



INITIAL INVESTIGATION FIELD REPORT

ERTS Number: 654267
Parcel #(s): 2275200633
COUNTY: Pierce

SITE INFORMATION

Site Name (e.g., Co. name over door): TPU Transformer at POT Pier 7	Site Address (including City and Zip+4): 2201 Sitcum Way Tacoma, WA 98421	Site Phone: 253/428-8615
Site Contact and Title: Mike Rhubright, Sr. Env. Spec.	Site Contact Address (including City and Zip+4): Tacoma Public Utilities, 3628 S. 35th St. Tacoma, WA 98409	Site Contact Phone: 253/502-8520
Site Owner: Port of Tacoma	Site Owner Address (including City and Zip+4): PO Box 1837 Tacoma, WA 98401	Site Owner Phone: 253/428-8615
Site Owner Contact: Robinson-Noble Inc	Site Owner Contact Address (including City and Zip+4): 3011 S. Huson Street, Suite A Tacoma, WA 98409	Owner Contact Phone: 206/550-7215
Alternate Site Name(s):	Comments:	
Previous Site Owner(s):	Comments:	

Latitude (Decimal Degrees): 47.26773

Longitude (Decimal Degrees): -122.41335

INSPECTION INFORMATION

Inspection Conducted? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Date/Time: 2.17.15; 9:20 am	Entry Notice: Announced <input checked="" type="checkbox"/> Unannounced <input type="checkbox"/>
Photographs taken?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Samples collected?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	If Yes, be sure to include a figure/sketch showing sample locations.

RECOMMENDATION

No Further Action (Check appropriate box below):	LIST on Confirmed and Suspected Contaminated Sites List: <input checked="" type="checkbox"/>
Release or threatened release does not pose a threat <input type="checkbox"/>	
No release or threatened release <input type="checkbox"/>	
Refer to program/agency (Name: _____) <input type="checkbox"/>	
Independent Cleanup Action Completed (i.e., contamination removed) <input type="checkbox"/>	

COMPLAINT (Brief Summary of ERTS Complaint):

An industrial transformer failed and released up to 143 gallons of mineral oil to soil and shallow groundwater at this location.

CURRENT SITE STATUS (Brief Summary of why Site is recommended for Listing or NFA):

The impacted soil has been cleaned up to the extent practical but contamination remains in the smear zone and likely in the groundwater at the site.

Investigator: S. Bell

Date Submitted: 10.12.15

OBSERVATIONS

Description (please be sure to include the following: site observations, site features and cover, chronology of events, sources/past practices likely responsible for contamination, presence of water supply wells and other potential exposure pathways, etc.):

Tacoma Public Utilities owns a pad-mounted, industrial type transformer located on Port of Tacoma property at Pier 7 adjacent to the east side of the Sitcum Waterway. The transformer is protected by a fenced enclosure, approximately 18 feet wide by 20 feet long. Testing of the transformer oil conducted by TPU in the past has demonstrated the PCB content was less than 1 ppm.

This transformer failed in December 2014 when the unit experienced a loss of up to 143 gallons of mineral oil, half of its total capacity. TPU hired Robinson-Noble (RN) to remediate the resulting soil contamination. On 5.04.15, RN conducted a preliminary assessment by advancing seven (7) direct push borings to 10 feet below ground surface ((bgs) around the outside perimeter of the fenced enclosure. Groundwater was encountered at 9 feet bgs in each of the borings, four of which were completed as temporary monitoring wells. Soil samples were collected from each of the borings and groundwater samples were collected from the temporary monitoring wells. No contamination was detected in the soil and groundwater samples collected from the borings. Based on the map provided in RN's cleanup report, the borings appear to be placed approximately 4 to 10 feet away from the fence and 14 to 18 feet away from the transformer, along a horizontal plane.

RN returned to the site on 07.05.15 to conduct site cleanup. After removing the transformer and pad, visibly stained soil was noted within the footprint of the pad. A vactor truck was used to remove impacted soil to a depth of 1' in the western half of the 10' by 11' excavation, and to 4' bgs in the northeastern portion. The southeastern section was excavated to an estimated 9 feet and failed to reach clean limits in that area in a soil sample collected at 8.5', with analytical results of 22,000 mg/kg mineral oil range hydrocarbons. Groundwater was encountered at 8.5' bgs during excavation, in contact with the heavily contaminated soil. No sampling of groundwater in the excavation occurred and visual observations were not reported regarding evidence of petroleum impact (e.g., sheen), although RN reported that it appeared to be tidally influenced. A total of 5.92 tons of oily waste water and 11.85 tons of oily solids were transported to PRS for disposal.

The transformer oil release at this location has been cleaned up to the extent possible but contamination remains in the smear zone and is likely impacting the shallow groundwater there. While RN has concluded that the contamination does not extend beyond the perimeter of the fence, based on their samples from the borings conducted in May 2015, a full hydrological cycle has yet to occur so that conclusion is premature. Soil contamination remains in the southeastern portion of the transformer excavation and is in contact with groundwater. The TPCHD recommends including this site on the Confirmed and Suspected Contaminated Site List.

Please note that impact to drinking water wells is not a concern at this location, but rather the potential for environmental impact to the Sitcum Waterway, about 120 feet west of the transformer, and Commencement Bay.

(fill in contaminant matrix below with appropriate status choice from the key below the table)

CONTAMINANT GROUP	CONTAMINANT	SOIL	GROUNDWATER	SURFACE WATER	AIR	BEDROCK	DESCRIPTION
Non-Halogenated Organics	Phenolic Compounds						Compounds containing phenols (Examples: phenol; 4-methylphenol; 2-methylphenol)
	Non-Halogenated Solvents						Organic solvents, typically volatile or semi-volatile, not containing any halogens. To determine if a product has halogens, search HSDB (http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB) and look at the Chemical/Physical Properties, and Molecular Formula. If there is not a Cl, I, Br, F in the formula, it's not halogenated. (Examples: acetone, benzene, toluene, xylenes, methyl ethyl ketone, ethyl acetate, methanol, ethanol, isopropanol, formic acid, acetic acid, stoddard solvent, Naptha). Use this when TEX contaminants are present independently of gasoline.
	Polynuclear Aromatic Hydrocarbons (PAH)						Hydrocarbons composed of two or more benzene rings.
	Tributyltin						The main active ingredients in biocides used to control a broad spectrum of organisms. Found in antifouling marine paint, antifungal action in textiles and industrial water systems. (Examples: Tributyltin; monobutyltin; dibutyltin)
	Methyl tertiary-butyl ether						MTBE is a volatile oxygen-containing organic compound that was formerly used as a gasoline additive to promote complete combustion and help reduce air pollution.
	Benzene						Benzene
	Other Non-Halogenated Organics						Other Non-Halogenated Organics (Example: Phthalates)
	Petroleum Diesel						Petroleum Diesel
	Petroleum Gasoline						Petroleum Gasoline
	Petroleum Other	RA	S				Crude oil and any fraction thereof. Petroleum products that are not specifically Gasoline or Diesel.
Halogenated Organics (see notes at bottom)	PBDE						Polybrominated di-phenyl ether
	Other Halogenated Organics						Other organic compounds with halogens (chlorine, fluorine, bromine, iodine). search HSDB (http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB) and look at the Chemical/Physical Properties, and Molecular Formula. If there is a Cl, I, Br, F in the formula, it is halogenated. (Examples: Hexachlorobutadiene; hexachlorobenzene; pentachlorophenol)
	Halogenated solvents						Solvents containing halogens (Halogen is typically chlorine, but can also be fluorine, bromine, iodine), and their breakdown products (Examples: Trichloroethylene; Tetrachloroethylene (aka Perchloroethylene); TCE; TCA; trans and cis 1,2 dichloroethylene; vinyl chloride)
	Polychlorinated Biphenyls (PCB)						Any of a family of industrial compounds produced by chlorination of biphenyl, noted primarily as an environmental pollutant that accumulates in animal tissue with resultant pathogenic and teratogenic effects
	Dioxin/dibenzofuran compounds (see notes at bottom)						A family of more than 70 compounds of chlorinated dioxins or furans. (Examples: Dioxin; Furan; Dioxin TEQ; PCDD; PCDF; TCDD; TCDF; OCDD; OCDF). Do not use for 'dibenzofuran', which is a non-chlorinated compound that is detected using the semivolatile organics analysis 8270
Metals	Metals - Other						Metals other than arsenic, lead, or mercury. (Examples: cadmium, antimony, zinc, copper, silver)
	Lead						Lead
	Mercury						Mercury

CONTAMINANT GROUP	CONTAMINANT	SOIL	GROUNDWATER	SURFACE WATER	AIR	BEDROCK	DESCRIPTION
Pesticides	Arsenic						Arsenic
	Non-halogenated pesticides						Pesticides without halogens (Examples: parathion, malathion, diazinon, phosmet, carbaryl (sevin), fenoxycarb, aldicarb)
	Halogenated pesticides						Pesticides with halogens (Examples: DDT; DDE; Chlordane; Heptachlor; alpha-beta and delta BHC; Aldrin; Endosulfan, dieldrin, endrin)
Other Contaminants	Radioactive Wastes						Wastes that emit more than background levels of radiation.
	Conventional Contaminants, Organic						Unspecified organic matter that imposes an oxygen demand during its decomposition (Example: Total Organic Carbon)
	Conventional Contaminants, Inorganic						Non-metallic inorganic substances or indicator parameters that may indicate the existence of contamination if present at unusual levels (Examples: Sulfides, ammonia)
	Asbestos						All forms of Asbestos. Asbestos fibers have been used in products such as building materials, friction products and heat-resistant materials.
	Other Deleterious Substances						Other contaminants or substances that cause subtle or unexpected harm to sediments (Examples: Wood debris; garbage (e.g., dumped in sediments))
	Benthic Failures						Failures of the benthic analysis standards from the Sediment Management Standards.
	Bioassay Failures						For sediments, a failure to meet bioassay criteria from the Sediment Management Standards. For soils, a failure to meet TEE bioassay criteria for plant, animal or soil biota toxicity.
Reactive Wastes	Unexploded Ordnance						Weapons that failed to detonate or discarded shells containing volatile material.
	Other Reactive Wastes						Other Reactive Wastes (Examples: phosphorous, lithium metal, sodium metal)
							Corrosive wastes are acidic or alkaline (basic) wastes that can readily corrode or dissolve materials they come into contact with. Wastes that are highly corrosive as defined by the Dangerous Waste Regulation (WAC 173-303-090(6)). (Examples: Hydrochloric acid; sulfuric acid; caustic soda)
	Corrosive Wastes						

Status choices for contaminants	
Contaminant Status	Definition
B - Below Cleanup Levels (Confirmed)	The contaminant was tested and found to be below cleanup levels. (Generally, we would not enter each and every contaminant that was tested; for example if an SVOC analysis was done we would not enter each SVOC with a status of "below". We would use this for contaminants that were believed likely to be present but were found to be below standards when tested)
S - Suspected	The contaminant is suspected to be present; based on some knowledge about the history of the site, knowledge of regional contaminants, or based on other contaminants known to be present
C - Confirmed Above Cleanup Levels	The contaminant is confirmed to be present above any cleanup level. For example - above MTCA method A, B, or C; above Sediment Quality Standards; or above a presumed site-specific cleanup level (such as human health criteria for a sediment contaminant).
RA - Remediated - Above	The contaminant was remediated, but remains on site above the cleanup standards (for example - capped area).
RB - Remediated - Below	The contaminant was remediated, and no area of the site contains this contaminant above cleanup standards (for example - complete removal of contaminated soils).

Halogenated chemicals and solvents: Any chemical compound with chloro, bromo, iodo or fluoro is halogenated; those with eight or fewer carbons are generally solvents (e.g. halogenated methane, ethane, propane, butane, pentane, hexane, heptane or octane) and may also be used for or registered as pesticides or fumigants. Most are dangerous wastes, either listed or categorical. Organic compounds with more carbons are almost always halogenated pesticides or a contaminant or derivative. Referral to the HSDB is recommended you are unfamiliar with a chemical name or compound, as it contains useful information about synonyms, uses, trade names, waste codes, and other regulatory information about most toxic or potentially toxic chemicals.

Dibenzodioxins and dibenzofurans are normalized to a combined equivalent toxicity based on 2,3,7,8-tetrachloro-p-dibenzodioxin as set out in Ch. 173-340-708(8)(d) and in the Evaluating the Toxicity and Assessing the Carcinogenic Risk of Environmental Mixtures using Toxicity Equivalency Factors Focus Sheet (<https://fortress.wa.gov/ecy/clarc/FocusSheets/tef.pdf>). Results may be reported as individual compounds and isomers (usually lab results), or as a toxic equivalency value (reports).

FOR ECOLOGY USE ONLY (For Listing Sites):

How did the Site come to be known: ☐ Site Discovery (received a report): _____ (Date Report Received)
☐ ERTS Complaint
☐ Other (please explain): _____

Does an Early Notice Letter need to be sent: ☐ Yes ☐ No

If No, please explain why: _____

NAICS Code (if known): _____

Otherwise, briefly explain how property is/was used (i.e., gas station, dry cleaner, paint shop, vacant land, etc.):

Site Unit(s) to be created (Unit Type): ☐ Upland (includes VCP & LUST) ☐ Sediment

If multiple Units needed, please explain why: _____

Cleanup Process Type (for the Unit): ☐ No Process ☐ Independent Action
☐ Voluntary Cleanup Program ☐ Ecology-supervised or conducted
☐ Federal-supervised or conducted

Site Status: ☐ Awaiting Cleanup ☐ Construction Complete – Performance Monitoring
☐ Cleanup Started ☐ Cleanup Complete – Active O&M/Monitoring
☐ No Further Action Required

Site Manager (Default: Southwest Region): _____

Specific confirmed contaminants include:

Facility/Site ID No. (if known): _____

_____ in Soil

_____ in Groundwater

_____ in Other (specify matrix: _____)

COUNTY ASSESSOR INFO:

Please attach to this report a copy of the tax parcel/ownership information for each parcel associated with the site, as well as a parcel map illustrating the parcel boundary and location.