The former dangerous waste management units are situated among other SWMUs where releases have occurred. Both the units and the SWMUs have likely contributed to the releases. Therefore, Ecology determined it unnecessary to apply all the closure requirements in the Dangerous Waste Regulations to releases to deeper soil, groundwater, surface water, and air at the Tacoma facility. There are alternative requirements protective of human health and the environment. These alternative requirements are found in Part 2 (Corrective Action) of the draft permit.

Within five years of the effective date of the reissued permit, Ecology will issue an order requiring PSC to institute corrective action for releases dangerous wastes and dangerous constituents, including releases from solid waste

The order will include schedules of compliance for corrective action. The order will be incorporated by reference into the re-issued permit.

For removal of dangerous waste and decontamination of equipment and structures, the re-issued permit includes a closure plan with detailed procedures that PSC must follow to close the facility. PSC estimated the cost of conducting these procedures while operating at its maximum capacity. PSC must provide assurance, on an ongoing basis, that the company has adequate funds available to conduct closure of the facility.

Closure activities at the PSC-Tacoma facility are designed to meet federal and state closure performance standards. The closure activities will accomplish the following performance standards in WAC 173-303-610(2)(a):

- Minimize the need for further maintenance.
- Control, minimize, or eliminate to the extent necessary to protect human health and the environment, post-closure escape of dangerous waste, dangerous constituents, leachate, contaminated run-off, or dangerous waste decomposition products to the ground, surface water, ground water, or atmosphere; and
- Return the land to the appearance and use of surrounding land areas to the degree possible given the nature of the previous dangerous waste activity.

Where removal or decontamination of dangerous waste management units, equipment, foundation soils, dangerous wastes or residues, or other materials is done, the removal or decontamination will assure that the levels of dangerous waste or dangerous waste residues do not exceed:

1. For foundation soils, the numeric cleanup levels calculated using residential exposure assumptions according to the MTCA Cleanup Regulation (Chapter 173-340 WAC).). Primarily, these will be unrestricted numeric cleanup levels calculated according to MTCA Method B, although MTCA Method A may be used as appropriate.

2. For structures, equipment, bases, liners, etc., clean closure standards shall be set by Ecology on a case by case basis in accordance with the closure performance standards (WAC 173-303-610(2)(a)(ii) and -610(5)) and in a manner that minimizes or eliminates post-closure escape of dangerous waste constituents.

Financial Assurance

PSC will have enough money set aside to cover the estimated cost of all closure activities, including groundwater monitoring.

Recordkeeping

The facility must maintain detailed operating records. These records document compliance with conditions of the permit and the Dangerous Waste Regulations. The facility must also maintain records of spills, releases, incidents of noncompliance, and emergencies. These records must be kept for periods ranging from three years to when facility closure is completed, depending on the type. The permit lists specific recordkeeping requirements.

Reporting

PSC must report certain information to Ecology, for example:

- Waste shipments received that do not agree with the accompanying manifest or shipping paper, if the discrepancy cannot be resolved within 15 days.
- Incidents that cause the facility to implement its Contingency Plan.
- Noncompliance with permit.
- Annual reports on the facility's operation, including information on waste minimization efforts.

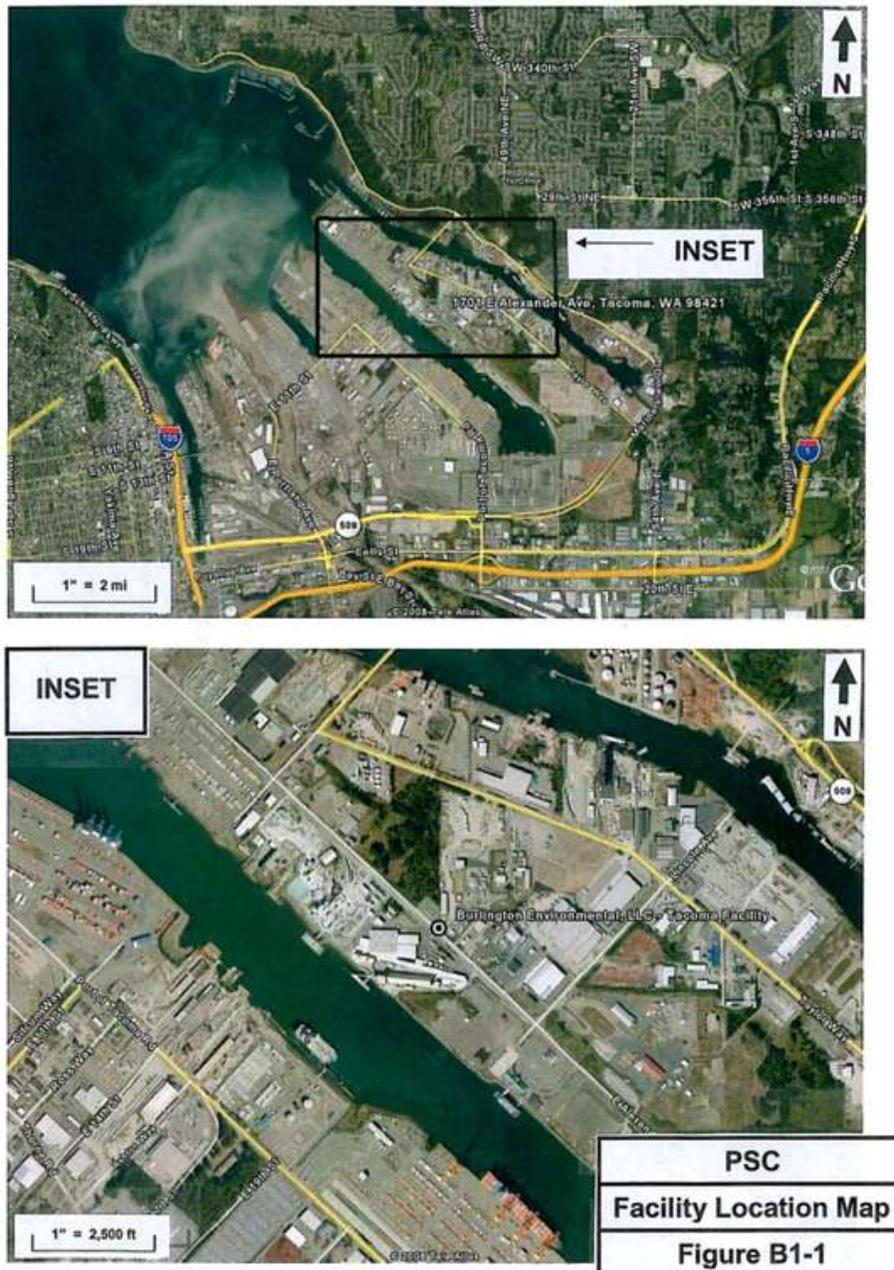
This list does not include all reports PSC must submit to Ecology.

E. Changes to RCRA Rules under the Hazardous and Solid Waste Amendments

In general, new or amended requirements in the Hazardous and Solid Waste Amendments of 1984 and related regulations will automatically apply to PSC dangerous waste management activities. The exception is for new requirements that are less stringent than those in effect when Ecology issues the final permit.

F. Conclusion

In this permit application, PSC has demonstrated it is capable of safely operating its dangerous waste management facility under the conditions required for a final permit. Therefore, Ecology has made a tentative decision to re-issue a final status permit to the facility.





PO Box 47600
Olympia, WA 98504-7600

Ecology Seeks Public Comment on
Draft Dangerous Waste Permit
Re-issuance for:

**Burlington Environmental, LLC
Tacoma Facility
Tacoma, Washington**

Public Comment Period:

**December 30, 2011
through February 15, 2011**

Special Accommodations

If you require special accommodations or need this document in a version for the visually impaired call the Hazardous Waste and Toxics Reduction Program at 360-407-6700.

Persons with hearing loss, call 711 for Washington Relay Service. Persons with a speech disability, call 877-833-6341.

If you request a public hearing and have a special accommodation need, contact Pallavi Mukerjee by February 6, 2011, at 360-407-7018 for assistance.
